



Keeping Youth in Play: the Effects of Sports-Based Interventions in the Prevention of Juvenile Delinquency

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KEEPING YOUTH IN PLAY

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IN THE PREVENTION OF JUVENILE DELINQUENCY

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Summary

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The financial and societal costs of juvenile delinquency are substantial. Therefore, scientists and policy makers are interested in understanding how to prevent juvenile delinquency. Historically, sports activities have been perceived as a tool to stimulate positive youth development and prevent antisocial behavior. Within the sports context youth are supposed to learn positive values (such as honesty, responsibility, and discipline) that protect against juvenile delinquency. Furthermore, sports participation has been related to a range of positive developmental outcomes, including better general (mental) health outcomes. Practicing sports may also teach youth socio-emotional skills, such as cooperation with peers and dealing with setbacks. Finally, participating in sports activities is assumed to increase social inclusion and social bonds to society. Participation in sports is generally experienced by youth as a fun activity, and if used as treatment or a preventive intervention for at risk youth as a non-stigmatizing activity. Therefore, sports-based crime prevention programs are considered to be a unique way to target, generally difficult to reach, at-risk youth. Nowadays, sports-based interventions aiming at the prevention of juvenile delinquency have been implemented all over the world. However, little is known about the validity of underlying theoretical assumptions supporting the use of sports in crime prevention and the effectiveness of sports-based crime prevention programs.

The main goal of this dissertation was to contribute to the scientific knowledge on the effectiveness of sports-based interventions to prevent juvenile delinquency in adolescents. First, the relation between sports participation and juvenile delinquency in adolescents was assessed by reviewing the empirical literature on sports participation and juvenile delinquency, and to test whether this relation was influenced by offense type and study, sample, and sports characteristics. Second, the effects of physical activity interventions on psychosocial outcomes in adolescents were measured with meta-analytic techniques, in particular examining potential moderators (i.e., outcome, study, sample, and intervention characteristics) of effectiveness. Third, the effectiveness of the Dutch sports-based crime prevention program for adolescents at risk for developing delinquent behaviors 'Only you decide who you are' [Alleen jij bepaalt wie je bent (AJB)] was examined. Finally, predictors of intervention success of AJB were assessed in order to establish which youth, coach, and context factors were associated with reduced risk factors and increased protective factors for delinquency.

The first study in this dissertation (Chapter 2) examined the empirical literature on the relation between sports participation and juvenile delinquency in adolescents. The multilevel meta-analysis included 51 published and unpublished studies, with 48 independent samples containing 431 effect sizes, and $N = 132,366$ adolescents. The results showed no overall significant association ($r = .005$) between sports participation and juvenile delinquency, indicating that adolescent athletes are neither more nor less delinquent than non-athletes. Some study, sample, and sports characteristics moderated the relation between sports

participation and juvenile delinquency. Athletes were more delinquent than non-athletes in studies using longitudinal designs and published in more frequently cited journals. Furthermore, in all-female samples, more positive associations between sports participation and juvenile delinquency were found than in all-male samples. Finally, the setting of the sports environment and whether it was a team or individual sport moderated the relation with juvenile delinquency. Athletes participating in an out-of-school setting appeared to have less favorable outcomes on juvenile delinquency compared to athletes participating in a school setting. Individual sports were associated with less delinquency, whereas for team sports no significant results were found. However, all effects were very small, having minimal clinical and practical relevance.

The effectiveness of physical activity interventions on psychosocial outcomes (externalizing problems, internalizing problem, self-concept, and academic achievement) in adolescents was assessed in four separate multilevel meta-analyses (Chapter 3). In total, 57 studies reporting on 216 effect sizes were included, and the results showed significant small-to-moderate effects of physical activity interventions on externalizing problems ($d = 0.320$), internalizing problems ($d = 0.316$), self-concept ($d = 0.297$), and academic achievement ($d = 0.367$). Therefore, it was concluded that physical activity interventions were in general effective in reducing externalizing and internalizing problems and in increasing self-concept and academic achievement. Several characteristics moderated the effects of psychosocial interventions. For the meta-analysis of the effect of physical activity interventions on externalizing problems, larger effects were found when the physical activity group was compared to a comparison group that received some other form of intervention (i.e., psychosocial interventions or group activities). Studies with more female participants, in clinical samples, and using quasi-experimental designs yielded larger effects of physical activity interventions on internalizing problems. For the meta-analysis of the effect of physical activity interventions on self-concept, larger effects were found for interventions with (aerobic) exercise elements compared to interventions with sports components. The strength of the effect of physical activity interventions on academic achievement was moderated by the type of measure of academic achievement. Larger effect sizes were found for grades compared to standardized achievement tests.

In the third study (Chapter 4), the effects of the Dutch sports-based crime prevention program AJB were tested. This was the first study that evaluated the effects of a sport-based crime prevention program using a quasi-experimental design. In total, 368 adolescents (between 12 and 18 years old) at risk for juvenile delinquency participated in the study. The primary outcome was juvenile delinquency, measured by official police registration data. The secondary outcomes were risk and protective factors for delinquency (e.g., conduct problems, aggression, resistance to social pressure, prosocial behavior, and academic engagement) measured with self- and teacher reports on three measurement occasions.

The results showed significant intervention effects on the delinquency measures. The intervention group consisted of fewer youth with police registrations as a suspect ($d = -0.34$), and had a lower mean number of registrations than the control group ($d = -0.23$). No significant intervention effects were found on the secondary outcomes.

The final study of this dissertation (Chapter 5) tested which youth, coach, and context factors were associated with intervention success (i.e., the reduction of risk factors and the promotion of protective factors for delinquency) in AJB. Participants of this study were 155 adolescents who participated in AJB, their teachers, and their sports coaches. At the start of the intervention (T0) and approximately 13 months after the start of the interventions (T2), eight risk and protective factors for delinquency were measured using questionnaires. Additionally, at T2 the participants and their coaches filled in questionnaires about the different predictors of intervention success (e.g., age, sex, and ethnicity of the youth, experience and behaviors of the coach, socio-moral atmosphere at the club, quality of the relationship with the coach, and type of sports). The youth participating in AJB showed significant improvements on seven out of eight risk and protective factors for delinquency over the course of T0 to T2. Change in risk and protective factors for delinquency was significantly predicted by several youth characteristics (e.g., type of education), coaching behaviors (e.g., motivating behavior), and context factors (e.g., socio-moral climate at the sports club and the type of sports).

The overall results of the present dissertation allow for some enthusiasm in regard to sports-based interventions. There is increasing empirical evidence showing that sports-based interventions have the ability to stimulate positive youth development. However, when it comes to the prevention of juvenile crime prevention, the overall lack of evidence that supports the widespread use of sports-based crime prevention programs became clear. Chapter 4 in the dissertation revealed intervention effects of AJB on juvenile delinquency, indicating that sports-based interventions could be effective in the prevention of juvenile delinquency. Nonetheless, there is a need for more empirical robust research on sports-based crime prevention to fully understand the potential effectiveness of these interventions. Knowledge on the effectiveness of sports-based interventions for the prevention of juvenile delinquency is not enough. Research should also examine *why*, *for whom*, and *under which conditions* we can expect positive effects of sports-based crime prevention programs.

In the dissertation it is concluded that it is not so much the sports activities themselves that can prevent juvenile delinquency. Sports-based crime prevention programs have to meet conditions concerning the quality of the sports environment and the behaviors of the coach in order to be effective, which implies a careful development and implementation of sports-based crime prevention programs. In the development and implementation of sports-based interventions, policy makers could make use of generally effective components of interventions. For example, behavioral modification techniques used within the sports

context, pedagogically competent coaches, a positive peer climate, and a monitoring system for the program outcomes and program integrity should be part of sports-based crime prevention programs.

The current dissertation yielded an important contribution to the scientific knowledge on sports-based crime prevention. The studies have showed that sports-based interventions have a potential in keeping at-risk youth “in play”, when conditions concerning the educational quality of the sports environment are met. This dissertation also emphasized the need for more research on sports-based crime prevention. The insights from scientific research could be used to increase the quality of sports-based crime prevention programs, which in turn may lead to larger effects in the prevention of juvenile delinquency.