

Evaluating a Rugby Sport Intervention Programme for Young Offenders

David Williams

Leann Collingwood

Stefanie Schmeer

Univeristy of Hertfordshire

James Cole

Sarcens Sport Foundation

Author Note

Dr David Williams, Senior Lecture in Forensic Psychology, Department of Psychology, University of Hertfordshire (corresponding author)

Leanne Collingwood, MSc Research Methods in Psychology student, Department of Psychology, University of Hertfordshire

James Cole, “Get Onside” course coordinator, Saracens Sport Foundation.

Dr Stefanie Schmeer, Principal Lecturer in Psychology, Department of Psychology, University of Hertfordshire

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Abstract

Purpose: Interventions intended to aid offender re-entry, rehabilitation and desistance based around specific sports and championed by sporting institutions have been introduced in custodial settings. Though research evaluating these is positive (Meek, 2012), conclusions are often hampered by the absence of control groups in such work. This study evaluated the Saracens “Get Onside” rugby based intervention at HMPYOI Feltham, while employing a non-randomised control group.

Design and Methodology: In total 24 young offenders took part. Those in the treatment condition experienced a ten-week course which included a range of activities leading to accredited awards, exercises in functional skills in literacy/numeracy and 72 hours of rugby sessions. Those in the control condition were matched on key static factors, crime attitudes and aggression. Self-reported measures of pro-crime attitudes, aggression, self-esteem, and impulsivity were taken once before the start, once during, and at the end of the course for both groups.

Findings: As predicted, self-reported scores measuring attitudes towards aggression and crime did differ significantly across groups, with those experiencing the intervention showing more positive values by the end of treatment compared with others. However, measures of impulsiveness and self-esteem showed no change.

Limitations: Revisions are suggested in respect of both the self-esteem and impulsivity measures, and future work needs better control over the match between treatment and comparison groups.

Originality/Value: Concerns over the potentially iatrogenic effects of contact sport interventions with offender groups may be misplaced, and the benefits of sporting interventions are replicated in a between groups design.

Keywords: Young, Offenders, Prison, Sports, Intervention, Treatment

Evaluating a Rugby Sport Intervention Programme for Young Offenders

A growing body of research now attests to the part that sport and physical activity may have in encouraging pro-social attitudes and behaviour in young people at risk of offending (Meek, 2014). Of course, simply engaging in any constructive activity is diversionary in the sense that it usually removes the individual from those situations, peer contacts, and routines that are associated with offending or anti-social behaviour (e.g., Felson, 2000; Crabbe, 2006). Beyond this, Sandford, Duncombe, and Armour (2008) discuss some of the ways in which sport might actually lead to increased social responsibility and decreases in offending behaviour and criminogenic factors. There are the obvious benefits in terms of physical health (Meek & Lewis, 2012), but it may also enhance an individual's confidence, self-esteem, and mental health generally (Ekeland, Heian, & Hagen, 2005). It may encourage altruistic attitudes and a sense of social responsibility (Coalter, 2005). It may satisfy the need for excitement and risk that would otherwise find expression in less constructive ways (Smith, & Waddington, 2004). It may encourage interpersonal collaboration and cooperation (team work). It may promote social and moral responsibility and provide a framework within which discipline can be valued, and self-discipline may develop (Nichols, 1997; Crabbe, 2006). Further, it may enhance concentration and attention (Palermo et al., 2006). It may address social inclusion needs by fostering positive outreach links with socially respected organisations. Similarly, it offers the potential for re-engagement with training and employment, directly through reference availability and indirectly by contributing towards a routine activity (Kelley, 2011). Finally, physical sport organisers can make a valuable and positive contribution by providing a role model perceived as credible, fair, consistent and worthy of respect by their sporting achievements (Fraser-Thomas, Cote, & Deakin, 2005; Riley & Rustique-Forrester, 2002).

Early reviews assessing the impact of physical sport upon a range of measures in young offenders, or 'at risk' groups, were largely positive (e.g., West, & Crompton, 2001; MacMahon, 1990). This may be one reason why sport has been traditionally seen by policy makers as something of a powerful solution to a range of community ills, including social exclusion, mental well-being and the diversion or rehabilitation of offender groups (Kelley, 2011). However, the roots of social disaffection are complex, and seldom uni-causal. Trying to establish a simple relationship between any intervention and reductions in anti-social behaviour is notoriously difficult (e.g., Evans-Chase, & Zhou, 2012). So it is hardly surprising that more recent reviews have been more equivocal when higher standards of methodology are applied (e.g., Haudenhuyse, Theeboom, & Nols, 2013; Lubans, Plotnikoff, & Lubans, 2012), yet despite this caution, findings remain generally supportive (Nichols, 2007; Sandford, Armour, & Warmington, et al., 2006).

One of the reasons why sport may not always prove beneficial is that it may not be a 'one size fits all' solution. Some may find participation in sport alienating and humiliating, especially where success is hard to obtain, or structured activities replicate often resented institutional control and authority (Sandford, et al., 2006; Andrews & Andrews, 2003). This is particularly problematic for young offender groups where evaluation apprehension and negative social comparisons may already be of concern. Those most disaffected and socially disengaged may not even wish to take part in 'organised' activities, whether sporting or not (Lubans, et al., 2012; Andrews & Andrews, 2003). There is also a risk that where an activity is poorly matched to a young person's needs it could make matters worse (Sandford et al., 2008). For example, Basile, Motta, and Allison, (1995) found that asking young people with conduct disorders to undertake relatively monotonous activities reduced pro-social attitudes and enthusiasm for sport generally.

Others have questioned whether the potentially violent nature of some contact sports may actually have negative effects. In their review of five studies investigating the relationship between contact sports and offending behaviour, Jenkins and Ellis (2011) found those who engaged in aggressive sports were more likely to be involved in hostile and violent incidents, especially of a sexual nature (Table 2, p.120). However, these authors make the point that much depends upon the philosophy that attends sports training. In the case of combat sports, or those where contact is an essential aspect, activity coupled with strong values of sportsmanship and self-discipline are likely to be key in retaining the positive benefits found for sport elsewhere (see also, Palermo et al., 2006; Trulson, 1986 for supportive findings). Where a framework of such pro-social values does not exist, it is possible that iatrogenic effects may be found for aggressive contact sports (Endresen, & Olweus, 2005), although much of this also depends upon whether the activity incidentally fosters positive peer relations, or allows and maintains deviant group contacts and values (Jenkins & Ellis, 2011). Put simply, a range of sports have been shown to have benefits for 'at risk' groups and young offenders, provided these are carefully delivered and structured, offered to suitable candidates in a supportive context, where activities are framed with positive values, and the contacts made and sustained are with non-deviant peers. On the other hand, those taking part in intervention programmes which lack sufficient support and structure are at the highest risk of re-offending (Abbott & Barber, 2007).

Sport-based interventions within the criminal justice system

In recent years a number of initiatives have been instantiated across both custodial and non-custodial settings, which have been specifically designed to reduce youth offending and recidivism. Programmes such as 'Positive Futures', 'Positive Activities for Young People' (PAYP), and 'Police Community Boxing Clubs' have sought to support young people at risk of offending. Positive Futures (launched in 2000), is a national sport and activity-based social inclusion programme which helps individuals with education and employment in order to prevent them from engaging in criminal activities (Home Office, 2006). PAYP is similar to Positive Futures, but instead helps younger individuals (aged 8-19) who are at risk of social exclusion, committing crime, or becoming victims of crime. PAYP offers a wide range of activities including arts, education, multimedia and sport (Department of Education, 2006).

More recently, '2nd Chance Sports Academies' have been established in a number of Young Offender Institutions. These 12-15 week long structured programmes are designed to improve the skills, behaviour and attitudes of those taking part through sport. Participants receive mentoring, and importantly are given placement opportunities which may continue after release (Meek, 2012). Various programmes have been delivered in partnership with football clubs, but two have been established at HMP YOI Portland based upon rugby in liaison with the RFU (Rugby Football Union, who supply coaching skills). These rugby-based programmes have been subject to an evaluation reported by Meek (2012). A total of 81 young offenders took part in the critical scheme (54 completed it). At the outset, a mean sample score of 50% on the OGRS (Offender Group Reconviction Scale, Taylor, 1999) suggested programme participants were initially at medium risk of reconviction based on static indicators, and the modal pre-conviction concerned an offence against the person. In essence, this indicated that the treatment sample was broadly representative of the general prison population for this age group and establishment, so obvious indicators of self-selection were not considered problematic.

A range of psychometric measures were taken by participants prior to commencing the programme, at completion and in a 2 - 16-month follow-up period. These included beliefs about aggression, non-violent strategies, self-esteem and self-concept, impulsivity, conflict resolution and aggression, attitudes towards offending, and finally re-conviction data was also available for the 50 offenders who were subsequently released. Meek (2012, p.14) reports an 18-month re-conviction rate of just 18% for completers, which compares with 48% for general prisoners released from HMP YOI Portland in the previous year (MoJ, 2011). This impressive figure is qualified by supplementary

data, which appear to show reconviction rates for a number of other sports academies much closer to those usually obtained. This generally positive picture is also reflected in the results for psychometric measures across the three critical time periods. Here 'beliefs about aggression', 'impulsivity', and 'attitudes towards offending' all showed a significant reduction at the 0.05 level over time (a somewhat generous alpha level, given there were 17 measures in this analysis, though not all appearing as independent constructs). A tandem qualitative analysis found psychological themes including emotional management, interpersonal relations between both staff and prisoners and hope for the future were important, and reported as having improved. According to Meek (2012) "*the findings illustrate the strengths of the 2nd Chance sports academy as a means of engaging with young men in prison, improving attitudes and behaviour, and meeting specific resettlement needs*" (p. 42). Results from the rugby-based 2nd chance Sport Academy scheme at HMP YOI Portland would appear successful.

The present study: Evaluating the 'Get Onside' rugby sports programme

Following the positive results described above, Meek (2012) suggests (recommendation 2/3) that similar programmes should be sensitively introduced elsewhere in the prison service with attempts made to actively encourage outside sporting organisations to get involved on the coaching side. However, Meek (2012) is also quick to point out that the basis for this expansion depends upon a study whose conclusions are inevitably limited by a number of inherent difficulties associated with work in this area. Clear suggestions regarding future research are made, including the need to have a formal comparison group, ideally a matched sample, against which the outcomes of the programme may be compared. A comparison group is especially important in order to make the claim that it is exposure to the treatment itself that affects change in measures, over and above that which might be expected as a matter of course during custody. The current study was designed to deal with this problem when evaluating the 'Get Onside' intervention programme developed between the 'Sports Foundation' arm of Saracens Rugby Club (SRC) and HMP YOI Feltham. The second round of this scheme which attempts to engage young offenders aged 18-21 years using the sport of rugby, began in March 2012. It offers offenders the chance to gain nationally recognised vocational qualifications, develop positive attitudes towards themselves and others, support personal development, reduce psychological criminogenic factors, aid re-engagement with society, and provide resettlement opportunities (e.g., through voluntary work, education and employment). Ultimately it is hoped that providing such opportunities to these young offenders may encourage desistance from crime in the future. The intervention lasts 10 weeks and includes a range of activities leading to accredited awards (141 hours), including a Community Sports Leadership

Award (CSLA), the Rugby Ready award, and functional skills in English levels 1 and 2. There are also 72 hours of rugby sessions, which provide individuals with the opportunity to coach, teach and officiate. In addition social inclusion workshops (72 hours) are presented involving topics such as victim awareness, anger management and an introduction to working with young people. Delivery of the programme is shared among prison service Physical Education staff at HMP YOI Feltham, Saracens RFC coaches and various outside agencies.

The 'Get Onside' programme provides an uncommon opportunity to evaluate the effectiveness of rugby-based sport intervention within a custodial setting, but with the addition of a control group that would allow more rigorous inferences to be drawn than previously possible. A sample of 24 young offenders took part, 11 in the intervention group and 13 in a control group made up of those willing to complete questionnaires but not exposed to the programme. Attitudes towards offending (victim hurt denial and reoffending), self-reported measures of aggression, impulsivity, and self-esteem were assessed for both groups; one week before the intervention, one week before the end of the intervention, and one week after the intervention had ended. In line with the results reported by Meek (2012) for the '2nd Chance Sports Academy' at HMP YOI Portland, it was expected that those attending the programme would not only demonstrate significant improvements across these key measures after commencing treatment, but that they would also do so when compared with controls.

Method

Participants

All participants were male, aged 18 to 21 years, from a variety of ethnic backgrounds, and currently placed in custody at HMP YOI Feltham. Participants in the intervention group (n=11) were recruited through the Saracens Rugby Outreach coordinator who advertised the course in the prison and selected suitable volunteers. Suitable participants had to adhere to specific criteria as follows: 1. they had received a short term sentence/committed a minor offence; 2. their crime still allowed them to work with children; 3. they were eligible for release on temporary license; 4. they had to have a consistent record of good behaviour; 5. they had expressed a commitment to making a change. Participants in the control group (n=13) were opportunistically recruited based on suitability and willingness to participate. One participant failed to complete in the treatment group because of a misconduct incident outside the programme, which meant their removal from it.

It was possible to check the equivalence of groups before the intervention took place. In terms of

current sentence length in months (intervention $M=22.56$, control $M=27.50$, $p=0.61$, n.s.), scores on a short form ASSET measure (intervention $M=6.55$, control $M=6.00$, $p=0.77$, n.s.), and ethnicity (no ethnicity differed by more than one person across groups and the frequency profile of the full sample was trimodal, 7 African, 5 White, 5 Caribbean) the two groups did not differ significantly. There were also no significant differences between groups in terms of the four key dependent measures taken at the pretest period (i.e., they were equivalent on outcome measures at the beginning of the programme, with independent samples t-test p values ranging between 0.18 and 0.86).

However, there was a significant difference between groups in terms of age (intervention $M=19.55$, $SD=0.82$, control $M=18.77$, $SD=0.83$, $t(22) = -2.29$, $p=0.03$), with those on the intervention group being just over a year older than control participants. The majority in the control group had committed violence against the person (46.2%) and crimes including the use of weapons (38.5%), whereas in the intervention group, the majority had committed robbery (63.6%) and weapon offences were relatively rare (9.1%). There was also a higher percentage of burglary offences in the intervention group (27.3%) than in the control group (7.7%). In summary, participants were equivalent across groups in the key areas of sentence length, predictions of future offending and ethnicity. However, the intervention participants had a mean age 13 months older than controls, and there is some descriptive suggestion that robbery and burglary were more common offences for the intervention group.

Design

This study employed a pre-post intervention design with a non-randomised control group to evaluate the 'Get Onside' sporting intervention programme for young offenders at HMP YOI Feltham. The independent variables were; treatment (intervention vs. control) and time (t-1, one week prior to the intervention vs. t-2, one week before the end of the intervention, vs. t-3, one week after the intervention). The main dependent variables were general attitudes towards offending (including victim hurt denial and anticipated reoffending); self-reported aggression (including physical and verbal aggression, anger and hostility); self-reported impulsivity, and self-esteem. In addition, risk of reoffending was measured at the beginning of the study using an ASSET tool in order to test equivalence between the intervention and control group at the outset. The predictions of the study were as follows: that self-reported scores measuring attitudes towards aggression, crime, impulsiveness and self-esteem would differ significantly across groups such that those experiencing the intervention would show more positive values by the end of treatment.

Measures

The same 38-item questionnaire booklet was given to all participants at different stages during the study period. As there were to be repeat administrations of the same questionnaire, it was important to ensure that this was as brief as possible in order to avoid respondent fatigue and so compromise the quality of data obtained. Short and easily administered measures were identified based on previously published questionnaires used with young people and young offenders, these appear as follows:

Attitudes towards aggression: The first 12 items measured attitudes towards aggression (physical, verbal, anger and hostility). These were derived from Bryant and Smith's (2001) refined version of the Buss-Perry aggression questionnaire. Examples of items included '*I have threatened people I know*' and '*I have trouble controlling my temper*'. These items were rated on a six-point Likert scale, ranging from '*not at all characteristic of me*' (1) through to '*very much characteristic of me*' (6). Adequate internal reliability alphas were obtained for this combined scale, with values falling between 0.93 and 0.95 across the three occasions it was measured in this study.

Self-esteem: The self-esteem measure consisted of one item, '*I see myself as someone who has high self-esteem*'. This is a substantially validated short form measure which in previous work has a reported concurrent validity with the Rosenberg Self-Esteem Scale of 0.93 and reliability estimated from longitudinal data of 0.75 (Robins, Hendin & Trezesniewski, 2001). This item was scored on a scale of 1=*strongly disagree* to 5=*strongly agree*.

General attitudes towards offending: The measure for this construct comes from a popular scale developed by Frude, Honess, and Maguire, (2009), which consists of 20 items addressing general attitudes towards offending (e.g., '*Committing crime is quite exciting*'), victim hurt denial (e.g., '*My crimes have never harmed anyone*'), and anticipation of reoffending (e.g., '*I wouldn't commit the offence/s again*'). These were rated on a five-point agreement scale, so that a high score indicated a pro-crime attitude. Adequate internal reliability alpha values were obtained for this combined scale, with values falling between 0.77 and 0.94 across the three occasions it was measured.

Impulsivity: The non-planning sub-scale of the Patton, Stanford, & Barratt (1995) Barratt Impulsiveness Scale (BIS) was used to measure impulsivity. This consists of five items, (e.g., '*I plan tasks carefully*' and '*I plan for job security*'). Items were rated on a four-point Likert scale ranging from *rarely/never* (1) to *almost always/always* (4). This scale returned reliability values

between 0.69 and 0.90 within this study. The lower end values fell below that reported in previous work (e.g., 0.79, Spinella, 2007). It is likely that a combination of the smaller sample available here and the limited relevance of some items to those in custodial settings accounts for this.

Risk of reoffending: The risk of reoffending was measured using a sub-section of the ASSET assessment profile (Youth Justice Board, 2011). This is a short and simple way of tapping key static factors predictive of re-offending. Measures on the ASSET include offence type, age at first reprimand, warning or caution, age at first conviction, and number of previous convictions. A score out of four is given for each of these measures; the maximum total score is 16 and the minimum score is 0.

The treatment intervention

The Get Onside programme is a ten week (141 hrs) rugby-themed course that can lead to basic qualifications in coaching, rugby refereeing, groundsmanship, and a Duke of Edinburgh Bronze, and Community Sports Leadership awards. It is conducted by a course coordinator from the Saracens Sport Foundation at HMP YOI Feltham in liaison with their gym department. Basic literacy and numeracy are taught as well as skills in preparation for work, anger management and financial awareness. There is also goal setting around physical fitness and conditioning. The heart of the programme is found in a work book which participants keep. This is a diary where activities can be scheduled, progress recorded, and tasks presented (such as basic numeracy tests). In order to achieve these goals, participants engage in group discussion, small group work, practical exercises, and of course they practice and officiate rugby. In essence, the programme addresses a range of issues around personal development drawing upon pro-social values allied to the sport of rugby.

Procedure

Once fully informed consent was obtained, participants were invited by prison personnel to complete a questionnaire booklet containing all the measures listed above on three occasions over a 13-week period. They were asked to do so in week 1 before the scheme commenced, and again in week 11 just before the end, and in week 13 after it had ended. Questionnaires were completed in the individual's prison cell and took approximately 30 minutes to complete. On no occasion did any participant show unwillingness to assist in this process, and none was offered any advantage or incentive for taking part beyond what might be gained from the scheme itself, having freely decided to take part.

Results

Data obtained using the measures described above was used to test the two main hypotheses of the study. The relevant descriptive statistics for valid cases appear in Table 1 below.

Table 1.

Mean scores for aggression, self-esteem, general pro-offending attitudes and impulsivity, across treatment conditions and the three points of measurement in time.

Measure and Time	Treatment Condition	Totals

t-1=one week prior to intervention, t-2 one week prior to end of intervention, t-3, one week after the intervention. A high score indicates more of the construct measured.

A series of mixed two-way analyses of covariance (ANCOVAs) was undertaken to test the effect of treatment condition over time using the four key measures presented in Table 1. Treatment condition was dealt with as a between-subject factor, while time was a within-subjects factor. To adjust for the effect of maturity differences in response to measures, age was entered as a covariate in all cases. However, this did not make a significant contribution as a covariate in any of the following analyses, but given its theoretical importance it was retained for the analysis presented here (its exclusion did not alter the pattern of findings either, nor did it correlated with any dependent measure). Further, post-hoc power calculations are provided for this analysis assuming a medium effect size in all cases (Cohen, 1988; O'Keefe, 2007). Finally, to control for the inflated risk of a type one error, a Bonferroni adjustment was made to the alpha level for each of the four omnibus ANCOVAs ($0.05/4=0.013$) reported.

Aggression. Assumption testing revealed that sphericity was violated in the case of time on this measure, so the Greenhouse-Geisser correction was used. There was no significant main effect of time on aggression, $F(1.37,31.01)=0.21$, $p=0.74$, $\eta^2=0.01$, $(1-\beta=0.78)$. There was no significant main effect of treatment either, $F(1,21)=1.79$, $p=0.19$, $\eta^2=0.08$, $(1-\beta=0.33)$. However, the interaction between time and treatment condition was significant, $F(1.47,21)=6.24$, $p=0.01$, $\eta^2=0.23$, $(1-\beta=0.78)$. To examine the interaction, a test of simple effects revealed that for the control group, the means for time 1 ($M=31.01$, $SD=15.03$) and 2 ($M=32.08$, $SD=13.62$) differed significantly from time 3 ($M=41.58$, $SD=12.45$), $t(12)=-2.55$, $p=0.02$, and $t(12)=-2.30$, $p=0.04$, respectively. This was repeated for the treatment group, where the mean for time 1 ($M=31.63$, $SD=14.42$) differed significantly from time 3, ($M=23.27$, $SD=8.38$), $t(10)=2.54$, $p=0.03$. Within-subjects contrasts for the control group also revealed a significant linear trend over time [$F(1,12)=6.52$, $p=0.02$, $\eta^2=0.35$], such that by the end of the programme period this group had higher aggression scores (no quadratic or other paired effects were significant so are not reported). Conversely, the same test applied to the treatment group revealed a significant linear trend over time in the opposite direction [$F(1,10)=6.48$, $p=0.03$, $\eta^2=0.39$], such that these participants had reduced aggression scores by the end of the programme (again, no quadratic or other paired effects were significant so are not reported). Taken together the results for the aggression measure suggest that the control and treatment group differed over time. This seems to be the result of an improving trend in the case of the treatment group, and perhaps a sharper negative change occurring towards the end of the time period for control participants, which is not related to the sport programme.

Self-esteem. Again, assumption testing revealed that sphericity was violated in the case of time on this measure, so the Greenhouse-Geisser correction was used. There was no significant main effect

of time on self-esteem, $F(1.45,30.55)=0.48$, $p=0.56$, $\eta^2=0.02$, $(1-\beta=0.77)$. There was also no significant main effect for treatment, $F(1,21)=1.09$, $p=0.31$, $\eta^2=0.05$, $(1-\beta=0.30)$ and the interaction between time and treatment condition was not significant either, $F(1.45,30.55)=0.85$, $p=0.42$, $\eta^2=0.04$, $(1-\beta=0.77)$.

Aggression scores

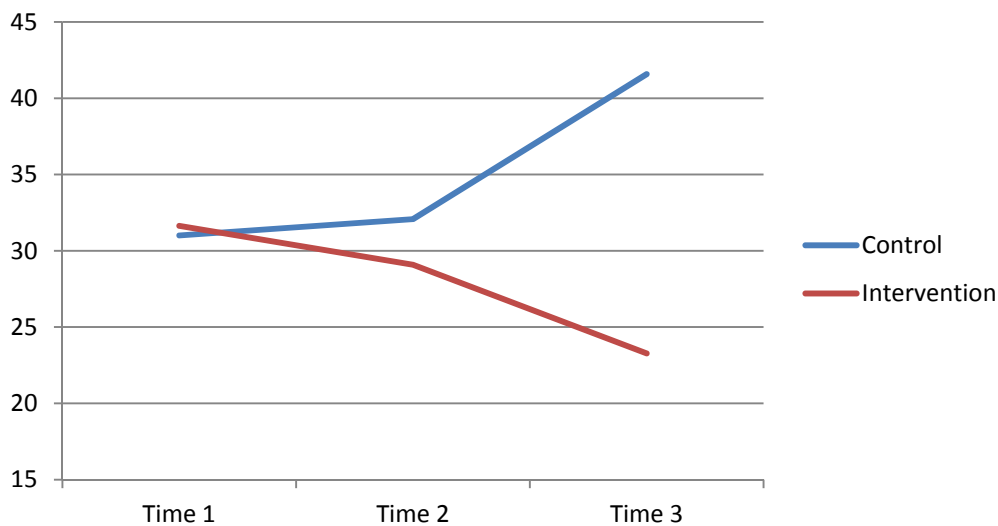


Figure 1. The significant interaction effect between time and intervention condition on attitudes towards aggression (a high value indicates a more aggressive attitude).

Offending Attitude Scores

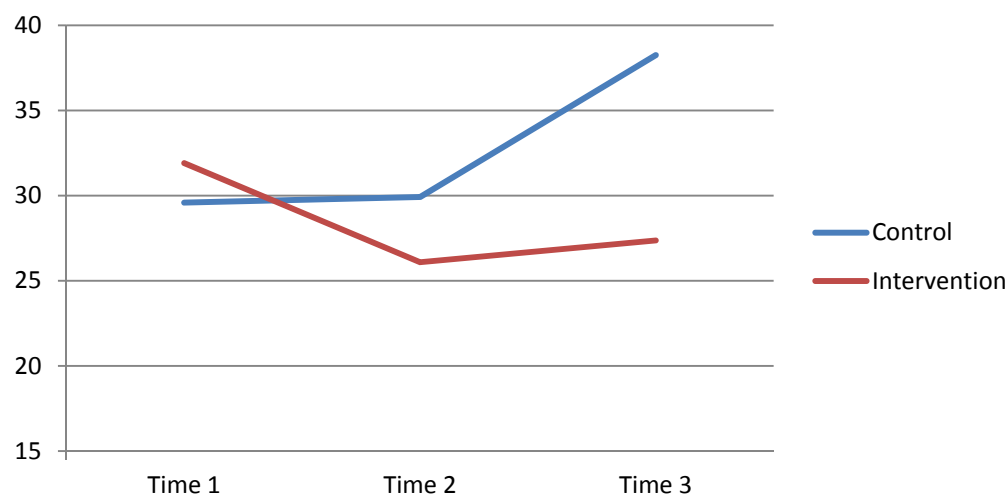


Figure 2. The significant interaction effect between time and intervention condition on pro-offending attitudes (a high value indicates attitudes in general support of crime).

Offending Attitudes. The ANCOVA testing offending attitudes by time and condition found no significant main effect of time, $F(2,42)=0.86, p=0.42, \eta^2=0.04, (1-\beta=0.82)$. There was also no significant main effect of treatment, $F(1,21)=1.88, p=0.18, \eta^2=0.09, (1-\beta=0.31)$. However, the interaction effect between time and treatment was significant, $F(2,42)=5.92, p=0.005, \eta^2=0.22, (1-\beta=0.82)$. In order to explore this interaction further, a test of simple effects revealed that for the control group, the means for time 1 ($M=29.59, SD=8.81$) and time 2 ($M=29.92, SD=8.32$) differed significantly from time 3 ($M=38.25, SD=11.19$), $t(12)=3.48, p=0.005$, and $t(12)=2.86, p=0.01$, respectively. Also, the within-subjects contrasts for the control group revealed no significant linear trend over time [$F(1,11)=0.22, p=0.65, \eta^2=0.12$]. This analysis of simple effects was repeated for the treatment group. Here the mean for time 1 ($M=31.91, SD=8.41$) differed significantly from the mean for time 2 ($M=26.09, SD=7.94$) and marginally significantly from time 3 ($M=27.37, SD=8.86$), $t(10)=-4.21, p=0.002$, and $t(10)=-1.98, p=0.07$, respectively; and the within subjects contrasts for the treatment group again revealed no significant linear trend over time [$F(1,9)=0.43, p=0.52, \eta^2=0.05$]. In sum, the analysis of offending attitude scores indicates that the treatment did have a positive impact when comparing the beginning of the programme with the end (t1-t2), whereas the control group shows an adverse rise towards the later stages of the programme (t2-t3), but independently of it.

Impulsivity. Finally, the self-reported measure of impulsivity was tested using the same ANCOVA as before. This found that there was no significant main effect of time on self-esteem, $F(2,40)=0.177, p=0.83, \eta^2=0.01, (1-\beta=0.89)$. There was no significant main effect of treatment, $F(1,20)=1.94, p=0.17, \eta^2=0.09, (1-\beta=0.30)$ and the interaction between time and treatment condition was not significant either, $F(2,40)=1.49, p=0.24, \eta^2=0.07, (1-\beta=0.89)$.

Results Summary

It was predicted that self-reported scores measuring attitudes towards aggression, crime, impulsiveness and self-esteem would differ significantly across groups, such that those experiencing the intervention would show more positive values by the end of treatment. The results indicate that both attitudes towards offending and aggression did show a significant improvement, and much of this was independent of declines found for the control group towards the end of the programme. However, no significant differences were found for either the self-esteem or impulsivity measure.

Discussion

The current study evaluated a 'Get Onside' sport intervention course by comparing those who had taken part with those who had not, on measures of general attitudes towards offending, aggression, self-esteem and impulsivity. With assessments taken before, during and after completion of the programme it is possible to say something of the different pathways, which those who do and do not undertake the intervention follow. Though there are limitations, this design offers clear and simple answers regarding the effectiveness of the treatment in terms of quantitative self-reported outcomes, with some further qualitative responses (for an excellent account of a related programme reporting idiographic data see Meek & Lewis, 2014). The results show that pro-crime and aggressive attitudes did diverge from an equal baseline over time and by treatment, however this positive result did not extend to indicators of self-esteem and impulsivity. These findings are broadly consistent with previous research, and may further attest to the benefits of the sport intervention approach within YOI settings in terms of factors specifically related to pro-crime attitudes (Andrews & Andrews, 2003; Meek, 2012, 2014; Meek & Lewis, 2014; Parker, Meek, & Lewis, 2014), and of interventions generally in this respect (Banse, Koppehele-Gossel, Kistemaker, Werner, & Schmidt, 2013, for a review).

One of the strengths of this study is that it has employed a comparison group, albeit somewhat imperfectly. With some qualification, this allows the inference that effects would not have occurred anyway with the passing of time in this setting (a problem often found with intervention research, e.g., Banse, et al., 2013). The groups did differ by age (13 months) at the outset, and this might be related to differences in crime risk (e.g., Loeber, 2012). However, key indicators of offence risk (ASSET), current sentence length, and scores on the dependent measures at the beginning of the programme did not differ. It remains possible that additional maturity rendered older participants more responsive generally to their experiences in prison, so the analyses were undertaken with age entered as a reliable covariate and without. This did not alter the pattern of findings. Further, age was not significantly correlated with any dependent measure on any of the three time occasions (all r s values were within the range $-.31$ to $.18$ and were not significant). In this study it seems unlikely that age explains these results, perhaps mainly because the gap between the groups is relatively modest and falls near the peak of a somewhat flexible age crime curve (Loeber, & Farrington, 2014).

It is worth examining the extent to which the two groups were equal in other respects. Once intervention participants had expressed an interest, they were selected for inclusion if they had a

record of good behaviour, and were committed to change. The risks of self-selection, and intervention selection bias are well known (Harris, Rice, & Quincey, 1998; for a review see Larzelere, Kuhn, & Johnson, 2004), with effect sizes falling from $(d) = 0.24$ when non-equivalent groups are used, to $(d) = 0.04$ when purely randomized selection is employed (Redondo, Sanchez-Meca, & Garrido, 1999; Larzelere, et al., 2004). It may be that the groups differed based upon unmeasured pre-existing factors such as a readiness for change or conduct adjudications. However, there was no significant difference found between the groups on the four outcome measures used in the pre-treatment period. In other words, at the outset groups were similar in respect of the key outcomes measures. We nevertheless acknowledge that ideally participants ought to be selected based upon matched criteria, but often researchers working in applied settings are constrained in this respect (as was the case here). Random selection and close matching are going to be difficult in custodial settings, at times even ethically problematic. Nevertheless, future work could be improved by attempting to select into the control group based upon whether participants would have met all the inclusion criteria for treatment, and if this is not possible, to take measures of 'readiness to change' for the purposes of analysis which would seem one of the more obvious potential confounds for intervention programmes (McMurran, et al., 1998). In sum, obtaining a close matched control in real world settings is never easy, and the groups here likely differed to some extent. Despite this, there is reason to believe that the groups were equivalent in respect of the outcome measures taken at the outset, and key static risk and demographic factors, so subsequent differences in outcomes by the end of treatment are plausibly attributed to the settings each group experienced in this period.

Pro-criminal attitudes were measured using Crime-pics II which is a self-administered measure of dynamic general attitudes towards crime that consists of items such as "*I will always get into trouble*" and "*Committing crime is quite exciting*", and has been used previously in sports intervention research (Frude, et al., 2009; Meek, 2012). That pro-criminal attitudes were significantly reduced in the treatment group is no small achievement. The trend is towards an improvement over time, with a significant difference from time 1 to 2 for treatment participants, suggesting the programme did have a positive impact. However, the opposite trend was found for the control participants, and it was notable that their attitudes worsened significantly between time 2 and 3, which is near the end and after the programme ended. This is an interesting finding, which the study was, however, not designed to examine. Qualitative interviews were undertaken after the programme ended, and we speculate that the control group responses from the last round started to be more open (and more frank), as the researcher began to get to know and be trusted by the control participants more (and who appeared more skeptical at the beginning). Following this, a

recommendation for future work is that pretreatment testing take place on more than one occasion over time, in order to establish a stable baseline of self-reporting (this was intended here, but proved impossible because to a certain extent inmates are a transient population at HMP YOI Feltham).

This study did not take a measure of recidivism, which may be considered perhaps the most valid indicator of successful intervention (Friendship, Beech & Browne, 2002). However, while a recent meta-review suggests effect sizes between general criminal attitudes and recidivism are positive but modest ($r \approx 0.20$; Banse et al., 2013), even this relationship has not always been found when Crime-pics II is used (Wilkinson, 2005, Table 5). In essence, we can say that there was a positive change in crime attitude scores, and it is likely that this is due to experiencing the programme, but whether this affects rates of recidivism will require further work, and in particular using a design that not only compares attitudes across treatment and control conditions at the group level, but also allows the further assessment of correlations between individual attitude scores at the end of the programme and conviction rates at two years for each participant (this is required to extend the claim that not only does the treatment change attitude, but that this is the main causal pathway in any desistance effects observed, Banse et al., 2013).

The quantitative findings in relation to pro-crime attitudes seem to be supported by feedback obtained in semi structured interviews conducted during the study. There were noticeable differences in responses given during these encounters in that no participants in the intervention group described themselves as unchanged by their experience of prison, for example: *“In a way yeah, I’ve become much calmer and cool and collective and I’ve like before reacting to something I’ll sit back and think about it first but in other terms in the past something would happen and I’d just react without thinking.”* (IP3). Further, they seemed more able to elaborate on their mistakes: *“If I wasn’t involved in what had happened I wouldn’t have like learnt the things I have so sometimes it’s just you like a negative, a negative is only a negative if you don’t learn nothing from it”* (IP1). It is difficult to say exactly what process within the intervention brought about the reduction in the pro-criminal attitudes observed. The programme is designed to foster positive personal development with instruction and activities in the following areas: basic literacy and numeracy, sports traditions, respect, dignity, pride, self-awareness, behaviour management, communication skills, substance abuse, financial management, sports injuries, victim awareness, friendship, honesty, career advice, creating a CV, and a range of rugby awards. The relative contribution of these is uncertain, though future work could attempt to take measures at the end of individual sections to shed some light on this. The beneficial effects have already been established for programmes with related content that employ basic literacy, thinking skills, reasoning skills, and

aggressive behaviour control (Travers, Wakeling, Mann, Hollin, 2013; Jolliffe, & Farrington, 2009; Friendship, Blud, Erikson, Travers, & Thornton, 2003). This programme adds a rugby sport dimension, which forms the context for almost every exercise. It may be that this is the sugar with which more conventional positive exercises are coated, or that the extra sport activity side of the programme is intrinsically beneficial. In any case, all those in the intervention group expressed very positive comments about the course; for example: *“I would definitely do it [again], it was a good course man, the best thing I’ve done since I’ve been in jail.”* (IP4); *“The rugby course I loved!”* (IP2); *“The rugby course has shown me a kinda new light because obviously you can still do rugby but you can still work round the background as a fitness instructor or help the people playing out and show them what to do if they wanna become a certain, if they wanna get out a certain thing from it.”* (IP3). It seems something may work, and the addition of a rugby theme and ethos was either part of it, or part of the attraction to it.

A concern often expressed regarding contact sports, is that they may encourage antisocial and aggressive behaviour (Jenkins & Ellis, 2011; Abbott & Barber, 2007; Endresen, & Olweus, 2005). This is partly because excessive exposure to ‘macho’ values and the normalising of violence in permitted rituals of play may enhance the expression of negative behavior in other settings. However, much depends on the attendant values, and structure of activities. The “Get Onside” program fosters strong values of sportsmanship; it sets out ‘squad values’ at the very beginning, and throughout there is emphasis upon the positive aspects of competition, self-respect through success, and a team spirit. Indeed, it is possible that a sport such as rugby is particularly well suited to meeting aggressive catharsis and natural excitement needs in a constructive and socially structured setting (Jenkins & Ellis, 2011). What is more, the acquired skills in officiating are likely to help develop understanding of conflict situations and the self-control needed to deal with related emotions. The results presented here in respect of aggression support the latter conclusion. The trend was towards lower scores in aggression for the treatment group, and an analysis of simple effects revealed that this effect was independent of that found for control participants. In essence, it appears that where a strong framework exists of pro-social values when delivering contact sport interventions, concerns regarding potential iatrogenic effects appear misplaced.

Finally, both impulsivity and self-esteem showed no difference by time 3 as a function of condition. Unfortunately it is not possible to rule out poor measurement selection here. In the case of self-esteem, although the single item recommended by Robins, et al., (2001) has the advantage of brevity, it was our experience that the basic idea of self-esteem referred to in the question was not fully understood by all. Future work may well find a multi-item scale better suited for this purpose.

Similarly, the impulsivity measure may have been too brief, with only the BIS (Patton, et al., 1995) planning subscale used, rather than the full 30 items. Feedback from participants suggested that these items may not have been as appropriate to their daily lives as was hoped, and again either the full scale would be better, or perhaps a shorter alternative (e.g., the I.19, Eysenck, & Eysenck, 1991). Based on these limitations, no conclusions are drawn regarding the course on either of these measures.

Conclusions

This study evaluated the Saracens “Get Onside” sport intervention course offered at HMP YOI Feltham. Following the recommendations of Meek (2012) this study employed a control group (non-randomised) as part of the design. This allows for stronger inferences to be made regarding the effectiveness of the course than would otherwise be possible, and is a surprisingly uncommon feature of sport intervention evaluations. However, the quality of control groups may vary on a continuum (Larzelere, et al., 2004). It may not always be possible to obtain a fully randomised control, with those obtained in applied settings falling at stages short of this. It is recommended that where possible future work employs selection criteria in addition to the means used here to ensure maximum participant equivalence at the outset of an evaluation. This would be an advance on this study, as would analysis at the individual level of correlations between the measures at the end of treatment and recidivism at a later follow-up period. Despite these limitations, and consistent with previous work that has not employed a control, it was found here that the course did have a positive impact on attitudes towards crime as measured at the end of the course. Perhaps more importantly, there was also no suggestion that indicators of aggression were raised as a result of participation, on the contrary, course members enthused about their experience and showed lower aggression in self-report measures than controls by the end of the programme. Practitioners often face a dilemma regarding interventions that involve physical contact in the context of competition, might they foster aggression or provide cathartic release (Jenkins & Ellis, 2011)? This work adds to a growing body of literature indicating the positive benefits of contact sport interventions ought not to be neglected, and concerns over potential negative effects in terms of aggression may be misplaced. This work also highlights areas where similar studies might be improved.

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