
Physical Activity as an Intervention with Young People Exhibiting Harmful Sexual Behaviour: A Review

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ABSTRACT

A number of treatment approaches have been used with young people who exhibit harmful sexual behaviour (YPHSB). Other young offenders (OYO) have sometimes received an alternative form of treatment - physical activity (PA)-based intervention. Positive outcomes have been reported for these young people. Some authorities have argued that YPHSB and OYO are similar in terms of their psychosocial characteristics and therefore might benefit from PA-based interventions. There are a small number of evaluations of such interventions with YPHSB but they are limited to adventure therapy (AT) or wilderness therapy (WT). This paper will provide an outline of PA-based interventions used with OYO; assess any overlap in psychosocial characteristics between YPHSB and OYO; and evaluate the evidence as to the efficacy of PA-based interventions with YPHSB.

Background

There are suggestions that an appreciable proportion of child sexual abuse is perpetrated by other children and young people (CYP) (Cooper and Roe, 2012; NSPCC, 2013; Smith, Bradbury-Jones, Lazenbatt, and Taylor, 2013). Hackett (2014), for example, indicated that a third of sexual offences were committed by CYP, and Campbell, Booth, Hackett and Sutton (2018) estimated that 30–50% of all childhood sexual abuse was perpetrated by other young people. There are, though, no reliable figures as to the extent of this offending by CYP (NSPCC, 2018). Young people aged 10 years and over in England and Wales can be held criminally liable for any offences they commit, including sexual offences (HM Government, 2015). It is recognised, however, within the UN Convention on the Rights of the Child, that young offenders are still children, and as such their welfare and rehabilitation are paramount (NSPCC, 2008).

It is essential that any welfare and rehabilitative provision for young people who exhibit harmful sexual behaviour (YPHSB) includes effective treatment. The majority of interventions for YPHSB in the UK comprise cognitive behavioural therapy (CBT) or relapse prevention (Masson and Hackett, 2003). A limited number of additional treatments have been developed over the past decade (NSPCC, 2011) including art, drama and yoga therapies (Hall, 2010). A few dedicated residential treatment centres have also been established (Glebe House, 2012; G-map, 2014). These residential treatment programmes strive to provide a youth-oriented service rather than simply reproducing the provision that exists for adult sex offenders.

Physical activity (PA)-based interventions for other young offenders (OYO) have been funded and promoted by successive governments in the UK (Armour, Sandford and Duncombe, 2013; Kelly, 2011; Nichols and Crow, 2004). This official enthusiasm is founded on the belief that such

interventions target ‘some of the risk factors associated with the reasons for involvement in crime’ (National Association for the Care and Resettlement of Offenders-NACRO, 2008, p.2). PA-based interventions are believed to facilitate personal, social and moral development. The social relationships formed during these interventions are viewed as being particularly crucial in affecting behaviour change (Audit Commission, 2009; Hartmann and Depro, 2006; Long and Sanderson, 2001; NACRO, 2008; NSPCC, n.d).

The present authors explore, in this paper, whether there are similarities between YPHSB and OYO in terms of their psychosocial characteristics, whereby interventions that have been shown to be effective in improving the psychosocial adjustment of the latter might be effective with the former. The authors also consider whether participation in PA, as part of a wider treatment programme, might help improve the psychosocial adjustment of YPHSB and prevent their re-offending sexually. Only those interventions where PA was a central element of the treatment programme were considered. All of the interventions that the authors could identify were limited to adventure- and wilderness-based activities, which took place in Australia, New Zealand or the US (Gillis and Gass, 2010; Grüning, 2007; Kjol and Weber, 1990; Lambie et al, 2000; Simpson and Gillis, 1998; Somervell and Lambie, 2009; Tidmarsh and Kilby, 2003). The authors’ aim, in analysing the methods and outcomes of existing PA treatment programmes with YPHSB, is to contribute to discussions as to the possible efficacy of PA-based interventions with this group.

The use of PA-based treatment interventions with OYO

PA-based interventions have been successful in engaging young people ‘at risk’, and in preventing offending and reoffending (Coalter, 2007; Kelly, 2011; Nichols, 2007). These interventions include physical fitness programmes, and outdoor and adventure activities, such as the *HSBC/Outward Bound* and the *Tall Ships* projects (Lubans, Plotnikoff, & Lubans, 2012; Sandford et al, 2008). PA-based interventions have also been linked with a range of positive outcomes in OYO: psychologically – improvements in empathy, self-esteem, confidence and sense of responsibility (Andrews and Andrews 2003; Sandford et al., 2008; West and Crompton, 2001); behaviourally -

greater pro-social behaviour and reduced offending (Armour & Sandford, 2006; Nichols, 2007); and socially – development of relationships with staff and peers, and an ability to work in teams (Audit Commission, 2009; NACRO, 2008; Nichols, 2007).

A number of theoretically- and empirically-based explanations have been put forward to account for the beneficial impact of PA interventions on the psychosocial adjustment of OYO. It has been argued, for example, that personal growth takes place within adventure education as a result of young people being faced with challenging situations (Nichols, 2007). Nichols believes that personal growth occurs through two critical aspects of such situations: ‘risk’, both physical (through participation in activities) and emotional (via assessing and managing difficult situations), and ‘competence’ (through overcoming increasingly challenging activities).

Other authorities have emphasised the sense of security that participation in PA interventions can generate. It has been contended that PA interventions, such as the *Youth Inclusion Programme*, provide a positive environment in which young people feel physically and emotionally safe (Sampson and Themelis, 2009). Young people within such an environment can build positive relationships with staff, and are able to discuss their offending in a non-threatening context – the belief being that this will reduce a young person’s exposure to risk factors and lower their chances of reoffending.

The importance of relationship building has been underlined in other studies. Meek and Lewis (2014) sought to use sporting activities to facilitate young men’s transition from prison to the community. They found that the intervention increased participants’ quality of life whilst in custody by enhancing their relationships within the institution and by improving their behaviour (the latter of which was brought about being better able to managing their frustration and anger). A similar sports-based intervention, in a youth offenders’ institution, was also found to be associated with improvements in behaviour and attitudes, with participants evidencing less aggression and greater opposition to offending (Williams, Collingwood, Cloes & Schmeer, 2015). Sports-based interventions have also been linked with self-transformation’ among young people involved in criminal or anti-social activities (Kelly,

2013). These transformations were, according to Kelly, due to the development of mentoring and supportive relationships formed during the physical activity sessions. Participation in sport has also been credited with raising the self-esteem of youth offenders as well as 'helping them acquire team working, communication, and life skills' (Chamberlain, 2013, p.1281).

Improvements in psychosocial adjustment have, though, been ascribed to a range of physical activities. The 'troubled' young people who took part in the *HSBC/Outward Bound* project (involving residential outdoor/adventurous activity) were reported to have made positive developments on a range of attributes, including self-confidence, trust and empathy/social responsibility (Armour, Sandford & Duncombe, 2013).

Some authors have, though, been more cautious as to the efficacy of PA-based interventions with OYO. Sandford et al., (2008) accept that PA can have beneficial effects on a young person's psychosocial adjustment but argue that it is the 'social processes inherent within programmes, and the explicit focus on personal development, that are most significant in effecting behaviour change' (p.422). Other writers point out that PA should be only one element within a holistic programme of interventions with OYO (Holroyd & Armour, 2003), which should include, for instance, educational and employment training opportunities (Andrews and Andrews, 2003). Yet other workers have pointed out that if these interventions are to be effective, they have, in addition, to address the causes of a young person's offending (Sampson and Themelis, 2009).

Some scepticism and also criticisms have been expressed in relation to the effects of PA-based interventions with OYO. This includes a questioning as to whether PA interventions have a) reduced reoffending (Luthar, Sawyer and Brown, 2006), and b) benefited OYO's wider development (Sandford et al., 2006). PA-based interventions have been criticised on account that they may, by bringing 'at risk' young people together, reinforce characteristics that are congruent with offending behaviour (Jacob and Lefgren, 2003). It has been further suggested that interventions involving any element of competition may lead to some young people experiencing a decrease in self-esteem, self-confidence and locus of control (Gardner et al.

(2009). These effects may be greater for girls, especially those with low fitness or skill levels (Andrews and Andrews, 2003; NACRO, 2008).

Adventure and wilderness therapy

There is a substantial history to the use of adventure therapy (AT) and wilderness therapy (WT), and with a range of young people. Ernest Balch's *Camp Chocura*, for example, was established in the late 1800s to address a 'poor work ethic' among boys from 'privileged' backgrounds (Gass, Gass & Russell, 2012). The UK and US Scouting movements were set up at the turn of the 20th Century, and the first 'therapeutic' initiatives, such as *Camp Ramapo* (1922), offered therapy to 'emotionally challenged young people (Gass et al). AT and WT are now practised in a number of countries, with a variety of service users and goals, and they incorporate a range of activities (Association for Experiential Education, 2014; Australian Association for Bush Adventure Therapy, 2013; Fletcher & Hinkle, 2002; Outdoor Education Australia, 2013; Wilderness Education Association, 2015).

AT involves, at its heart, outdoor activities, such as rock climbing and high rope challenges, alongside experiential learning and counselling (Gass et al., 2012). WT consists of the same multidimensional approach but is undertaken in a wilderness setting and usually for extended periods of time (Harper, Russell, Cooley & Cupples, 2007; Russell & Hendee, 2000). The outdoor activities incorporated in AT and WT are designed to be physically and psychologically demanding, and they include an element of risk (Richards, 2003). Individuals faced with the challenges of AT and WT are encouraged to develop a sense of mutual support, trust and accountability with staff and peers (Fletcher & Hinkle, 2002). Staff use these interactions and relationships to encourage individuals to reflect upon their feelings, thoughts and behaviour, take responsibility for them, and ultimately undergo psychosocial change (Gass et al., 2012).

AT/WT are associated with a number of positive outcomes, including improvements in self-concept, personal growth, self-actualization, personal efficacy, self-confidence and well-being (Ewert, 1989; Fletcher & Hinkle, 2002), internalised locus of control, interpersonal development and social skills (Hattie, Marsh, Neill & Richards, 1997). AT/WT have been used successfully with young

people from a wide range of service user groups, such as those with challenging behaviour, substance misuse issues and mental health difficulties. It is partly as a result of this efficacious and diverse application of AT and WT, that these interventions have been recommended for vulnerable and troubled young people in general, including YPHSB (Norton, 2010; Scott & Duerson, 2010).

Characteristics of YPHSB and OYO

It is important to establish whether YPHSB are similar to OYO, in terms of their psychosocial characteristics, as this would help determine whether PA-based interventions that appear to be effective with the latter might work with the former. The contention that YPHSB and OYO have similar psychosocial characteristics has been questioned (Calder, 2007; Hutton and Whyte, 2008). Sheerin (2004), for example, pointed out that there were high rates of psychiatric disorder among YPHSB but not among OYO. O'Halloran et al (2002) found that YPHSB, in terms of their psychological profiles, more closely resembled their 'normal control group' (no behavioural, interpersonal or psychological problems) than the 'clinical control group' (behavioural difficulties but no sexual offending).

Considerable overlap in the psychosocial characteristics of these two groups has been reported including: low self-esteem, poor academic achievement and dysfunctional home lives (Hackett, 2007; NSPCC, 2008); internalising (depression and affective disorders) and externalising symptoms (behaviour problems) (Van Wijk et al., 2007); and high rates of psychiatric disorder (Garland et al., 2001; Teplin et al., 2002).

Other authors have put forward a more nuanced perspective, claiming that there are distinct sub-groups within the YPHSB population, only some of whom are similar to OYO (Hackett, 2007; Worling, 2001). Pullman and Seto (2012), for example, state that although the majority of YPHSB are 'generalist' (i.e. similar to OYO in terms of their 'risk and etiological factors'), some are 'specialist'. Worling (2001) contends that one-half of all YPHSB fit into an 'antisocial/impulsive' typology, which indicates an overall tendency for rule breaking, akin to OYO.

Additionally, Hackett (2007) believes that overall YPHSB and OYO are more similar than dissimilar and therefore should receive the same interventions:

If young people with sexually abusive behaviours are not fundamentally different from other young people in trouble and with problems, this means, that we could, and indeed should, be able to take from what we know constitutes 'good practice' from work with other groups of children and young people and apply them to this population too (p.13).

There appears to be support for the view that interventions used with OYO can be used with YPHSB (Erooga & Masson, 2006). However, a number of authors, whilst accepting that these interventions may work for many YPHSB, assert that some will need other forms of treatment (Pullman and Seto, 2012; Quinsey, Skilling, Seto & Lalumiere, 2010).

There are some strengths in the above studies in general. They tended to: be based upon large samples; cover a range of ages; and utilised standardised measures. There are also, though, numerous weaknesses in this body of work. Most of the studies are: based upon males only; are restricted to adolescents; were carried out in the US; and drew their samples from quite different sources, such as incarcerated youth and young people in state care. It is not clear, therefore, as to how similar – or different – YPHSB and OYO are to one another in terms of their psychosocial characteristics.

Evaluations of AT and WT-based treatment programmes

There is limited research on the impact of AT and WT-based interventions with YPHSB (Grüring, 2007). Both Kjol and Weber (1990), and Tidmarsh and Kilby (2003), made claims as to the efficacy of AT in regards to the psychosocial adjustment of YPHSB, but both provide only anecdotal evidence to support their arguments. Kjol and Weber (1990) described the work of *Treetop Adventure* – a five-day camp, combining adventurous activities, such as high rope activities, with counselling. A fundamental aspect of the intervention was the use of exhilarating activities, which were said to

produce endorphin and adrenaline ‘rushes’. Kjol and Weber (1990) suggested that what was critical in the intervention was not engagement in the high risk activity itself but the interaction that this facilitated between YPHSB and staff. The young people were, through this interaction, able to develop an understanding of their emotions, first in relation to the activities and then in respect of their lives more generally. Kjol and Weber (1990) claimed that this enabled the young people to address their self-doubt and anger, develop greater trust in people, disclose undetected harmful sexual behaviours, and gain greater control over their lives.

AT has also been explored within the context of the *Male Adolescent Programme for Positive Sexuality* (MAPPS) (Tidmarsh and Kilby, 2003). The MAPPS intervention comprised three distinct stages: *the basic group*, *the transition programme* and *the advanced group*. The key elements of MAPPS included separating YPHSB from their usual environment; engaging them in adventure activities; and exposing them to a ‘pro-social culture’, in which they developed mutually positive and helpful relationships with other young people and staff. This latter element was felt to be especially important in helping the young people build trust, express their emotions and address their anxieties. Tidmarsh and Kilby (2003) contend that as the young people progressed through MAPPS, they were able to understand, take responsibility for, and avoid repetition of, their previous SHB. There are, though, major problems with the two above works. They were both based on small and unrepresentative samples, and the programmes comprised several aspects, which makes it difficult to determine which element was having what effect, if any. The evaluations also did not use any outcomes measures, so there is no reliable evidence to support the claims of the authors.

Evidence-based Studies

Referral, acceptance and allocation

A search of the literature identified five AT/WT programmes for YPHSB that have been subject to systematic evaluation (see Table 1). YPHSB ‘arrived’ in these programmes through a variety of routes. YPHSB in the Gillis and Gass (2010) study were identified through the records of the Juvenile Justice Department. Self-referrals were accepted in

the programme evaluated by Lambie et al (2000) but these were limited in number. The referred and self-referred young people in the studies by Simpson and Gillis (1998), and Lambie et al (2000), were further divided to determine their readiness for the programmes and for the purposes of allocating participants to different streams within a programme.

Additional therapeutic provision

Arrangements for the provision of therapy, additional to the AT and WT, varied between the different interventions. Individual, group or family therapy was offered in all programmes with the exception of Gillis and Gass (2010). Multi-group family therapy was provided only in Lambie et al.’s (2000) programme, and a range of other therapies were delivered across all the programmes, including CBT, art therapy and psychodrama. Parent/carer participation was an integral part of the treatment process in all programmes, except Gillis and Gass (2010), and was used in the pre- or post-assessment of YPHSB or in therapeutic sessions.

Programme duration

There were differences in the length of time young people spent in AT or WT, and in the programme overall. Some participants spent only four to six days in the AT/WT environment (Somervell and Lambie, 2000), while others spent one week per month in AT/WT (Simpson and Gillis, 1998). Young people could spend up to 26 days in one wilderness-based programme (Grüning, 2007). The duration of the programmes overall ranged from 9 months to two years.

See Table 1 on next page

Table 1
Characteristics of evaluated programmes utilising AT or WT with YPHSB

Study	Therapy	Programme	Referral method	Type of experience (solo/group)	Community based or residential	Parental involvement	Programme length
Simpson and Gillis (1998)	Family therapy techniques; Individual and group counselling; Art Therapy; Adventure Therapy: -One week camping per month	LEGACY Programme USA: 4 levels to the programme: Level 1 – The Foundation Level 2 – Treatment Level 3 – Academics Level 4 – Transition	Court Service Worker	Group	Residential	NO	10 months plus 8 month aftercare programme
Lambie et al (2000)	Group, Family and Individual Therapy; Multi-family Group Sessions; Psychodrama; Outdoor Wilderness Group Therapy: - 2 x 6 days and 1 x 4 days	SAFE Adolescent Programme New Zealand: Multi-faceted treatment approach with 6 levels. 3 streams: A Standard Programme (medium risk); Adolescents with special needs; A high risk group.	Referred via Child Protection Services and 3 self-referrals	Group	Community	YES	1-2 years (Average 18 months) plus 18 month follow up including individual, family and group therapy.
Grüring (2007)	Individual, group and family therapy; CBT; psychodrama; art, animal, horticultural therapies. Wilderness and adventure therapies: 1st setting – adjunctive adventure therapy and yearly camping trips 2 nd setting – integrated adventure therapy and wilderness expeditions (9-26 days duration)	USA	Selection of participants at the 2 settings based on accessibility to the researcher	Group and Solo experiences. Solo included backpacking, skiing, mountaineering and rock climbing.	Residential – 2 settings	NO	Not applicable
Somervell & Lambie (2009)	Individual, group and family therapy; 2-3 camps of 4 – 6 days duration	SAFE Adolescent Programme: New Zealand	Referral via Department of Social Welfare and FGC (n=6), district court (n=1)	Group	Community	NO	12-24 months
Gillis and Gass (2010)	Behaviour Management through Adventure approach (BMtA)	LEGACY Adventure-based behaviour management programme: USA	Archival data provided by Department of Juvenile Justice. Committed via juvenile courts	Not applicable	Retrospective study of 3 different types of setting: 1 –LEGACY (Residential) 2 – Youth Development Centre (Residential) 3 – Other specialised programme (Hospital or residential)	NO	Youth followed for 3 years after leaving each programme. LEGACY programme 12 months Data considered at 1, 2 and 3 years

Other programme features

Participants had solo experiences of AT/WT in one of the interventions (Grüiring, 2007). Three of the five programmes evaluated were community-based and two were residential (Gillis and Gass, 2010; Grüiring, 2007). Post-treatment support was offered in only one programme (Simpson and Gillis, 1998). This support consisted of weekly contact, and monthly on-site and placement visits.

Evaluation Format

Research design

There were similarities but also notable differences in the methods used to evaluate the programmes. The evaluations incorporated either one discrete research design or elements of different research designs (see Table 2). These included matched group design (Gillis and Gass, 2010), embedded case study (Grüiring, 2007) and programme evaluation (Simpson and Gillis, 1998). All but one of the five evaluations employed a longitudinal design, following up participants over varying periods of time post-treatment ranging from 8 months to 3 years.

Sample size

Sample sizes were typically quite small, ranging in four of the studies from 5-24 young people. Only one study used an appreciably sized sample ($n=285$) (Gillis and Gass, 2010). The YPHSB in the five programmes ranged in age from 13-19 years, except in one study where they were aged 8-18 years (Gillis and Gass, 2010). All of the young people were male. The extent and quality of other socio-demographic data collected on the samples were variable and control groups were not used in any of the studies.

Methods

A range of methods were used in the evaluations. Standardised questionnaires were completed by young people in two studies. Participants in the Lambie et al., (2000) evaluation completed the: *Rosenberg Self-Esteem Scale* (Rosenberg, 1965); and the *Sexual Response Questionnaire* (SRQ), developed by the New Zealand Family Planning Association, to assess young people's sex education levels and sexual attitudes (Lambie et al, 2000). Young people

in the Simpson and Gillis (1998) study completed the *Minnesota Multi-Phasic Personality Inventory – Adolescents* (MMPI-A) (Butcher et al, 1992), and the *Tennessee Self-concept Scale* (Fitts, 1965).

Interviews were carried out in four of the evaluations but at different stages of the programme. Simpson and Gillis (1998), and Lambie et al (2000), employed pre-treatment interviews. These interviews were used not only for research purposes but also to determine the most appropriate form of treatment for the young people based upon any risk they might pose to themselves or other young people on the programme.

Interviews with participants were also used during the intervention phase, to examine progress during treatment, and post-treatment interviews were employed to assess a range of outcomes, including participants' self-esteem, relationships and recidivism (Lambie et al., 2000; Somervell and Lambie, 2009). Grüiring (2007) conducted single and group interviews with the young people. Interviews were also undertaken with therapists (Somervell and Lambie, 2009), and in another study interviews with YPHSB were undertaken at different stages of the programme (4, 8 and 12 months) (Lambie et al, 2000).

See Table 2 on next page.

Table 2
Methods used in evaluations of interventions with YPHSB

Study	Design	Sample size	Data Collection	Informants
Gillis and Gass (2010)	Matched group design	95 males from each placement setting (range 8-18 years) White (n=62), African American (n=33) in each	Re-arrest rates from archival dataset	Not applicable
Somervell and Lambie (2009)	Qualitative study	7 males (Mean age 16 years) (Range 13-18 years) Ethnicities include European, Maori, Tongan, Niuean and Indian.	Participant observation (4 day camp); semi-structured interviews (young people and therapists)	Young people and therapists
Grüring (2007)	Embedded case study	5 males (Range 15-17 years)	Single and group interviews; direct (field/participant) observation (total of 7 weeks camping); case files and therapy notes; psychological evaluations, police and court reports; client diaries	Young people
Lambie et al (2000)	Follow-up study	14 males (Mean age 16 years) (Range 13-19); 12 parents (8 mothers only, 2 fathers only, 2 both parents) plus 1 school housemaster.	Sexual Response Questionnaire (SQR) Rosenberg Self-esteem Scale Interviews (using a questionnaire)- Parent and Young person)	Young People Parents Child Protection Services computer records on reoffending (average 2 years post treatment)
Simpson and Gillis (1998)	Programme evaluation	24 males (Mean age 14.4 years) (Range not noted) 27.5% African American; 62.5% White	Minnesota Multi-Phasic Personality Inventory – Adolescents (MMPI-A) Tennessee Self-concept Scale (TSCS) at 0 months, 4 months, 8 months, 12 months.	Young People

Police, court and child protection service records were searched in three of the evaluations to determine whether young people had been arrested for, or convicted of, a sexual offence post-

intervention (Gillis and Gass, 2010; Grüring, 2007; Lambie et al., 2000). Searches were also undertaken within case files, therapy notes and client diaries to provide additional information on

young people's attitudes towards their HSB along with the impact these interventions may have had upon them (Grüiring, 2007).

Somervell and Lambie (2009) used participant observation to learn about the SAFE program and to build rapport with participants, and Grüiring (2007) employed this method to assess the role of AT in the wider treatment programme.

The young people's post-treatment involvement with agencies, regarding any suspected offending, was an outcome measure in three studies (Gillis and Gass, 2010; Lambie et al., 2000; Simpson and Gillis, 1998). The young people's broader psychosocial adjustment was assessed, either during treatment and/or after treatment, in four studies (Grüiring, 2007; Lambie et al., 2000; Simpson and Gillis, 1998; Somervell and Lambie, 2009).

Outcomes for YPHSB

There were indications in three of the evaluations that interventions including AT/WT were associated with reduced sexual recidivism by YPHSB. The arrest rate for sexual offences, three years' post-intervention, for young people who took part in AT (19%) was considerably lower than that of their counterparts who had been enrolled in 'Youth Development Centres' (35%) or 'Other Specialised Programmes' (33%) (Gillis and Gass, 2010). None of the participants in the evaluation by Lambie et al (2000) and Simpson and Gillis (1998) were known to have reoffended two years' post-treatment.

Some of the young people exhibited improvements in other offence-related behaviours and attitudes post-intervention. This included accepting greater responsibility for their offending and behaviour more generally (Lambie et al., 2000); and disclosing previously undetected offences (Somervell and Lambie, 2009). Lambie et al (2000) reported that twelve of the fourteen young people in their evaluation could recall ways to keep themselves safe from reoffending and all fourteen had a good understanding of sexuality issues upon completion of the programme.

There were reports in a number of the evaluations indicating that many young people felt more positive in terms of various aspects of their psychological adjustment. This included greater

connection with 'emotions and sentiments', 'freedom of expression', sense of belonging and personal responsibility (Grüiring, 2007); enhanced self-view (increased self-confidence and self-efficacy) (Somervell and Lambie, 2009); and improved self-esteem and self-satisfaction (Lambie et al., 2000).

There were reports in some of the evaluations of improvements in the way in which young people related to others. The large majority of participants in the Lambie et al (2000) evaluation exhibited greater victim empathy. Somervell and Lambie (2009) found that young people were better able to form trusting and close relationships, and to work in teams. Parents in the evaluation conducted by Lambie et al (2000) reported improved relationships with their sons.

There was a suggestion in one evaluation that the intervention may have had some negative consequences. Simpson and Gillis (1998) reported that young people's scores in anger, resentment and 'projection' increased, whilst their self-esteem decreased.

Limitations in the evidence-based studies

There was tentative evidence from these evaluations that treatment interventions that include AT/WT have a number of positive outcomes for YPHSB. These outcomes include reduced sexual recidivism rates, and improvements in wider psychosocial adjustment in respect of self-esteem and social relationships.

Caution should be exercised, though, in interpreting the results of these evaluations. Importantly, the most recent study was published eight years ago and the oldest 20 years ago, and only three of the five studies had been published in peer-reviewed journals. These two factors alone cast doubt on the rigor of at least two of the studies. The number of evaluations carried out ($n=5$) is small and all participants in the five studies were male so it may not be possible to generalise the findings to females with HSB. This is of particular importance as the NSPCC (2017, p. 2) recently stated that society 'lacks understanding that girls can behave in a sexually harmful way'.

There are a number of additional methodological limitations with the evaluations. The studies used quite small samples, which means, even in

qualitative studies, difficulty in extrapolating from the findings and a greater risk of type 2 errors (Faber and Fonseca, 2014). The use of non-validated research instruments is of particular concern due the lack of evidence regarding the reliability and validity of the chosen instruments. Finally, there was a reliance on self-reporting in several of the studies. Even though this is a common approach for gathering data, the method has been criticised because of the bias that can occur. Althubaiti (2016 p. 212) stated that 'Bias can arise from social desirability, recall period, sampling approach, or selective recall' when relying on self-reported data. He adds that an over-reliance on self-reported data can lead to unreliable findings.

There was little attempt in any of the evaluations to examine the impact of AT/WT specifically upon the young people. In addition, none of the three studies that found reductions in recidivism clarified whether the additional components of the treatment process had accounted for the reductions (Gillis and Gass, 2010; Lambie et al, 2000; Simpson and Gillis, 1998). Grüring (2007), Lambie et al. (2000), and Somervell and Lambie (2009) suggest that AT/WT might have benefited this process with AT/WT enhancing engagement in the treatment process. Grüring (2007) also reported that young people's engagement helped inform clinical assessments.

Conclusions

Although these evaluations do not represent a very extensive body of work, they do suggest that PA may be able to make a contribution towards treating YPHSB. Both Grüring (2007), and Somervell and Lambie (2009), argue that the adventure and wilderness elements of the programmes enhanced the engagement of YPHSB in the treatment process. Grüring speculated that this enhanced engagement was due to meeting 'the young person on his own turf i.e. the world of action, wildness, thrill, risk.....and uncertainty' (p.109).

Positive psychosocial changes were reported in all studies that measured these outcomes (Grüring, 2007; Lambie et al, 2000; Simpson and Gillis, 1998; Somervell and Lambie, 2009). These changes included improvements in victim empathy, self-concept, self-esteem and social relationships. Enhanced social relationships may have come

about as a result of the young people engaging in trust building and teamwork activities. All of these research teams reported that the YPHSB believed they were less likely to reoffend sexually owing to the prevention strategies they had been taught on the programmes. Evidence as to the specific contribution that PA made to these outcomes was not provided in any of the studies.

Although there is provisional evidence as to the efficacy of PA with YPHSB, Somervell and Lambie (2009) acknowledge that there may be practical constraints surrounding these interventions. These constraints consist of the high staffing and other resource costs involved in AT/WT-based programmes. Russell and Phillips-Miller (2002) argue that the main constituents of AT/WT could be 'mimicked in outpatient or residential settings' (p. 434) by using low cost, more traditional physical activities.

In summary, there are indications that PA may be a useful intervention with YPHSB, but there are many problems with the evidence base. There is clearly a need for more evaluations of treatment programmes with YPHSB that include PA at the heart of the intervention. Future evaluations need to avoid the limitations that have characterised much of the work to date.

References

- Althubaiti, A. (2016). Information bias in health research: definition, pitfalls, and adjustment methods. *Journal of Multi-Disciplinary Healthcare*, 9, 211-217. doi10.2147/JMDH.S104807
- Andrews, J.P. and Andrews, G.J. (2003). Life in a secure unit: The rehabilitation of young people through the use of sport. *Social Science and Medicine*, 56(3), 531-550 doi 10.1016/S0277-9536(02)00053-
- Armour, K. & Sandford, R. (2006). *Evaluation of the HSBC/Outward Bound Partnership Project and the HSBC Education Trust Kielder Challenge and Tall Ships Projects: Interim report (36 months)*. Retrieved from <http://www.lboro.ac.uk/microsites/ssehs/youth-sport/research/social-inclusion/hsbc-outward-bound.html>

- Armour, K., Sandford, R. and Duncombe, R. (2013). Positive youth development and physical activity/sport interventions: mechanisms leading to sustained impact. *Physical Education and Sport Pedagogy* 18 (3), 256-281. doi:10.1080/17408989.2012.666791
- Association for Experiential Education. (2014). *What is experiential education?* Retrieved from <http://www.aee.org/what-is-ee>
- Audit Commission. (2009). *Tired of hanging around: Using sport and leisure activities to prevent anti-social behaviour by young people*. London: Audit Commission
- Australian Association for Bush Adventure Therapy (2013). *About AABAT*. Retrieved from <http://www.aabat.org.au/index.php/about-aabat>
- Borduin, C.M., Scaffer, C.M. (2002). Multisystemic treatment of juvenile sexual offenders: A progress report. *Journal of Psychology and Human Sexuality*, 13(3), 25-42 doi 10.1300/J056v13n03_03
- Brandes, B.J. and Cheung, M. (2009). Supervision and treatment of juveniles with sexual behaviour problems. *Child and Adolescent Social Work Journal*, 26(3) 179-196 doi 10.1007/s10560-009-0170-4
- Butcher, J.N., Williams, C.L., Graham, J.R., Archer, R.P., Tellegen, A., Ben-Porath, Y.S., & Kaemmer, B. (1992). *Minnesota Multiphasic Personality Inventory-Adolescent Version (MMPI-A): Manual for administration, scoring and interpretation*. Minneapolis, USA: University of Minnesota Press.
- Calder, M. C. (2007). *Working with children and young people who sexually offend: taking the field forward*. Dorset: Russell House Publishing
- Campbell, F., Booth, A., Hackett, S., & Sutton, A. (2018). Young People Who Display Harmful Sexual Behaviors and Their Families: A Qualitative Systematic Review of Their Experiences of Professional Interventions. *Trauma, Violence and Abuse*, 1 (14), 1-14. doi: 10.1177/1524838018770414.
- Chamberlain, J.M. (2013). Sports-based intervention and the problem of youth offending: a diverse enough tool for a diverse society? *Sport in Society*, 16(10), 1279-1292, doi: 10.1080/17430437.2013.821251
- Chung, D., O'Leary, P.J. and Hand. T. (2006). *Sexual violence offenders: Prevention and intervention approaches*. Australian Institute of Family Studies, Australian Centre for the Study of Sexual Assault, (5) 1-54. Retrieved from http://www.aifs.gov.au/acssa/pubs/issue/acssa_issues5.pdf
- Coalter, F. (2007). *A wider social role for sport*. London: Routledge
- Cooper, C and Roe, S. (2012). *An estimate of youth crime in England and Wales: Police recorded crime committed by young people in 2009/10, Research report 64*. Retrieved from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/167982/horr64.pdf
- Derezotes, D. (2000). Evaluation of yoga and meditation trainings with adolescent sex offenders. *Child and Adolescent Social Work Journal*, 17(2), 97-113. doi 10.1023/A:1007506206353
- Efta- Breitbach, J. and Freeman, K.A. (2005). Treating of juveniles who sexually offend: An overview. *Journal of Child Sexual Abuse*, 13(3) 125-138 doi 10.1300/J070v13n03_07
- Erooga, M. and Masson, H. (Eds.). (2006). *Children and young people who sexually abuse others. Current developments and practice responses (2nd ed)*. Abingdon, Oxon: Routledge
- Ewert, A.W. (1989). *Outdoor and adventure pursuits: Foundations, models, and theories*. Columbus, Ohio, USA: Publishing Horizon.
- Faber, J. and Fonseca, L.M. (2014). How sample size influences research outcomes. *Dental Press Journal of Orthodontics*, 19(4), 27-29. doi: [10.1590/2176-9451.19.4.027-029.ebo](https://doi.org/10.1590/2176-9451.19.4.027-029.ebo)
- Fitts W.H. (1965). *Manual for the Tennessee Self Concept Scale*. Nashville Tennessee, USA: Counsellor Recordings and Tests
- Flanagan, F. (2003). Intervention with sexually abusive young people in Australia and New Zealand. *Journal of Sexual Aggression*, 9(2), 135-149. doi 10.1080/13552600310001632129
- Fletcher, T.B. & Hinkle, J. S. (2002). Adventure based counselling: An innovation in counselling.

- Journal of Counselling and Development*, 80(3), 277-285 doi 10.1002/j.1556-6678.2002.tb00192.x
- Forensic Psychology Practice Limited. (2006). *Adolescent sex offenders. A practitioner's portfolio*. Sutton Coldfield: Forensic Psychology Practice Limited. Retrieved from <http://www.forensicpsychology.co.uk/wp-content/uploads/2011/10/AdolescentSexOffendersPortfolio.pdf>
- Gardner, M., Roth, J. and Brooks-Gunn, J. (2009). Sports participation and juvenile delinquency: the role of the peer context among adolescent boys and girls with varied histories of problem behaviour. *Developmental Psychology*, 45(2), 341-353 doi 10.1037/a0014063
- Garland, A.F., Hough, R.L., McCabe, K.M., Yeh, M., Wood, P.A., Aarons, G.A. (2001). Prevalence of psychiatric disorders in youths across 5 sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(4), 409-418. Doi 10.1097/00004583-200104000-00009
- Gass, H.L. and Russell, K.C. (2012). *Adventure therapy: Theory, research and practice*. New York, USA: Routledge
- Gill, R., and Raphael, S. (2009). New hope and help for forgotten youth. *Journal of Child and Adolescent Psychiatric Nursing*, 22(2), 57-62 doi 10.1111/j.1744-6171.2009.00173.x
- Gillis, H.L. and Gass, M.A. (2010). Treating juveniles in a sex offender program using adventure-based programming: A matched group design. *Journal of Child Sexual Abuse*, 19(1), 20-34 doi 10.1080/10538710903485583
- Glebe House. (2012). *Welcome to Glebe House*. Retrieved from www.glebehouse.org.uk/
- G-map. (2014). *Greater Manchester Adolescent Project: home*. Retrieved from www.g-map.org/index.html
- Greenwood, P. (2008). Prevention and Intervention programs for juvenile offenders. *The Future of Children*, 18(2), 185-210. doi 10.1353/foc.0.0018
- Grüning, G. (2007). *The role of adventure therapy in the comprehensive treatment of adolescents who committed sexual abuse: a case study*. (MA dissertation, Prescott College, USA). Retrieved from <http://pqdtopen.proquest.com/doc/304717414.html?FMT=AI>
- Hackett, S. (2004). *What works for children and young people with harmful sexual behaviours?* Essex: Barnardo's. Retrieved from http://www.barnardos.org.uk/what_works_for_children_and_young_people_with_harmful_sexual_behaviours_-_summary_1.pdf
- Hackett, S. (2007). Just how different are they? Diversity and the treatment of young people with harmful sexual behaviours. In M.C. Calder (Ed), *Working with children and young people who sexually abuse. Taking the field forward*. (9-22). Dorset: Russell House Publishing
- Hackett, S. (2014). *Children and young people with harmful sexual behaviours*. London: Research in Practice Research in Practice Research Reviews, 15
- Hackett, S., Phillips, J., Masson, H. and Balfe, M. (2011). *Recidivism, desistance and life course trajectories of young sexual abusers. An in-depth follow-up study, 10 years on*. Retrieved from <https://www.dur.ac.uk/resources/sass/research/briefings/ResearchBriefing7b-Recidivismdistanceandlifecoursetrajectoriesofyoungsexualabusersanin-depthfollow-upsstudy10yearson.pdf>
- Hall, S. C. (2010). *Exploring implications and benefits of holistic working with young people who have sexually harmed others*. (Doctoral Thesis, De Montfort University). Retrieved from <https://www.dora.dmu.ac.uk/bitstream/handle/2086/4977/S%20C%20Hall%20PhD%20Final.pdf?sequence=1>
- Harper, N.J., Russell, K.C., Cooley, R and Cupples, J. (2007). Catherine Freer Wilderness Expeditions: An exploratory case study of adolescent wilderness therapy, family functioning, and the maintenance of change. *Child Youth Care Forum*, 36(2) 111-129 doi 10.1007/s10566-007-9035-1
- Hartmann, D. and Depro, B. (2006). Rethinking sports-based community crime prevention: A preliminary analysis of the relationship between midnight basketball and urban crime rates. *Journal*

of *Sport and Social Issues*, 30(2), 180–196. doi: 10.1177/0193723506286863

Hattie, J. Marsh, H.W. Neil, J.T. and Richards, G.E. (1997). Adventure education and outward bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43–87 doi 10.2307/1170619

HM Government. (2015). *Age of Criminal Responsibility*. Retrieved from <https://www.gov.uk/age-of-criminal-responsibility>

Holt, N. (2008). *Positive youth development through sport*. London: Routledge.

Holroyd, R.A. & Armour, K. (2003). Re-engaging disaffected youth through physical activity programs. In *The British Educational Research Association Annual Conference, Heriot-Watt University, Edinburgh*, Retrieved from <http://www.leeds.ac.uk/educol/documents/00003304.htm>.

Hunter, J.A. (2010). Prolonged exposure treatment of chronic PTSD in juvenile sex offenders: Promising results from two case studies. *Child Youth Care Forum*, 39(5) 367–384. doi 10.1007/s10566-010-9108-4

Hutton, L. and Whyte, B. (2008). *Children and young people with sexually harmful behaviour: Is age of onset a factor?* Edinburgh: Criminal Justice Social Work Development Centre for Scotland

Jacob, B. A. and Lefgren, L. (2003). Are idle hands the devil's workshop? Incapacitation, concentration and juvenile crime. *The American Economic Review* 93(5), 1560–1577 doi 10.1257/000282803322655446

Jones, V. (2010). Children and young people exhibiting sexually harmful behaviour – what have we learned and what do we need to know to propose effective intervention? In: Council of Europe Protecting Children from Sexual Violence: A Comprehensive Review. Strasbourg: Council of Europe. Retrieved from <http://www.coe.int/t/dg3/children/1in5/Source/PublicationSexualViolence/Jones.pdf>

Johnson, D.R. and Emunah, R. (2009). *Current Approaches in Drama Therapy* (2nd ed). Illinois: Charles C. Thomas Publisher

Kelly, L. (2011). Social inclusion' through sports-based interventions? *Critical Social Policy*, 31(1), 126–150. Doi: 10.1177/0261018310385442

Kelly, L. (2013). Sports-Based Interventions and the Local Governance of Youth Crime and Antisocial Behavior. *Journal of Sport and Social Issues* 37(3) 261–283 DOI: 10.1177/0193723512467193

Kjol, R. and Weber, J. (1990). The 4th fire: Adventure-based counselling with juvenile sex offenders. *The Journal of Experiential Education*, 13(3), 18–22

Lambie, I, Hickling, L. Seymour, F, Simmonds, L., Robson, M. and Houlahan, C. (2000). Using wilderness therapy in treating adolescent sexual offenders. *Journal of Sexual Aggression: An international, interdisciplinary forum for research, theory and practice*, 5(2), 99–117 doi 10.1080/13352600008413302

Lambie, I., McCarthy, J., Dixon, H. and Mortensen, D. (2001). Ten years of adolescent sexual offender treatment in New Zealand: Past practices and future directions. *Psychiatry, Psychology and Law*, 8(2), 187–196. doi 10.1080113218710109625019

Lambie, I, Robson, M. and Simmonds, L. (1997). Embedding psychodrama in a wilderness group program for adolescent sex offenders. *Journal of Offender Rehabilitation*, 26 (1–2), 89–107. Retrieved from http://www.tandfonline.com/doi/abs/10.1300/J076v26n01_06#.VcHysflViko

Lambie, I. and Seymour, F. (2006). One size does not fit all: Future directions for the treatment of sexually abusive youth in New Zealand. *Journal of Sexual Aggression*, 12(2), 175–187 10.1080/13552600600823647

Long, J. and Sanderson, I. (2001). The social benefits of sport: Where's the proof? In I. Henry, and C. Gratton (Eds). *Sport in the city: the role of sport in economic and social regeneration*. (187– 226). London: Routledge

Longo, R.E. (2005). An integrated experiential approach to treating young people who sexually

- abuse. *Journal of Child Sexual Abuse*, 13(3) 193-213 doi 10.1300/J070v13n03_10
- Lubans, D.R., Plotnikoff, R.C. and Lubans, N. (2012). Review: A systematic review of the impact of physical activity programmes on social and emotional well-being in at-risk youth. *Child and Adolescent Mental Health*, 17(1), 2-13 doi 10.1111/j.1475-3588.2011.00623.x
- Luthar, S.S., Sawyer, J.A. and Brown, P.J. (2006). Conceptual Issues in the study of resilience. Past, present and future research. *Annals of the New York Academy of Sciences*, 1094, 105-115 doi 10.1196/annals.1376.009
- Masson, H. and Hackett, S. (2003). A decade on from the NCH Report (1992): Adolescent sexual aggression policy, practice and service delivery across the UK and Republic of Ireland. *Journal of Sexual Aggression*, 9(2), 109-124. doi: 10.1080/13552600310001632084
- Meek, R., & Lewis, G. (2014). The impact of a sports initiative for young men in prison: Staff and participant perspectives. *Journal of Sport and Social Issues*, 38(2), 95-123, doi: 10.1177/0193723512472896
- National Association for the Care and Resettlement of Offenders. (2008). *Youth crime briefing: Sport, recreational and physical activity programmes and youth justice*. London: NACRO
- Nichols, G. (2007). *Sport and crime reduction. The role of sports in tackling youth crime*. Abingdon, Oxon: Routledge
- Nichols, G and Crow, I. (2004). Measuring the impact of crime reduction interventions involving sport activities for young people. *The Howard Journal*, 43(3), 267-283 doi: 10.1111/j.1468-2311.2004.00327.x
- Norton, C. (2010). Into the wilderness – a case study. The psychodynamics of adolescent depression and the need for a holistic intervention. *Clinical Social Work Journal*, 38(2), 226-235 doi 10.1007/s10615-009-0205-5
- NSPCC (2008). *NSPCC policy summary: Children and young people who display sexually harmful behaviour*. Retrieved from www.nspcc.org.uk/inform/policyandpublicaffairs/policysummaries/sexuallyharmfulbehaviour_wdf56930.pdf
- NSPCC. (2011). *Sexual Abuse: A public health challenge*. London: NSPCC
- NSPCC. (2013). *Thousands of children committing child sexual abuse*. Retrieved from www.nspcc.org.uk/news-and-views/media-centre/press-releases/2013/13-03-04-child-sex-offences/child-sex-offences_wdn94647.html
- NSPCC. (2016). *Research briefing. Harmful sexual behaviour*. Retrieved from <https://learning.nspcc.org.uk/media/1372/research-briefing-harmful-sexual-behaviour-hsb.pdf>
- NSPCC. (2018). *Sexual abuse. Facts and figures*. Retrieved from <https://www.nspcc.org.uk/preventing-abuse/child-abuse-and-neglect/child-sexual-abuse/sexual-abuse-facts-statistics/>
- NSPCC. (n.d). *National clinical assessment and treatment service*. Retrieved from www.nspcc.org.uk/what-we-do/the-work-we-do/priorities-and-programmes/sexual-abuse/national-clinical-assessment/ncats_wda87191.html
- O'Halloran, M., Carr, A., O'Reilly, G., Sheerin, D., Cherry, J., Turner, R., & Brown, S. (2002). Psychological profiles of sexually abusive adolescents in Ireland. *Child abuse & neglect*, 26(4), 349-370 doi 10.1016/S0145-2134(02)00313-7
- Outdoor Education Australia (2013) *Who we are*. Retrieved from www.outdooreducationaustralia.org.au/
- Parton, N. (2006). Foreword. In Erooga, M. and Masson, H. (Eds.). (2006). *Children and young people who sexually abuse others. Current developments and practice responses (2nd ed)*. (xvii-xviii) Abingdon, Oxon: Routledge
- Pullman, L. and Seto, M.C. (2012). Assessment and treatment of adolescent sexual offenders: Implications of recent research on generalist versus specialist explanations. *Child Abuse and Neglect*, 36(3), 203-209 doi 10.1177/1079063214554958

- Quinsey, V.L., Skilling, T.S., Lalumiere, M.L. and Craig, W.M. (2003). *Juvenile delinquency: Understanding the origins of individual differences*. Washington, USA: American Psychological Association
- Rasmussen, L.A. (1999). Factors relating to recidivism among juvenile sexual offenders. *Sexual Abuse: A Journal of Research and Treatment*, 11(1), 69-85. Retrieved from <http://link.springer.com/article/10.1023/A:1021332929575#page-1>
- Richards, K. (2003). Adventure therapy: Exploring the healing potential of the outdoors. An update of a U.K. seminar. *Horizons*, 21, 36-39
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, New Jersey, USA: Princeton Press
- Russell, K.C. and Hendee, J.C. (1999). Wilderness therapy as an intervention and treatment for adolescents with behavioural problems. In Watson, A.E., Aplet, G. H., and Hendee, J.C. (2000). *Personal, Societal, and Ecological Values of Wilderness: 6th World Wilderness Congress Proceedings on Research, Management and Allocation*. Retrieved from http://www.fs.fed.us/rm/pubs/rmrs_p014/rmrs_p014_136_141.pdf
- Russell, K.C. and Phillips-Miller, D. (2002). Perspectives on the wilderness therapy process and its relation to outcome. *Child and Youth Care Forum*, 31(6), 415-437 doi 10.1023/A:1021110417119
- Sampson, A. and Themelis, S. (2009). Working in the community with young people who offend. *Journal of Youth Studies*, 12(2), 121-137 doi 10.1080/13676260802558854
- Sandford, R.A., Armour, K.A. and Warmington, P.C. (2006). Re-engaging disaffected youth through physical activity programmes. *British Educational Research Journal*, 32(2), 251-271. doi 10.1080/01411920600569164
- Sandford, R. A., Duncombe, R. and Armour, K. (2008). The role of physical activity/sport in tackling youth disaffection and anti-social behaviour. *Educational Review*, 60(4), 419-435 doi 10.1080/100131910802393464
- Scott, D.A. and Duerson, L.M. (2010). Continuing the discussion: A commentary on 'Wilderness therapy: Ethical considerations for mental health professionals'. *Child Youth Care Forum*, 39(1), 63-68 doi 10.1007/s10566-009-9090-x
- Seto, M. C., & Lalumière, M. L. (2010). What is so special about male adolescent sexual offending? A review and test of explanations through meta-analysis. *Psychological Bulletin*, 136(4), 526-575 doi 10.1037/a0019700
- Sheerin, D. (2004). Psychiatric disorder and adolescent sexual offending. In W. L. Marshall, A. Carr, & R. C. Beckett (Eds.) *The handbook of clinical intervention with young people who sexually abuse* (pp. 129-160). Hove, East Sussex: Brunner-Routledge.
- Simpson, C.A. and Gillis, H.L. (1998). Working with those who hurt others: Adventure therapy with Juvenile sexual perpetrators. In *Exploring the Boundaries of Adventure Therapy: International Perspectives. Proceedings of the International Adventure Therapy Conference, 1st Perth, Australia, July 1997*. Retrieved from <http://files.eric.ed.gov/fulltext/ED424075.pdf>
- Smith, C., Lazenbatt, A., Bradbury-Jones, C., & Taylor, J. (2013). *Provision for young people who have displayed harmful sexual behaviour (Full report)*. The University of Edinburgh/NSPCC Child Protection Research Centre.
- Somervell, J. and Lambie, I. (2009). Wilderness therapy within an adolescent sexual offender treatment programme: A qualitative study. *Journal of Sexual Aggression: An international, interdisciplinary forum for research, theory and practice*, 15(2), 161-177 doi 10.1080/13552600902823055
- The Association for the Treatment of Sexual Abusers. (2000). The effective legal management of juvenile sex offenders. In Gill, R., and Raphael, S. (2009). New hope and help for forgotten youth. *Journal of Child and Adolescent Psychiatric Nursing*, (22)2, 57-62 doi 10.1111/j.1744-6171.2009.00173.x
- Tidmarsh, P. and Kilby, S. (2003). The use of adventure therapy in the treatment of adolescents who commit sexual offences. In Richards, K. and Smith, B. (Eds.) *Therapy within adventure: Proceedings of the second international adventure therapy conference* (263-271) Augsburg, Germany: Ziel

- Teplin, L.A., Abram, K.M., McClelland, G.M., Dulcan, M.K., & Mericle, A.A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry*, 59(12), 1133-1143.
- Tucker, A. R., Combs, K. M., Bettmann, J. E., Chang, T. H., Graham, S., Hoag, M., & Tatum, C. (2018). Longitudinal outcomes for youth transported to wilderness therapy programs. *Research on Social Work Practice*, 28(4), 438-451. doi 10.1177/1049731516647486
- Tucker, A.R. & Norton, C.L., (2013). The use of adventure therapy techniques by clinical social workers: Implications for practice and training. *Clinical Social Work Journal* 41(4), 333-343 doi 10.1007/s10615-012-0411-4
- Van Huyssteen, C.G. (2010). *Exploring the factors that contribute to the self-configuration process of juvenile sexual offenders*. Masters dissertation The University of South Africa, South Africa. Retrieved from http://uir.unisa.ac.za/bitstream/handle/10500/4834/dissertation_vanhuysteen_cg.pdf?sequence=1
- Van Wijk, A. PH., Blokland, A.A.J., Duits, N., Vermeiren, R. and Harkink, J. (2007). Relating psychiatric disorders, offender and offence characteristics in a sample of adolescent sex offenders and non-sex offenders. *Criminal Behaviour and Mental Health* 17(1) 15-30 doi 10.1002/cbm.628
- Welch, C. and Righthand, S. (2005). Characteristics of youth who sexually offend. *Journal of Child Sexual Abuse*, 13(3), 15-32 doi 10.1300/J070v13n03 02
- West, S.T., and Crompton, J.L. (2001). A review of the impact of adventure programs on at-risk youth. *Journal of Park and Recreation Administration*, 19(2) 113-14. Retrieved from <http://js.sagamorepub.com/jpra/article/view/1580/1545>
- Wilderness Education Association. (2015). *About*. Retrieved from <http://www.weainfo.org/about>
- Williams, D., Collingwood, L., Coles, J. & Schmeer, S. (2015). Evaluating a rugby intervention programme for young offenders. *Journal of Criminal Psychology*, 5(1), 51-64, doi: 10.1108/JCP-05-2014-0008
- Worling, J.R. (2001). Personality-based typology of adolescent male sexual offenders: Differences in recidivism rates, victim-selection characteristics and personal victimisation histories. *Sexual Abuse: A Journal of Research and Treatment*, 13(3), 149-166, doi 10.1023/A:1009518532101
- Youth Justice Board. (2005). *Services for young people who sexually abuse*. London: Youth Justice Board.