INPLASY

The relationships between moral disengagement and prosocial versus antisocial behavior in sport

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ADMINISTRATIVE INFORMATION

INTRODUCTION

*R*eview question / Objective Existing studies have not yet quantitatively summarized the relationship between moral disengagement and prosocial versus antisocial behaviors in sport and have not yet examined the potential moderators of this relationship. This current study is important because this knowledge will enhance the understanding of the factors that moderate this relationship and have further implications for theory and practice. To fill the gap in the literature, this study conducted a meta-analysis of the relationship between moral disengagement and prosocial versus antisocial behavior in sport. Specifically, the aim was to answer the following questions:

1. What is the strength of the association between moral disengagement and prosocial versus antisocial behavior in sport?
2. What is the strength of the association between moral disengagement and prosocial versus antisocial behavior in sport when teammates act as recipients?
3. What is the strength of the association between moral disengagement and prosocial versus antisocial behavior in sport when opponents act as recipients?
4. Is the relationship between moral disengagement and prosocial and antisocial behavior in sport moderated by cultural background, sports type, age, gender, and sport participation experience?

Condition being studied The development of the Prosocial and Antisocial Behavior in Sport Scale (PABSS) has made a sustainable contribution to the study of moral behavior in this field over the past decade or so. The term "Moral behavior" is broadly defined as intentional acts that have a positive or negative consequence for the psychological or physical welfare of others. Previous studies have shown that prosocial behavior may promote social identity, sport commitment, resilience, positive emotions, enjoyment, effort, sport performance, and cohesion. Conversely, antisocial behavior may lead to a range of negative consequences, most notably increased anger, anxiety, and burnout, as well as decreased social identity and cohesion. Moreover, the diary data showed an association between self-reported moral behavior and the moral behavior of teammates, especially in close partnerships in which high levels of behavioral consistency may be maintained between individuals. This perspective is indirectly supported by some dyadic data based on the Actor-Partner Interdependence Models. Thus, it is important to understand prosocial and antisocial behavior in sport, considering the ramifications these behaviors have on others.

Moral disengagement as an important antecedent of prosocial and antisocial behavior in sport has gained the attention of many researchers in recent years. However, the state of the literature shows that the strength of the association between moral disengagement and prosocial behavior in sport is not as solid as it is with antisocial behavior in sport. At the same time, taking into account the different recipients, there is a divergence in the strength and direction of the relationship between moral disengagement and prosocial versus antisocial behavior towards teammates in sport, and inconsistency in the strength of the relationship between moral disengagement and prosocial versus antisocial behavior towards opponents in sport. In addition, potential moderators of this relationship (i.e., cultural background, sport type, age, gender, and sport participation experience) have not been systematically tested. Therefore, carrying out this meta-analysis can provide a gap in the field, provide additional knowledge to add, and help to further guide the development of practical and theoretical work.

METHODS

Search strategy We identified a number of terms used for database searches and organized them into three parts. In the first part, "sport" OR "training" OR "competition" OR "game" OR "athletic" OR "athlete" OR "player" was used to focus on the studied context. In the second part, to capture studies involving moral disengagement, we determined "moral disengagement" OR "moral evasion" OR "moral shirk" OR "moral escape" by referring to the search strategy in a meta-analysis of moral disengagement and cyberbullying (Zhao & Yu, 2021). In the last part, based on a previous meta-analysis of theories of mind and prosocial behavior (Imuta et al., 2016), we referred to a few keywords related to prosocial behavior, linking them through logical operators as follows: "prosocial behavior" OR "caring" OR "comforting" OR "cooperating" OR "donating" OR "helping" OR "sharing" OR "supporting". We acquired several search terms for antisocial behavior from a meta-analysis evidence of the five-factor model's relation to antisocial behavior (Vize et al., 2019), and finally "antisocial behavior" OR "aggression" OR "violence" OR "antisocial" OR "crime" OR "delinquency" OR "bullying" OR "offending" was utilized.

We searched all fields, not just titles, abstracts, or keywords. Each database's search strings were manually entered, not by an automated program. We did not impose limitations on the publication schedule or the acceptable languages for articles during the search process. To our knowledge, the same meta-analyses have not been published before, and this review was committed to summarizing all relevant studies from the creation of the database to the present day.

Taking the Web of Science pubmed database as an example, the search formula is: ((((((ALL=(sport)) OR ALL=(training)) OR ALL=(competition)) OR ALL=(game)) OR ALL=(athletic)) OR ALL=(athlete)) OR ALL=(player).

Participant or population The participants were mainly athletes and coaches in the context of sport.

Intervention Not Applicable.

Comparator Not Applicable.

Study designs to be included Cross-sectional and longitudinal studies.

Eligibility criteria To be included in this review, studies had to meet the following criteria: (1) quantitative studies with full texts that were published in peer-reviewed journals; (2) used instruments to assess moral disengagement, prosocial behavior, or antisocial behavior; (3) associations between moral disengagement, prosocial behavior, and antisocial behavior were explored in sport contexts; (4) a clear sample size

reported in the article; and (5) the specific effect size (Pearson's product-moment correlation coefficient r) was reported in the article, or, if it was not available, it could be obtained by using an appropriate conversion formula. In the meantime, we excluded conference abstracts, dissertations, and books.

Information sources On August 15, 2023, we searched five English databases (PubMed, Web of Science, Scopus, PsycArticles, and PsycINFO) as well as two Chinese databases (CNKI and Wanfang Data) for studies regarding moral disengagement, prosocial behavior, and antisocial behavior in sport.
We also used both backward and forward citation searching. On the one hand, the backward search process did not reveal that previous researchers had published meta-analyses with exactly the same variables as those in the current review, although the context of application was different. A meta-analysis closest to the topic of this review, summarizing associations of prosocial and antisocial behavior among sport groups (Graupensperger et al., 2018), and we recorded its full reference list. The complete reference lists of three strongly comprehensive narrative reviews were similarly recorded (Boardley & Kavussanu, 2011; Kavussanu & Stanger, 2017; Kavussanu & Al-Yaaribi, 2021).
On the other hand, a forward search was conducted using Web of Science for six articles, including the four reviews mentioned above and two additional articles regarding the development and subsequent validation of the PABSS (Kavussanu & Boardley, 2009; Kavussanu et al., 2013), because the PABSS is the most important instrument in the field. The rationale for doing so was that researchers from any country or region conducting research on prosocial and antisocial behavior in sport would most likely cite these articles.

Main outcome(s) Prosocial and antisocial behavior in sport.

Quality assessment / Risk of bias analysis The risk of bias of the included studies was assessed based on the National Institutes of Health's Quality Assessment Tool for Longitudinal and Cross-sectional Studies. The tool was revised by the researchers to form a Chinese version (Meng et al., 2023). The possible answers for each item were "yes," "no," or "not applicable." Total checklist scores ranged from 0-8 for cross-sectional studies and 0-12 for longitudinal studies, with higher scores indicating a lower risk of bias; however, no clear cut-off values were provided. The entire

review was done independently by the first and second authors. In the event of inconsistent assessments, a third author was consulted to reach consensus.

Strategy of data synthesis Pearson's product-moment correlation coefficient r was used as an indicator of effect sizes for the current meta-analysis. Comprehensive Meta-Analysis Version 3.3 was used to average multiple effect sizes from the included studies and estimate the overall effect size. Results with a two-tailed test p-value less than 0.05 were defined as statistically significant. Correlation coefficients between moral disengagement and prosocial and antisocial behaviors were extracted or calculated from each included study. As the correlation coefficients did not conform to a normal distribution, all correlation coefficients were converted to Fisher's Z-scores prior to main and moderated effects analyses (Lipsey & Wilson, 2001). After estimation was complete, Fisher's Z-scores were then converted to correlation coefficients for interpretation. As recommended by Cohen (1992), small, medium, and large effect sizes were determined using 0.10, 0.30, and 0.50 as critical values for the correlation coefficient, respectively. If studies did not report correlation coefficients but did report t-values for independent samples t-tests, F-values for one-way ANOVA, χ^2-values for chi-square tests, and β-values for one-way linear regression analyses, respectively, they were converted to r-values before coding through the appropriate formulas (Card, 2012; Lakens, 2013; Peterson & Brown, 2005).

Subgroup analysis To explore possible reasons for the heterogeneity of the findings, subgroup analyses and meta-regression analyses were used to examine potential moderators of the relationship between moral disengagement and prosocial versus antisocial behavior, depending on the type of variable. As recommended by van Eldik et al. (2020), subcategories containing at least 3 studies are generally included in subgroup analyses. For the categorical variable of country of origin, only studies from China and the UK met these requirements in terms of numbers. Similarly, contact and mixed sports within sport types were allowed into the subgroup analysis. The three continuous variables of age, gender (percentage of females), and sport participation experience were brought into the meta-regression analyses for sequential testing.

Sensitivity analysis In the meta-analysis, the combined effect sizes may be affected by outliers, leading to spurious statistical results (Kepes &

Thomas, 2018). In order to assess the impact of outliers and the robustness of the meta-analysis results, we performed a sensitivity analysis through the leave-one-out method. Specifically, the included effect sizes were eliminated one by one, and the combined effect sizes after elimination were compared to the combined effect sizes before elimination to identify the impact of each effect size on the overall results. Not until all effect sizes had been eliminated, and if there was a large change in the combined effect size after eliminating a study, this would indicate the presence of outliers that affect the combined effect sizes.

Country(ies) involved China.

Keywords moral disengagement; prosocial behavior; antisocial behavior; meta-analysis; cultural background differences; gender differences.

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