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## **Sport, science and art in the prevention of crime among children and youth**

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## *Abstract*

This paper explores theoretical frameworks used for understanding the relationship between leisure activities and the prevention of youth crime. It is examined whether scientific research has yielded empirical support for these theoretical perspectives. This discussion is illustrated by means of examples of good or promising projects for each field (sports, art, science). It is concluded that leisure can be regarded as an important context for youth crime prevention. In practice however, there appears to be little scientific evidence for these mechanisms. Therefore, it is difficult to identify good or promising practices within this field.

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## **1. Introduction**

The field of youth crime prevention is very broad and diverse. The wide array of youth crime prevention programmes is characterised by a variety of goals, methods, domains and target groups.

A specific segment of programmes focuses on leisure activities of youngsters. Because leisure can be considered as most closely associated with the world of adolescence beyond school, it is regarded as an important context for youth crime prevention programmes (Caldwell & Smith, 2006). By setting up sport, science or art activities, these projects aim at preventing youngsters from offending. It is presumed that involving youngsters in such activities can prevent them from (re)offending.

In this paper, we explore theoretical frameworks used for understanding the relationship between leisure activities and the prevention of youth crime. Next, we shall examine whether scientific research has yielded empirical support for these theoretical perspectives. We will illustrate our discussion by means of examples of good or promising projects for each field (sports, art, science). In our conclusion, the most important results are to be found summarised and the implications for youth crime prevention programmes in Europe are discussed.

## **2. Theoretical perspectives**

If we assume that crime prevention programmes divert youngsters from offending by providing art-, sport- or science-related activities, how might this correlation be explained?

Several explanations are put forward in scholarly literature. How these theoretical perspectives link leisure activities to youth crime obviously has important implications for preferred crime prevention strategies.

In this paper, we will concentrate on the most popular perspectives in scholarly literature. These perspectives focus on: (1) opportunities, (2) peers, (3) social bonds and / or (4) feelings of physical and mental well-being. This division, as presented in the table below, is of course artificial; perspectives might overlap each other or might combine several angles. Above all this, categorisations always have a subjective and arbitrary character.

Figure 1: Theoretical perspectives linking leisure activities and youth crime

	Explanation of youth crime	Implications for prevention
<b>Opportunities</b>	youngsters are (more) likely to offend when they have the opportunity to do so	<u>diversion</u> : - diverting youngsters from a place / at a time when they might otherwise be involved in crime - diversion from boredom
	more specifically, youngsters are (more) likely to commit offences when there is little or no supervision (social control)	<u>deterrence</u> : raise social control (structured activities under supervision)
<b>Peers</b>	youngsters learn to engage in delinquent behaviour due to association with others, especially (delinquent) peers / peer groups	<u>role models</u> : reduce contacts with (criminal) peers, promote contacts with positive role models such as non-offending peers, and / or teachers / coaches
<b>Social bonds</b>	youngsters with weak attachment, commitment and belief in positive social norms, activities and institutions are (more) likely to commit offences because they have little or no social bonds ("nothing to lose")	<u>bonds with teachers / coaches</u> : increase positive bonds with others and conventional institutions ("stake in conformity")
<b>Physical / mental well-being</b>	youngsters with low well-being (e.g. low self-esteem) will be (more) likely to commit offences, especially in peer groups (easily influenced)	<u>improve sense of well-being</u> : -increase self-esteem, physical fitness, cognitive skills, sense of identity / belonging, sense of achievement, locus of control, self-control, discipline,... - opportunity to work off steam / unleash frustrations

## 2.1. Opportunity perspective

Possible positive effects of leisure activities on offending are often explained by the **opportunity perspective**. As in the routine activity theory (Osgood & Anderson, 2004) it is assumed that youngsters are more likely to offend when they have the opportunity to do so. More specifically, it is suggested that children and adolescents will be more likely to offend when external social control (e.g. supervision by an adult) is lacking.

According to the opportunity perspective, positive effects of leisure activities can be explained by the diversion effect: structured leisure activities divert youngsters from a place or a time when they might otherwise be involved in crime. In other words, structured activities offer fewer opportunities to engage in deviant behaviour because children are doing *something* instead of just "hanging out". In a more



general way, it is argued that youngsters are diverted from boredom (Nichols, 1997).

Another important explanatory factor is deterrence. It is assumed that raising external social control by organising leisure activities under *supervision* of adults (teacher, coach,...) will engender a deterrent effect (Caldwell & Smith, 2006). Within this perspective, the "Midnight Basketball" programmes introduced in the USA during the 1990's (see Hartmann, 2001) are worth mentioning for example. These programmes aim at reducing and preventing youth crime by engaging youngsters in supervised basketball matches during the evening and night.

The opportunity perspective can be criticised because it merely focuses on short-term effects (diversion effect), instead of focusing on long-term effects by getting at the causes of (youth) crime. For example, a decrease in crime rates might be the result of the displacement effect (relocation of crime) instead of the diversion effect (actual falling crime rates).

## 2.2. Peers / peer groups

Another important explanatory mechanism is closely related to **peers and peer groups**. According to some theories, e.g. the differential association theory (Sutherland, 1947), youngsters *learn* to engage in deviant behaviour due to association with others, especially (delinquent) peers or peer groups.

Within this perspective, youth crime prevention programmes that focus on art, sports and science might have positive effects because they reduce contacts with delinquent peers, promote contacts with non-delinquent peers and with other positive role models such as teachers or coaches.

## 2.3. Social bond perspective

A third way of explaining why sports, art or science projects might prevent youth crime is the **social bond** perspective. For example, according to the social bond theory (Hirschi, 1969), youngsters with weak attachment, commitment and belief in positive social norms, activities and institutions are (more) likely to commit offences. Because they have little or no social bonds, they have "nothing to lose".

Providing constructive leisure activities might reduce youth crime because they provide an opportunity to create positive bonds with others (e.g. coaches, teachers) and institutions, which in turn results in a "stake in conformity". In a more broader sense, it is sometimes argued that these activities might promote the social integration of socially vulnerable youth, for example because the acquired



experiences or qualifications help youngsters get a good job (Theeboom et al., 2008). In other words, these projects might engender long-term effects by increasing the human, social, and cultural capital of youngsters (see as well McNeal, 1999; Nichols, 1997).

## **2.4. Physical and mental well-being**

A last key perspective focuses on **physical and mental well-being** of children and adolescents. It is argued that youngsters who do not feel good about themselves will be (more) prone to offend. For example, children and adolescents with low self-esteem might be more easily influenced by delinquent peers (see e.g. Mason, 2001).

Leisure programmes might (e.g. as a consequence of increased physical fitness) help to improve youngsters' self-esteem so that they will be less susceptible to peer pressure and will no longer need to boost their self-image by deviant behaviour. According to Crabbe (2000), this remains a quite over-simplified assumption, especially for what concerns sports. In sports there are always "winners" and "losers". Will the "losers" gain more self-esteem as well?

Other similar mechanisms are suggested as well. For example, some scholars suggest that participating in constructive leisure activities might lead the youngsters to what is known as an increase of cognitive skills, more self-control, an increased sense of belonging to a group (identity), a sense of achievement, a greater sense of the ability to take their life in their own hands (locus of control), and increased discipline (McNeill et al., 2011; Nichols, 1997). Furthermore, these activities might provide an opportunity to work off steam and / or to unleash frustrations (Nichols, 1997). As a result, these children and adolescents would be less likely to engage in offending. In short, it is argued that when youngsters feel good about themselves, the odds of (re)offending will decrease.

## **3. Do sport, science and art programmes work?**

In this chapter we will explore empirical evidence for the theoretical assumptions on the effects of art, sports and science projects on crime prevention / reduction, and methodological problems that hinder the search for such evidence. Because we focus on the European context, we will only draw on European scholarly literature. The bulk of publications focuses on sport programmes, probably because these kind of projects are the most common.

Despite the fact that several studies suggest a positive effect of leisure programmes in the prevention of youth crime, it appears that there is **little evidence** that these programmes actually are effective in reducing youth crime (Nichols, 1997; Smith & Waddington, 2004).

First, some studies suggest that participation in leisure activities, more specifically sport interventions, can produce **negative effects**. As mentioned before, it is often assumed that sport participation prevents crime amongst youngsters. For the last decade, several researchers examined whether sports and leisure activities have an effect on youthful offending. The results have been mixed (Nichols & Crow, 2004). Notwithstanding numerous studies suggest a positive effect of sport programmes, other studies point out that involvement in such programmes might produce negative effects as well. For example, some researchers (e.g. Endresen & Olweus, 2005; Rutten et al., 2007) found out that young athletes were more involved in physical fights than non-athletes. Caruso (2011) concluded that sport participation reduced property crime and youth crime, but increased (however weakly) violent crime. It therefore seems important to make a distinction between several types of crime. Smith and Waddington (2004) point out that sport schemes are often based on a one-sided perception of sport: *an unambiguously wholesome and healthy activity in both a physical and a moral sense*. They stress that some sport subcultures include for example alcohol-related initiation rites or are even characterised by a heavy drinking culture (e.g. rugby). According to Crabbe (2000, 384), some sports provide environments in which *acts of violence, confrontation and drug use may be licensed in ritualized fashion and given meaning through their association with the hegemonic masculine ideals of toughness, heroism and sacrifice*.

Second, solid scientific evaluations of sport, art and science projects are limited, and available evaluations often are of poor quality because of several **methodological problems**. As a result, it is hard to say whether these projects have a positive effect on crime prevention / reduction. Some of these major methodological problems are discussed below. Most of these issues can be generalised to evaluations of crime prevention projects on the whole and are not limited to leisure-related programmes.

A first recurrent problem is related to **available data**. Sometimes essential statistics are lacking, or access to relevant data is not granted (Nichols & Crow, 2004; Sagant & Shaw, 2010).

A second problem is related to **the sample**. Sample sizes of evaluations are often small, with low statistical significance as a result (Nichols & Crow, 2004). The lack of control groups is another frequently mentioned methodological weakness of available evaluations (Nichols, 1997). Specifically for leisure programmes, we have to keep in mind that these programmes often attract a mixed population. For



example, in some programmes, part of the participants are volunteers. This might have an impact on the results as these may be youngsters who are less likely to commit crime anyway (Collins & Kay, 2003).

A third issue is the lack of **clearly defined and measurable outcome criteria** (Smith & Waddington, 2004). Nichols and Crow (2004, 268) put this as follows: *If one wants to know whether something 'works', then it is important to have clearly defined and measurable outcome criteria to show what it has achieved in relation to its objectives.* Programme objectives are sometimes unclear because the project originated from practice rather than from theoretical perspectives (Nichols, 1997; Wikström, 2007).

Even when outcome criteria are fixed, it sometimes remains difficult to measure the impact of prevention programmes. First, how do you "isolate" the influence of the programme, in other words, how can you exclude other sources of influence? Even when a positive effect is found, it is hard to prove that this is (solely) a result of the prevention project (Nichols, 1997; Sagant & Shaw, 2010). This is why it is important to include control groups in evaluations. More specifically, random controlled trials seem preferable. Whilst meta-analyses and systematic reviews synthesise evidence and provide an overview of averages, random controlled trials investigate what happened if no intervention had taken place. Second, the impact of such programmes might be situated on a broader level (e.g. the community). How do you "measure" this?

A fourth methodological obstacle is formulated by Wikström (2007, 63) as follows: *(...) To advance current strategy and policies the first question for crime prevention should be, "How does it work?" and only the second question should be, "What works?".* In other words, it is not only important to measure whether crime rates are indeed decreasing, but it is even more important to know *why*. This question is lacking in a lot of evaluation studies. Because of the absence of a clearly defined theoretical rationale for these projects, even when success is claimed, it is unclear what specific aspects of these projects account for that claimed success (Smith & Waddington, 2004). For this reason, it is important that leisure programmes are **theoretically underpinned** (knowledge-based). In order to figure out why a project does or does not work, picking the **accurate evaluation method** appears to be crucial as well. According to Nichols and Crow (2004), the choice should be determined based on the aims (diversion, deterrence,...) and classification (primary, secondary, tertiary prevention or a combination) of the project and assumed mechanisms of crime reduction. In a more general way, it is argued that qualitative methods are needed in order to gain insight into the reasons *why* a specific programme might work. Several researchers stress that quantitative evaluations should be combined with qualitative methods such as individual case studies in



order to clarify how and why a programme has had an impact on participants (Nichols & Crow, 2004; Sagant & Shaw, 2010; Smith & Waddington, 2004).

A fifth problem is the lack of **long-term follow-up** in most evaluation studies (Nichols, 1997). Even when short-term positive effects are found, it is not clear whether the same effects remain on a longer term basis.

Looking back at the theoretical part of our paper, we can conclude that because of these methodological problems, little conclusive statements can be made about the supposed positive effects of art, sport and science projects on youth crime prevention and reduction.

#### **4. Some examples of good / promising practices**

Despite methodological difficulties, several good or promising practices of art-, science- and sports-based youth crime prevention programmes can be found throughout Europe. In what follows we selected an example for each subcategory in order to illustrate what these programmes can look like in practice, and which are their strengths and weaknesses.

##### **4.1. Art: 'Inspiring Change' (UK - Scotland)**

The "Inspiring Change" project was running in 2010 in five prisons in Scotland (Barlinnie, Greenock, Polmont, Shotts and Open Estate). This project was aimed at involving 200 prisoners in a whole range of art projects in order to increase commitment in learning processes and increase literacy levels. It was assumed that art interventions might have a positive impact on desistance by facilitating identity changes which are crucial within the desistance process. Participating in these projects might allow offenders to see themselves within another (non-criminal) perspective, and might allow them to picture other future life directions, life styles, identities and social networks. Within this framework it is assumed that art interventions might be helpful in shaping the rehabilitation process (McNeill et al., 2011). As the project focuses on the prison population, it can be labeled as "tertiary prevention".<sup>1</sup>

Anderson and Overy (2010) evaluated the effect of music and art interventions within the group of young prisoners. They examined whether engagement in art interventions had an effect on self-esteem, self-control, behaviour and literacy skills, and on further participation in education. The study involved 14 young

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<sup>1</sup> Tertiary crime prevention consists of interventions which deal with actual offenders and aim at preventing offenders from committing new offences (Brantingham & Faust, 1976).



offenders (males between 16 and 21 years of age) detained at Her Majesty's Young Offenders Institution (HM YOI) Polmont. These 14 prisoners voluntarily participated in a ten-week study and were divided into three groups: music (N=4), art (N=5) and a control group (N=5). Participants were involved in eight weekly sessions of music or art. The main aim of these sessions was to engage the young men in music (playing the guitar) and art (creating a sculpture) within a group context. The methodology consisted in (1) conducting structured interviews, (2) exploring measures of emotions, self-esteem, self-control and literacy skills and (3) analysing records of behaviour. All three methods were repeated before and after the art interventions.

Results indicated increased educational engagement amongst the young men in all three groups, with the largest growth in the music group. These findings suggest that offenders who participate in art classes in prison are more likely to engage in other educational opportunities. Moreover, the results suggested an increase in self-esteem and a slightly positive shift in behaviour for the music group. The number of incidents went down from the pre- to post-periods within this group, whereas they went up quite considerably in the other two groups. However, qualitative information about the specific nature of "an incident" is lacking.

Despite the *promising* results, several methodological critiques can be formulated. The results suggest positive effects of art interventions within a group of young male prisoners. However, the sample size is very small, and it is not clear whether these results are generalisable to other young male prisoners. In addition to this, we feel that the follow-up period (three months) is quite short. It is not clear what the effects will be on a longer term basis. In order to answer the question whether and how the art interventions really do play a role further on in life in general, and have an effect on the desistance process in particular, a follow-up study is recommended. However, due to financial restrictions, the researchers were not able to carry out such a follow-up study (McNeill et al., 2011, 93).

#### **4.2. Science: 'Hands Off' (United Kingdom)**

A promising youth prevention project in the science domain is "Hands Off". In this project, the principles of DNA are linked to crime prevention by marking property. This programme contains a good example of how science education can play a role within the field of youth crime prevention.

"Hands Off" targeted secondary school students aged 13 and 14 because of their high level of vulnerability to property offences. This project was intended to prevent victimisation of property crime. Marking property with DNA allows identification of the owner of this property. Furthermore, a general promotion of the awareness of a



crime prevention principle was pursued (Marlow, 2011). Notwithstanding that youngsters in this project are targeted as potential victims, we can assume that – because property crimes within this age group often take place *between* youngsters – potential offenders are as well children and adolescents.

The project was launched in two schools and consisted of (1) a presentation on the structure of DNA and the logic of its application to property marking, and (2) a laboratory-based process in order to show how to extract DNA samples and mix DNA with an adhesive compound (only visible under fluorescent light) and how to apply this marking method to property.

Approximately a year afterwards, 48 pupils who participated in the classroom practical filled in a questionnaire. It appeared that 79% of them had marked their property as a result of the practical, mainly mobile phones and MP3 players.

This project can be considered as promising. It is an innovative project that combines theoretical and practical education in order to prevent and reduce the victimisation of young people. Because we expect to find, within the target group of youngsters, potential victims as well as potential offenders, the effect of property marking might be double: preventing victimisation *and* preventing offending.

However, some methodological reflections can be made. It is assumed that by marking property, property offences will decrease because potential offenders will be deterred as a result of an increased (perceived) risk of getting caught. Nevertheless, according to Hamilton-Smith and Kent (2005), property-marking can only lead to reductions in property theft if it is commonly used. Moreover, an overt and widely spread communication about the implementation of this technique is needed (Laycock, 1985). Potential offenders will only be deterred if they *know* that this technique is commonly used. If not, we can wonder whether the effect will not be limited to small-scale, individual-level behavioural changes. Another consideration is the long-term impact of these techniques. It is not clear what the effects will be at a more long-term level.

### **4.3. Sports: 'fairplayer.manual/fairplayer.sport' (Germany)**

As concerns sports-based youth crime prevention projects, we selected the 2011 ECPA winner: "fairplayer.manual/fairplayer.sport". This German project can be considered a good practice in youth crime prevention especially because of its solid and permanent scientific evaluation and positive results.



Although the programmes “fairplayer.manual” and “fairplayer.sport” both aim at promoting social and moral skills to prevent bullying and violence among children and adolescents, we shall only discuss the latter project because it focuses on the sports context. “Fairplayer.sport” consists of a structured prevention training programme in soccer clubs and an (optional) training for trainers and other supervisors in multiday workshops. One of the topics in these workshops is the prevention of violence in soccer (Project Entry Form Germany ECPA 2011, 2011).

The project addresses girls and boys aged 11 to 14 and their trainer, and heavily draws on insights from developmental psychology and sports science. Trained coaches implement the concrete measures (movement-oriented exercises and games), which introduce adolescents to situations that demand fair and non-discriminatory behaviour. Afterwards, their behaviour and experiences are discussed, hopefully resulting in the development of behavioural alternatives and changes. The introductory phase is followed by six steps. These steps are organised hierarchically and treat topics such as self-concept, emotion regulation, empathy and morality / fairplay. The techniques within these steps combine established methods of violence prevention (e.g. cognitive-behavioural methods, moral dilemma method,...) with common insights from sports science. The implementation of the programme (11 sessions) takes approximately 3 to 4 months. The project has been carried out in several soccer clubs in Berlin. In order to implement the project nationwide, a “train-the-trainer” approach is currently being developed (Project Entry Form Germany ECPA 2011, 2011).

A major strength of the “fairplayer.sport” programme is the permanent scientific evaluation and refining in cooperation with the University of Berlin (Scheithauer et al., 2010). By means of a controlled waiting-control-group design involving 13 teams from 13 youth clubs in Berlin, positive outcomes of the programme have been ascertained. For both the intervention group and the control group, data was collected during a pre-, post- and follow-up period with time intervals of approximately 3 months. In the evaluation, a multi-perspective approach (several respondent groups) is combined with methodological triangulation (questionnaires, observations,...).

We notice however that the effectiveness within “problematic” groups (defined as groups with lower levels of pro-social and positive behaviour, higher rates of relational aggression, etc.) remains questionable. Whereas the intervention group with a positive behavioural base showed improvements on several self-rated scales (e.g. stronger anger control, lower level of relational aggression,...) compared to the control group, almost no significant training effects were found within the “problematic” group (Project Entry Form Germany ECPA 2011, 2011).



## 5. Conclusion

Leisure can be regarded as an important context for youth crime prevention. It is often assumed that involving youngsters in sport, art or science programmes can prevent them from (re)offending. In theory, these projects might have a positive impact on the behaviour of children and adolescents through four main mechanisms: (1) opportunity, (2) peers, (3) social bonds and (4) physical and mental well-being. In practice however, there appears to be little scientific evidence for these mechanisms. First of all, solid scientific project evaluations are scarce. Secondly, available evaluations are often hampered by several methodological problems. It is therefore difficult to identify good or promising practices within this field. In order to illustrate this debate, as well as to inspire readers, we presented a small selection of good or promising practices, each with their own strengths and weaknesses.

What are the implications for crime prevention policies in a European context? First, it seems that investing in scientific research in order to develop theoretical frameworks for crime prevention projects, instead of creating “ad hoc” projects, is crucial. High-quality evaluations in order to clarify what works, and especially *why*, are needed. Quality standards for solid evaluations of crime prevention projects could help to close this gap.

However, it is important to spread information on good and promising practices throughout Europe in order to encourage replication of projects in Member States. The question of local contexts is of course an essential issue (Sagant & Shaw, 2010, 181). According to Wikström (2007, 68-69): *(...) particular programmes may work better in some settings than in others, that is, their effectiveness may be context-dependent. It is therefore important to consider (build evidence concerning) in which contexts a particular programme may be effective. Currently, such evidence is scarce.*



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