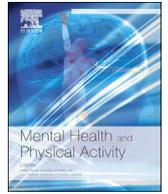


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## Positive collateral damage or purposeful design: How sport-based interventions impact the psychological well-being of people in prison

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### ABSTRACT

**Purpose:** The primary aim of this study was to identify how sport based interventions impact psychological well-being within the prison population, considering both the hedonic and eudaimonic perspectives, namely the experience of positive affect and healthy psychological functioning and self-realisation. The study focuses on the perspective of those involved in either the design, delivery or oversight of sport based interventions within prison, collectively referred to as stakeholders throughout. Results were presented within a thematic framework to aid the future design and delivery of sport based interventions within the prison environment. A second aim was to link the themed framework to psychological theories of health behaviour change, a quality assurance recommendation by the Medial Research Council, but not achieved to date in the literature.

**Methods:** A total of 16 stakeholders were interviewed to ascertain their views on constituent components of the interventions contributing to psychological well-being. Inductive thematic content analysis was adopted and the emergent themes are discussed within the context of extant psychological theory and recent relevant research to understand how they positively impact psychological well-being.

**Results:** Six themes emerged, reflecting the spoken words of participants: 1) "Relating and Relationships"; 2) "Sense of Achievement"; 3) "Sporting Occasions"; 4) "In Their Hands"; 5) "Facing Forward"; and 6) "Creating a Life Rhythm". The psychological theories identified as underpinning these themes were Basic Psychological Needs Theory, Self-Identity Theory, and Self-Categorisation Theory.

**Conclusions:** Collectively, the themes and psychological theories identified, offer a new framework for the effective design and delivery of sport based interventions within prison that will potentially maximise benefit to prisoner psychological well-being. The new conceptual framework includes constructs from three psychological theories, suggesting that one theory alone cannot account for the complexities of designing interventions to enhance psychological well-being for prisoners. We invite researchers to go beyond designing ad-hoc programmes and to adopt and evaluate the proposed framework in future trial based research.

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### 1. Introduction

Psychological well-being relates to a person's psychological functioning, life-satisfaction and ability to develop and maintain mutually benefiting relationships (Stewart-Brown & Janmohamed, 2008). It comprises both the hedonic perspective, that is, the subjective experience of happiness and life satisfaction, alongside the eudaimonic perspective, focusing on psychological functioning, good relationships and self-realisation. The psychological well-

being of people in prison has been repeatedly identified across multiple judicial jurisdictions as a serious issue which should be given priority status, and afforded the appropriate resources to enable a multi-agency approach if success in tackling poor psychological well-being is to be realised (United Kingdom - Mental Health and Criminal Justice Report, Durcan, 2016; United States - Travis, Western, & Redburn, 2014; Australia - Australian Institute of Health and Welfare, 2015). Although intervention programmes vary in content, it has been shown that regular involvement in sport can have a beneficial effect on social, physical and psychological well-being (Biddle, Mutrie, & Gorely, 2015; Lancet, 2016; Woods, Breslin, & Hassan, 2017; World Health Organisation, 2016). In line with the European Sports Charter (Council of

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Europe, 2001), sport is defined as all forms of physical activity, both casual and organised, competitive or non-competitive. Studies within non-prison based populations have demonstrated involvement in sport leads to decreases in depression and anxiety, and increases in self-perceptions (Fox, 1999; Mason, Curl, & Kearns, 2016). Furthermore, systematic reviews of the impact of sport and physical activity from childhood through to old age (Arent, Landers, & Etnier, 2000; Biddle & Asare, 2011) and specifically within prisons (Woods et al., 2017) have reported positive effects on psychological well-being.

Within the prison population, multiple studies have reported a myriad of positive effects sport can have on psychological well-being (Amtmann & Kukay, 2016; Battaglia et al., 2015; Buckaloo, Krug, & Nelson, 2009; Cashin, Potter, & Butler, 2008; Gallant, Sherry, & Nicholson, 2014; Martin et al., 2013; Martos-Garcia, Devis-Devis & Sparkes, 2009). Positive effects are reported in life-skills, self-esteem, self-efficacy, confidence, hopelessness, depression, mood and resiliency. These findings primarily focus on the views of the prisoners, and relate to studies of people in prison engaging with sport through regular physical activity in the gym, or for example, participating in recreational football several times a week. Previous studies have also examined the impact of facilitated sport-based interventions (SBI) within prison, also focused primarily on the prisoners' perspective. A typical SBI would be the delivery of 8–12 week "sporting academies", which have sport participation as the main focus/activity, but include specific aims related to, for example, personal development or employability (Dubberley, Parry, & Baker, 2011; Leberman, 2007; Meek & Lewis, 2014a; Parker, Meek, & Lewis, 2014; Williams, Collingwood, Coles, & Schmeer, 2015). However, the lack of detailed studies focusing on the perspectives of stakeholders responsible for the design and delivery of SBIs within prison represents a significant gap in the literature, that if not filled will have implications for programme effectiveness in enhancing well-being.

Parker et al. (2014) reported on the outcomes from a 12-week sporting academy, which facilitated the development of sports coaching skills, qualifications (e.g. Sports Leaders awards), life-skills mentoring and pre-release resettlement support. The authors highlighted positive physical, social and psychological benefits, including: feeling physically fitter, increased self-esteem and positive outlook on life in preparation for reintegration into society. In a separate study, Meek and Lewis (2014a) provided a detailed ideographic account from prisoners and prison staff, focusing on the impact of football and rugby based sporting academies, provided within an English prison. The academies were positioned as an alternative way of engaging young men in identifying and meeting their community re-entry needs associated with the transition from prison. In this study, a cohort of 79 young men, (aged 18–21 years) reported benefits on prison life, preparation for release, improved attitudes toward offending, positive thinking and behaviour within prison, and on release. The authors also reported increased desistance from crime and enhanced prisoner self-esteem. Mindful of these positive outcomes, and similar positive impacts on prisoner psychological well-being detailed within a systematic review of 14 prison-based SBIs, Woods et al. (2017), highlighted that new research was required to further our understanding of the complexities of how such interventions are effective, in turn enabling practitioners to maximise intervention impact. A consistent exclusion of any psychological theory in the design of prison based SBIs, in contrast to Medical Research Council (MRC) guidance encouraging sound theoretical inclusion in health behaviour change interventions (Moore et al., 2015) was also highlighted by Woods et al. (2017) and represents a gap/opportunity for future research to address. This call for a greater

understanding of the complexities which underpin effective SBIs within prison resonates with the wider use of SBIs with at-risk individuals within communities, not only across the UK, but worldwide (Jones, Edwards, Bocarro, Bunds, & Smith, 2017).

Studies have examined the use of sport within at-risk communities to simultaneously promote psychological well-being at an individual level, whilst also delivering improved social cohesion and/or crime reduction in the communities within which that individual resides (Cameron & MacDougall, 2000; Coalter, 2009; Nichols & Taylor, 1996; Nichols, 2007; Taylor, Crow, Irvine, & Nichols, 1999; West & Crompton, 2001). The use of sport is often credited with playing a distinctive role in achieving non-sporting development goals, offering both at-risk individuals and prisoners alike, an alternative activities-based delivery method with which they typically engage better (Nichols, 2007). However, caution is sounded that the crucial psychological benefits are largely by-products of broader sports development objectives (Nichols, 2004), and the empirical evidence consistently warns of disconnect between the positive views of practitioners regarding the transformational power of sport, and those conducting the research (Coalter, 2013; Hartmann & Kwauk, 2011; Kay, 2009; Lubans, Plotnikoff, & Lubans, 2012; Sandford, Armour, & Warmington, 2006).

Criticisms often centre on difficulties in deconstructing and attributing causality (Collins, Henry, Houlihan, & Buller, 1999), and the centrality of sport to the resultant benefits (Coalter, 2013; Holt, 2016). Holt, mindful of the view expressed by Parkinson (1998), that sport, like most activities, is not a priori good or bad, but has the potential of producing both positive or negative outcomes, suggests the more constructive question centres around enquires on what conditions are necessary for sport to have a beneficial impact. This suggestion is further echoed in the more recent call by Woods et al. (2017) for a greater understanding of the complexities involved in SBIs delivered within prisons and a need to identify appropriate psychological theory to guide SBI design. The importance of a number of psycho-social mechanisms within the prison population were identified by Parker et al. (2014) and Meek and Lewis (2014a), such as improved self-perceptions, social connectedness and mood and emotions. However, there is a lack of detailed exploration from a stakeholder perspective, those responsible for intervention design and/or delivery, of how such SBIs positively impact on the psychological well-being of people in prison. Given the centrality of these stakeholders to the realisation of potential positive SBI impacts, a detailed exploration of their views is deemed worthy of investigation. The current study is therefore a response to the paucity of research exploring how stakeholders believe SBIs effectively contribute to prisoner psychological well-being and the lack of psychological theory explaining the link between what stakeholders perceive to be the constituent intervention components and improved prisoner psychological well-being.

Therefore, the study aims are twofold: 1) to understand the complexity of how SBIs can positively impact the psychological well-being of people in prison from the stakeholder perspective and present the results within a thematic framework; and 2) to link the framework to existing psychological theories of health behaviour change. Through interviews with a broad cross-section of those invested in the provision of SBIs in a prison setting, their views will inform a framework of key components, both sporting and non-sporting, required for the effective design and delivery of prison-based SBIs. Furthermore, the research will reflect on, and discuss, the emerging framework in the context of appropriate psychological theories which, it is suggested, should collectively underpin the development and delivery of SBIs.

## 2. Method

### 2.1. Participants

A total of 16 adult stakeholders (14 males and 2 female) were recruited. Inclusion criteria was defined as having experience of designing, delivering, or managing the implementation of SBIs within prison populations, and the exclusion criteria was defined as having no experience in any of the same activities. A sample frame was constructed using purposeful sampling, supplemented with snowballing, to increase the number of participants within the recruitment pool. From the sample frame of 18 individuals who were contacted via telephone and/or email, one declined to participate and one did not respond. [Table 1](#) displays the stakeholder roles of those who agreed to participate. A broad range of sports were represented within the interventions discussed, including, football, rugby, circuit classes, gaelic football and hurling (indigenous to Ireland), volley-ball, orienteering and kayaking.

### 2.2. Procedure

Ethical approval was granted from the Office for Research Ethics Committees, Northern Ireland (ORECNI), the National Health Service, Research and Development (NHS R&D) committee and the Northern Ireland Prison Service (NIPS). Subsequent to ethical approvals and participant recruitment, semi-structured interviews were conducted, facilitating sufficient structure to ensure a series of consistent and comprehensive topics were covered in each interview, whilst providing flexibility to ensure that interviewees' insights could be identified and developed ([Bryman, 2012](#)). Interview topics covered within the guide included, intervention design, aims, perceived impact, whether the intervention included behaviour change theory, participant motivation to take part and access to the programme.

### 2.3. Data analysis

Thematic content analysis was undertaken to inductively search for concepts, categories and themes emerging from the data collected. [Braun and Clarke \(2006\)](#) describe thematic analysis as a method for identifying, analysing and reporting patterns (themes) within the data. The six-step process adopted, as advised by [Braun and Clarke \(2006\)](#), is presented in [Table 2](#).

The reliability and validity of the analysis process and final theme construction were established through a number of checks conducted throughout the study to ensure accurate and rigorous findings are presented to the reader ([Sparkes, 1998](#)). First, following verbatim transcription of the interviews, each participant was provided with a copy of their transcript to ensure it accurately reflected their views expressed and allow for clarification; second, the study included extensive participant quotes to elevate the validity of the findings, with the participant I.D. numbers from

[Table 1](#) indicating the origin of each quote used; third, all raw-data quotes were subjected to an audit trail (a mapping from the participant's spoken word to theme creation); and finally, detailed discussions were held between the research team to explain and challenge emergent concepts, categories and themes.

## 3. Results

[Table 3](#) displays six themes, reflecting the spoken word of study participants, which emerged from the analysis, and their supporting sub-categories. Following completion of the thematic content analysis, the emergent themes were considered in the context of appropriate psychological theories, which are suggested as a starting point to bridge the existing gap in theory driven sport based interventions identified in previous prison based research ([Woods et al., 2017](#)).

### 3.1. Theme: relating and relationships

The development of social skills and the forging of better relationships through sport were described as key to improving psychological well-being. The opportunities for new or improved relationships existed between the prisoners, prison staff and prisoners, external facilitators and prisoners and, prisoners and the community. These findings reflect and extend the views of prisoners reporting improved relationships and communication skills through sport within prison ([Dubberley et al., 2011](#); [Leberman, 2007](#); [Meek & Lewis, 2014a](#); and [Gallant et al., 2014](#)). This theme manifested through two sub-categories:

#### 3.1.1. Improved social ability and mobility

The involvement of prisoners in the SBIs, particularly team-orientated sports (the majority), enabled the development of new and improved ways of communicating. The prevailing view was that the sports team environment provided a unique setting through which to build camaraderie around a shared experience and goal. This enabled communication that was more measured and calm, increased understanding of others points of view and a willingness to both give and receive meaningful praise. Often, having built up sufficient goodwill in the sporting environment, classroom based activities were used to further cement these social abilities. As P1 explained:

"You can see the group dynamic change as a result of those conversations and it's that kind of openness, the sports there, but it just creates social abilities, so it's whether or not you want to explain yourself and see what others think of you in a nice supportive environment ... and also relationship-ability with other people, they don't just have to shout and scream or lose their temper, they can start to question or explore and debate without it becoming an argument, you know, a fully-fledged battle."

**Table 1**  
Stakeholder participants, (CIC = Community Interest Charity).

Participant Number	Role in Prison Based SBI, Organisation and Location	Participant Number	Role in Prison Based SBI, Organisation and Location
P1	Programme Delivery, CIC, UK	P9	Programme Delivery, CIC, UK
P2	Programme Delivery, CIC, ex-prisoner, UK	P10	Programme Delivery, CIC, UK
P3	Programme Delivery, CIC, UK	P11	Programme Oversight, France
P4	Programme Delivery, CIC, UK	P12	Programme Oversight and Delivery, Belgium
P5	Programme Delivery, CIC, UK	P13	Programme Delivery, Sports Governing Body, UK
P6	Prison Governor, UK	P14	Prison Based PE Teacher, Ireland
P7	Programme Delivery, Sports Governing Body, UK	P15	Programme Delivery, Professional Sports Body, UK
P8	Programme Oversight, Sports Governing Body, UK	P16	Senior Officer, Head of Prison Gym, UK

**Table 2**  
Braun and Clarke's (2006) six-step process for thematic analysis.

Step	Associated Activities
1. Familiarisation with the data	Active reading and re-reading of the transcripts to allow for "immersion" in the data.
2. Initial data coding	Adoption of an open coding method, where the data was fractured, conceptualized and integrated to form concepts and categories (Strauss & Corbin, 1998). Completed with the assistance of the software package QSR NVivo 10.
3. Searching for themes	The use of axial coding to sort, synthesize, and organise the data and reassemble them in potential themes. This was achieved by relating the emergent categories to their subcategories to form more precise and complete explanations or themes.
4. Reviewing themes	Reviewing the themes, to check if they "work" in relation to both the initial open-coded extracts and the entire data set; use of thematic maps. In reviewing the themes, it is important to ensure internal homogeneity and external heterogeneity, (Patton, 2015), resulting in themes that are both specific enough to be discrete (non-repetitive), whilst also broad enough to encapsulate a set of related ideas.
5. Define and refine themes	Establish clarity around the essence of each theme and their associated categories and concepts. Although steps 2 through to 5 are presented here as linear, they were constant iterative processes, aided by detailed memo-writing to spark new ways of thinking about the data.
6. Final presentation of themes	Presentation of the complicated story of the data in a way which convinces the reader of the merit and validity of the analysis conducted.

**Table 3**  
Emergent themes and sub-categories.

Theme/Category	Sub-Category
1. "Relating and Relationships"	1.1 Improved social ability and mobility 1.2 Respect and accountability for others
2. "Sense of Achievement"	2.1 Individual and shared achievements 2.2 External recognition
3. "Sporting Occasions"	3.1 Novelty 3.2 Escapism
4. "In Their Hands"	4.1 Choice of activities 4.2 Stakeholder status
5. "Facing Forward"	5.1 Reduced transitional anxiety 5.2 Openness to signposting
6. "Creating a Life Rhythm"	6.1 Structure to prison Life 6.2 Transitional structure

The nature of the time invested over a course by the facilitators in relationship building, through the sporting activities, and often in subsequent one-to-one sessions with prisoners, also had a positive impact on social abilities. This appeared to create a unique trusting relationship which enabled prisoners to talk more candidly and openly, benefitting their psychological well-being. Even for interviewees based almost exclusively within the prison full-time, but not prison staff, there was a removal of the usual power imbalance barrier impacting prisoner/staff relations. As P1 explained:

"We come in and we're not wearing a uniform, well we're wearing a [organisation name] uniform, so if we put a survey out, if we sit down with them, we're able to listen to them, we have to follow rules but we're not defined by them if that makes sense, so the relationships is very much between us and the men on the ground."

An additional key difference in this relationship (compared to that of prisoners and prison staff) is the ability of prisoners to contact these individuals on release, have them act as referees on CVs, or even have their families contacted by the individuals prior to release to assist with issues, for example, getting their children involved in sporting activities in the communities (resulting in a positive impact on the parent still in prison).

When put to interviewees that a similar relationship (and other impacts) could be achieved through other activities, arts or crafts based for example, they often agreed. It was felt that being passionate enough about ones' delivery tool (e.g., sport, the arts), and clear in your messages, could lead to similar impact(s) being achieved. P3 commented:

"It's how you include it [the activity, e.g. sport] in the message. You're right you could argue you have what's his name from the TV, Gareth Malone. He would argue you could do it with choirs. He could do it with choirs. He probably could, but I think we have a distinct advantage because we're using a method which has a lot of life skills associated with it. I know as many coaches that would totally gloss over that and would only teach you to become a better rugby player, wouldn't even focus on the other skills. It does come back to that individual and why we're doing it and understanding it as well and believing in it."

As insinuated toward the end of that quote, there was an unsurprising belief that even with the possibility for other tools to deliver a similar impact, sport had an advantage in: a) being an easier sell in prison; and b) allowing life skills to be embedded more readily.

Improved social mobility was related to both the immediate prison-based impact, alongside longer term impacts. Regarding the former, it was highlighted that involvement in sport afforded opportunities to meet and engage with prisoners from other landings, and in some rare cases within mixed prisons, engage with the opposite sex in mixed classes. P6, a prison governor, noted their experience:

"[It's about] delivering improved relationships through sport with offenders, we have males, females, prison officers all training together, which is unique; there is inherent risk, but it's our job to manage that ... where possible we try to replicate society, mixed sessions have been a positive experience ... have led to respect on site."

There was also a perceived longer term impact, with the improved social abilities underpinning greater self-belief for mobility and integration within their communities upon release, or interaction with visiting members of the community. Social mobility was also considered important in relation to forming and realising the opportunities linked to career aspirations.

### 3.1.2. Respect and accountability for others

P14, a PE teacher working full-time within the prisons for 10 years, commented:

"The way they'd [prisoners] speak to each other, the way they'd speak to officers, the way officers speak to them, is just - I was shocked. I was shocked at how people can treat people like that. Especially people who are vulnerable in society."

This PE teacher's view, shared by other interviewees, was that involvement in SBIs, and the shared experiences within that,

produced a humanising effect, whereby mutual respect was earned and then shared. P9 explained:

“That’s a really useful tool [sport] in terms of building the relationship because we can have, there’s a bit of camaraderie, there’s a bit of respect if we’re training alongside them. We give them a bit and they in turn, they give us a bit back, so that essentially would be one of the key ingredients in building the relationship, is that wee bit of fitness together.

P5 recounted an example where sport was used specifically to facilitate mutual respect between prison staff and the prisoners, through the use of the climbing wall. This exercise was in preparation for their outdoor-based SBI which would involve both prisoners and prison officers as participants, with the specific aim of improving relations as requested by the governor:

“As session went on, we introduced bee-laying, so the idea was the prisoners would have opportunity to bee-lay each other, so that’s being in control of the rope for the person that’s climbing, so after a while then the POs felt confident enough to allow the prisoners to bee-lay them, so it was a real.. you know.. they were really nervous at the start, but once climbed once or twice, that trust was really there, so was interesting to see how that developed, as it took a lot of trust for the prison officers to allow the lads to bee-lay them ... they were very supportive of each other, moving hands and body positions, you know’ if you try this, that’s how I got past that point’ ... so really starting to communicate with each other constructively.”

Accountability to, and for, other individuals, not often experienced by many of the prisoners, was an important element of the SBIs. This was an impact reported both within and away from the sports environment. Within a match scenario, it was accountability to other team-mates, however, this extended beyond the touchline, specifically in the form of becoming a “sports mentor”, an option for prisoners who had completed previous SBIs. P5 explained the role of sports mentors:

“They will give constructive criticism [to current participants], but they’ll also understand that it’s good to end with a positive. Tell them what they were doing right as well. They’re there [on the pitch], and again it’s giving them responsibility. One of the biggest things which we find out in the regional centres externally as well, is when you have a mentor, maybe that has been inside, they’ve never had responsibility for other people.

It’s one of the things that really surprised me, is that, [they’ll say] - I love having that, now I’m responsible for him. Speaking to mentors, what they’ve had is, it’s the only time that they’ve had responsibility for something. In that sense it’s really important to them.”

These experiences resonate well with the development of human potential inherent in positive psychological well-being.

### 3.2. Theme: sense of achievement

The use of SBIs offered prisoners an easy, or at least relatively easy, to reach “platform” to simply “feel good about themselves” through reflecting upon their achievements. Certainly, prisoners could achieve in non-sporting activities, but as P14 put it, “sport was definitely an easy sell in prison” and therefore could facilitate this impact more readily than other activities. Two sub-categories were identified within this theme:

#### 3.2.1. Individual and shared achievement

Participation in SBIs offered opportunities for prisoners to experience an immediate sense of achievement. This could result from completing a demanding physical activity, as P5 recalled from an orienteering intervention:

“One of the lads, you know, they obviously smoke regularly, yeah ... like little trains ... he walked about about a kilometre into it, lay down and basically said, na, that’s me - not doing anymore of this, and you can take me back to prison.. I’m done ... he wanted to go back at that stage, but obviously, [with] bit of encouragement and a bit of banter from the prison officers and then his fellow prisoners ... he got through it and he actually really enjoyed it at end of day, he was the one was bouncing around at the end in the car park, you know, having a bit of fun ... got a real buzz from it.. a sense of achievement - really good to see.”

Similarly, playing against another team, particularly if that is an outside team visiting the prison (one of the final components of several of the SBIs discussed), offered prisoners unique opportunities to feel positive about themselves through a sense of achievement and recognition.

“Playing against themselves doesn’t have the same ring to it. As soon as you put in another team from outside who are regular rugby players, this is chance for them to show. They can show the guards. They can show the prisoners. They can show the Governor. This is what we’ve learned. We’re not all bad.”

#### 3.2.2. External recognition

The receiving of associated awards and qualifications within the prison are highly valued, as P16 explained:

“I’ve never had a certificate in my life before, is what they say to you. Never, for anything ... it’s a huge big thing, it’s only a bit of paper that’s laminated, means nothing to me but, it’s huge to these guys, really is, and their smile on their face when you’re there shaking their hand and you’re giving them an award, it’s immense.”

As commented above, SBIs are clearly not exclusive in the presentation of certificates and awards in prison, but they appear to offer a more attractive environment in which those awards and qualifications can be attained. Recognition, not just from those inside the prison, but also from family members invited to attend end of academy award ceremonies was highly valued. This provides a platform for participants to present a different identity to meaningful others in their lives, positively impacting on psychological well-being. However, this can also have a negative impact, if participants are faced with the situation of significant family members not attending such events. As P15 explained:

“There’s also an opportunity where they can receive their certificates, so we bring in their families in as well, which again is an area that’s really difficult for these boys - of the 20 that would graduate, erm, probably three parents would turn up.”

### 3.3. Theme: sporting occasions

The impact of sporting occasions and their associated environment(s) on the psychological well-being of people in prison

emerged as a key theme and was supported by two sub-categories.

### 3.3.1. Novelty

It was explained that prisoners were often experiencing the sport being played for the first time in their lives. Football and resistance training are the most popular sporting activities within prison, however the SBIs represented a new diversity of sports, including for example, rugby, cricket, volleyball, orienteering, football, canoeing, swimming and Gaelic games, the latter indigenous to Ireland. Critically, from a service provider point of view, the novelty facilitates increased listening and attention from the prisoners, which enables practitioners to deliver key messages, both sporting and non-sporting. As P3 commented:

"[They were] Engaged because it was [via] physical activity. There was only one person who'd ever done rugby before. That helped us because what we found ... even the PTI [physical training instructor] said, it's great when the prisoners are responding to you. They're actually listening because they don't know. If we'd gone in and done football, we'd never have the same uptake because everybody's a football expert in Scotland ... whereas in rugby, because they didn't know how to play the game, they had to listen to the coaches. We got their attention quite quickly. The sport really worked."

It was also perceived that novel sports environments removed prisoners from their comfort zone, whether that was delivering a coaching session, or completing an endurance based activity. Stretching them beyond their comfort zones, mentally and physically, removed personal barriers and enabled new, more positive ways of thinking and interacting.

### 3.3.2. Escapism

Sporting occasions within prison were perceived as offering an 'escape' both mentally and at times physically (if participating in sports outside the prison, e.g., kayaking) from the often stressful confines of prison. P10 explained, "A lot of the lads will say to me they forget they're in prison when they're out on the AstroTurf especially", P16 further elaborated, "They can say yes, I'm in prison technically, but for that hour and a half I can be anywhere in the world." Being granted Release on Temporary License (ROTL) to participate in an outside SBI, brought further psychological well-being benefits as explained by P5, "just the novelty of standing on the balcony and looking outside across the water, that was enough for them, they were really happy."

## 3.4. Theme: in their hands

The SBIs or simply the prison gym, offered scope for prisoners to exercise a relative sense of empowerment and autonomy, otherwise rare inside and/or outside of the prison. Sport offered them an environment where they could be a voice that mattered. Two sub-categories contributed to this theme.

### 3.4.1. Choice of activities

SBIs provided participants with the opportunity to choose to engage with new sports, which often, prior to entering prison, they would not have been afforded. Practitioners and prison staff spoke of a desire to offer diversity within their SBIs, and a need to create an offering which reflected that of outside the prison. As P12 explained:

"Our goal is to set up and offer the same as the offer outside of prison, that's the goal - the prison sentence, or the loss of freedom is the sentence the offenders get, everything else we try

to do, we try to copy the programmes outside prisons, inside prisons, of course there are a lot of limitations - you know of the biggest is of course, finances, but if there is coming up a new fitness hype, like insanity, we teach that in prison - if we see eh.. the start to run programme, or the programme you know (Couch to 5K) and we saw that coming up in society, we also copy that inside of prison."

### 3.4.2. Stakeholder status

Prisoners were viewed as service users of the SBIs, who should be consulted about what that offering looked like and how it might be presented. Of course, whilst not possible to action all requests, many were taken on board and implemented. P1 explained that part of their role was to "keep my hand in with what people want, rather than what I think they want", and this was achieved by talking to prisoners and conducting surveys. Outside of specific SBIs, this sense of being a valued stakeholder was also evident in the gym, captured in this quote from P16:

"It's not the first time a prisoner has come to me with a [request for a] new bit of equipment and I've purchased it, purely because no one had thought on it before and I deemed it financially available and a good idea, so yes I've bought stuff in the gym before .... you can see the amazement and they encourage others to do it. So they get the buzz from their amazement but they pass the buzz on. It's like a peer mentoring so they go to their mates and it encourages more to use more equipment and encourages them to have other ideas because they actually see the ideas being put into place."

Within some of the SBIs, stakeholder status also meant that responsibility was handed over to the prisoners to organise sections of the activities, or indeed an entire independent programme of sports events with budgetary control. On one SBI for example, the prisoners have to organise and run a tag rugby event for external teams, hosted inside the prison. From timetabling matches, to organising catering, to awarding man of the match, they are responsible for all aspects of the event. In another example, prisoners were tasked to organise a series of summer sporting events for the entire prison, called the "Castle Games". A budget of 750 euros was provided and all decisions were made by prisoners' committees. It was noted, that this sense of empowerment stands in stark contrast to many other conditions in the prison, and often prisoners experiences prior to incarceration.

## 3.5. Theme: facing forward

This category emerged, not exclusively, but most strongly from interviews with stakeholders involved in longer duration SBIs (for example, 8–12-week full-time sporting academies), those augmented with additional employability or training programmes. It was important therefore to try and extract the additionality sport was bringing to this category, and associated sub-categories. It was explained by interviewees that sport was not merely a 'fly-paper' to attract participants, rather, the climate created by the sporting input facilitated an openness to considering future positive life courses, which may or may not involve continued involvement in sport. The two sub-categories are:

### 3.5.1. Reduced transitional anxiety

Many of the interviewees stressed that integral to their offering was a "through the gate" service, which allowed prisoners, having successfully engaged with their offering in the prison, to continue

the relationship upon release. It was felt that sporting organisations are uniquely placed to offer this due to their involvement at the heart of many communities. Key to this was the establishment of a relationship inside the prison, instilling a sense of confidence in the prisoner that they would be welcome upon release. It was believed that this feeling of belonging would have a beneficial impact on psychological well-being. P15 commented:

“and then sport really creates a great network, which is why we try and signpost the boys to rugby clubs and things like that, where there's people working from dustmen to doctors, all playing in the same team, so there isn't really a, sort of, a class distinction, if that makes sense?”

### 3.5.2. Openness to sign-posting

Prison offers a multitude of services designed to assist with rehabilitation and reduce re-offending upon release, for example, criminal justice services, training and employability services. By linking these services with SBIs, the providers were able to deal with prisoners in a more positive state of mind, or state of readiness to change, resulting in more meaningful engagement. An example was provided by P1:

“because they're on a sports programme and they're feeling better, they're developing their communication skills ... there's a window of opportunity for an (external) organisation to glean information and utilise it, and if they were to come into a room and meet their client they would find a less resistant one. That's what the National Career Service is finding, less resistance when they meet them [prisoners] because they're in a comfortable environment really, rather than coming in to sort of violence and stresses in general, if someone knocks on a door [on a landing] and says can we have a chat, they're going to be resistant.”

There was a clear belief that SBIs facilitated the development of life skills, which when coupled with an openness to sign-posting, could assist prisoners in building future careers. However, this hinged on very clear linkages being made between sport and positive life skills, rather than “playing sport for sport's sake”, (P3), and hoping somehow that the connections would be made. For example, one stakeholder explained how he engrained four key life lessons in all his rugby sessions: 1) always move forward; 2) constant recycling [of the ball, or oneself], getting up and going again; 3) achieving 1 & 2 with the help of those around you; and, 4) having a constant focus on an end goal. There were also examples from three of the interviewees of prisoners who, upon completion of an SBI and their subsequent release, had been employed with associated sporting organisations. One a strength and conditioning coach in a professional team, and two had become full-time mentors in different sport-based community interest charities. Larger sports governing bodies were also well placed to offer tangible career development outside of the obvious coaching opportunities. P8 explained their future intentions as their SBI evolves:

“Something that we are looking to do next year, is where we can have people in here on work placement [on ROTL or liberation] ... I mean we are a small to medium sized company, we are a hundred and twenty people, but we've a broad range of finance, marketing, all of those things that you forget about and you just focus ... it's all on the pitch and it's all about coaching ... but there's obviously so much more to it.”

However, caution was sounded regarding the need to manage expectations, that whilst there are examples of employment opportunities coming directly as a result of involvement in the SBIs, this would not always be possible. This was considered an important issue as overpromising and not delivering very quickly leads to a breakdown of trust and engagement with the prisoner population.

### 3.6. Theme: creating a life rhythm

This theme emerged as a key contributor to the perceived improvement in psychological well-being of prisoners, particularly with regard to having a life purpose and associated positive functioning. This creation of a life rhythm and a daily structure would then ideally continue upon release, through contacts with the community based sports initiatives. There were two associated sub-categories which supported this theme:

#### 3.6.1. Structure to prison life

The essence of this sub-category was that sport, whether that was in the prison gym, or through a specific SBI, often helped prisoners simply “get through the day” (P14), by virtue of it being a more attractive proposition within the prison. Sport represented a voluntary choice, which made them feel in control and better about themselves. Sport was something they could do several times a week, in some prisons every day, and crucially it represented an activity to look forward to. What was often described as an increase in focus and discipline by those engaged in the SBIs, encouraged and enabled prisoners to engage with a daily structure, and consequently be less engaged with activities likely to lead to problems in prison, such as involvement in fighting, drugs or consistent troublesome relations with prison staff. There was however an associated risk to psychological well-being with this sub-category, expressed by P6, a prison governor:

“Once they have experienced the benefits, they become more involved in the routine, then if there is some difficulty why they can't go, it can affect their (psychological) balance for the worse.”

It was therefore deemed important to be flexible when considering the potential removal of privileges which are facilitating attendance on the SBIs, particularly in the early stages, when ill-discipline was more likely to arise.

#### 3.6.2. Transitional structure

P2, an ex-prisoner who now delivers SBIs explained the importance of having a daily structure and routine established on release from prison:

“The only time we engage in sport [from previous childhood experience] is in prison, but when you come out and you're up to no good, you've got no time for that [sport] because you're constantly chasing money, you're constantly doing whatever you're doing, so there's not really the time to go and do that until you've got a good routine and your income is getting to where you want it to be, then you can take your foot off the pedal a bit.”

Those involved in the delivery of SBIs, particularly those which straddled both sides of the prison gate, felt that prisoners attending their interventions greatly enhanced their chances of embracing a positive life rhythm, that is, developing a structure to their daily routines which enables them to flourish rather than gravitate toward risk-taking behaviours. This can be achieved by building on

their increased openness to the community links and possible employability opportunities discussed previously.

#### 4. Discussion

The aims of the current study were to present a thematic framework to aid the design and delivery of SBIs within prison and link the framework to extant psychological theory. The discussion will therefore focus on examining how the preceding themes presented in detail relate to existing theory and previous research.

A close alignment was observed between the themes “Relating and Relationships”, “Sense of Achievement” and “In Their Hands”, and Basic Psychological Needs Theory (BPNT), (Ryan & Deci, 2001). Ryan and Deci propose that humans have three fundamental psychological needs: autonomy; competence; and relatedness, that once met, lead to increased psychological well-being. Autonomy is concerned with the experience of choice in one’s behaviour and acting as a result of personal interest. Competence refers to feelings of effectiveness in one’s environment and experiencing opportunities to express one’s capacities. Finally, relatedness refers to feeling connected with others, a reciprocal sense of caring and having a sense of belonging with other individuals and one’s community.

A clear similarity is evident between ‘Relatedness’, as a central tenant of BPNT and the theme, Relating and Relationships, with similarities also existing within remaining themes identified, e.g., Facing Forward (openness to community involvement) and Sense of Achievement (sharing achievements with others). The importance of prisoners developing new ways of relating and having opportunities to put these new skills into practice, (internally and externally), was cited by multiple stakeholders as key mechanisms within the SBIs. The development of pro-social behaviours and an associated positive impact on psychological well-being is supported by previous non-prison based research, indicating that sharing a meaningful connection with others through sport may enhance mental well-being (Mack et al., 2012; Gunnell, Crocker, Mack, Wilson, & Zumbo, 2014). Previous prison based research with programme participants has also consistently reported improved relations, communication, trust and team-working (Dubberley et al., 2011; Meek & Lewis, 2014a; Leberman, 2007; Gallant et al., 2014), each contributing to improved relatedness and subsequent psychological well-being.

Improvements to participants’ perception of competence (i.e. feelings of effectiveness in one’s environment and experiencing opportunities to express one’s capacities) are core elements within BPNT and were evident across several of the themes identified, most readily in “Sense of Achievement”, for example, the personal and team achievements, which were readily facilitated within the SBIs, and the associated recognition (both internally in the prison, and externally to significant others). Also, the theme “Sporting Occasions”, identified by previous research as an effective means to engage prisoners, or at-risk individuals, in activities they typically dislike such as education, (Lewis & Meek, 2012; Nichols, 2007; Sharpe, Schagen & Scott, 2004), is also credited in the current research with providing a range of novel sports, offering opportunities for ‘quick-win’ improvements in perceived sporting competence. As a result, associated improvements were reported in both prisoners’ immediate affective state, at the point of achieving a new sporting goal, but also their eudaimonic well-being, through a more lasting increase in self-efficacy, for example, having completed multiple physically demanding tasks. These reported mechanisms of achievement and recognition are in line with previous research reporting involvement in sport as a route for providing improvements in perceived competence, positive self-definition and self-presentation (Kehily, 2007; Leberman, 2007; Lubans et al., 2016;

Meek & Lewis, 2014a).

In addition to new sport competences, improved social competences and opportunities to display them were also evident in the themes of “Facing Forward”, and “Relating and Relationships”. Opportunities to express one’s capacities were also more readily realised by the perceived improvement SBIs had on the participants’ Life Rhythm, with newly established daily structures enabling an improved sense of purpose and meaning, both key to psychological well-being (Ryff & Keyes, 1995).

Within BPNT, as proposed by Ryan and Deci (2001), autonomy is concerned with the experience of choice in one’s behaviour and acting as a result of personal interest, which may initially appear paradoxical within the confines of incarceration. However, Woodall, Dixey, and South (2014) examined how choice, control and implicitly, empowerment, key components within the discourse for ‘health-promoting prisons’, have benefitted prisoner well-being. Despite institutional structure imposed upon prisoners, they could exert some personal choice by exercising a degree of self-determination. Furthermore, it is actually within prison, free from the potentially limiting environments hitherto experienced, where offenders need to start making choices, if they are to successfully reintegrate into communities upon release. This view aligns closely with the experiences described in the theme “In Their Hands”, and also “Facing Forward”, and represents a clear benefit to eudaimonic well-being of the prisoners involved in SBIs.

We propose that SBIs, with the diversity of choice described previously, provided prisoners with a platform for an initial self-determined choice to become involved or not, with the wide-ranging appeal of sports representing an easier choice than non-sports based interventions. Increased autonomy and empowerment were also achievable through the treatment of prisoners as stakeholders within SBIs, for example, the purchasing of equipment in the gyms and responsibility for organising sporting activities. These autonomy supportive approaches resonate with research demonstrating the many benefits athletes report when coached within an autonomy supportive environment, such as enhanced psychological well-being, basic psychological need satisfaction, self-determined motivation, and performance (Amorose, 2007; Gillet, Vallerand, Amoura, & Baldes, 2010; Mageau & Vallerand, 2003). The beneficial impact of instilling a sense of autonomy and empowerment has also been reported previously within prison SBIs. Leberman (2007), reported participants becoming more aware of having choices in moving forward with their lives, and Meek and Lewis (2014a), reported increased participant motivation to improve their diet by making healthier choices following their involvement in SBIs.

In addition to BPNT, the emergent themes closely align with Social Identity Theory, Tajfel (1972), which focuses on people’s internalised sense of their membership of a particular group, and their subsequent sense of self becoming defined in terms of that membership. An individual’s psychology often depends on the state of the group that they believe defines them (in-groups), with positive psychological well-being associated with groups which provide stability, meaning, purpose and direction (Haslam, Jetten, Postmes, & Haslam, 2009). The themes presented, such as “Facing Forward”, “Creating a Life Rhythm” and “Relating and Relationships”, all provide new opportunities for meeting these needs as participants begin to define themselves as group members within the shared social identity of the SBI. Reicher and Haslam (2006), in a nine-day simulated prison environment, also found that as prisoners developed a shared sense of social identity and collectively resisted stressors (themes present in the framework identified, for example through the use of sports mentors) their well-being increased.

Social identity theory focuses on the importance of three key

structural elements, the perceived permeability of group boundaries and the perceived stability and legitimacy of an in-group in relation to other groups (Tajfel & Turner, 1979). Therefore, the more an individual perceives their group boundaries, and desirable other groups, as permeable, the more positive they will be regarding opportunities for social mobility between those groups (Haslam et al., 2009). The themes identified within the current research, in particular “Facing Forward”, would therefore suggest that SBIs enable people in prison to perceive the community support groups and sports teams, which can form part of a new social identity on release, as more permeable, therein facilitating positive impacts on psychological well-being.

Finally, a constituent part of social identity theory is self-categorisation theory, which extends the former, by examining more forensically the dynamic workings of the self, and its relationship to and within groups (Turner, 1985). Whether, and which, social identities become salient is seen to be an interactive product of the fit of a particular categorisation and a person's readiness to use it (Oakes, Haslam, & Turner, 1994). With this in mind, the SBIs, could be viewed as offering preparatory mechanisms which assist people in prison to increasingly perceive themselves as ready to adopt new or different pro-social identities, with the potential to improve psychological well-being. This increasing readiness to adopt new and/or different identities through SBIs, also links to part of the transtheoretical model of behaviour change (Prochaska, Redding, & Evers, 2008), which sets out five stages individuals can progress through, and relapse from, namely, pre-contemplation, contemplation, preparation, action and maintenance of new behaviours. SBIs could therefore be viewed a useful tool in aiding prisoners transition from pre-contemplation to contemplation of new pro-social identities, and potentially beyond.

Haslam et al. (2009) highlight that negative psychological consequences can occur if an individual's sense of social identity is compromised, through leaving or being rejected by those who are part of an in-group. This links to the caution sounded by P6 of the detrimental effects of breaking newly established routines within prison; therefore, if SBIs are sources of new social identities and positive life rhythms, the relevant providers need to act with due responsibility in relation to providing continuity of that identity, both within the prison and ideally on release.

Regarding the centrality of sport to potential positive impacts on psychological well-being it is worth noting that many of the sub-categories within identified themes are not necessarily related to, or dependant on prisoners' involvement in sport. For example, “Facing Forward”, which focuses in part on engagement with (non-sporting) community based partnerships, could be achieved without sport. The case was made however that the involvement of prisoners in SBIs facilitated introductions to a number of community based partnerships in a more receptive setting, thus greatly improving subsequent prisoner engagement. Secondly, it was suggested the ability of SBIs to reinforce the cross-functionality of skills, obtained through them but applicable to employability, was a unique additionality offered by the SBIs. These views are afforded validity through the experience of young offenders reported by Parker et al. (2014), and Meek and Lewis (2014a). Parker et al. (2014), concluded that the wide range of community networks, which the sporting academies provided for prisoners, ensured that rather than being left with false hopes and hollow promises, there was a sense of possibility and opportunity for the future, thus encouraging a “learned optimism” Maruna (2001, p. 147).

The current study focused on the potential positive impacts sport-based interventions can have on the prison population. However, prisons as social environments tend to reflect the cultural norms of their host societies (De Viggiani, 2012), and this is evidenced in findings from Meek and Lewis, (2014b), which reported

that participation in sport and physical activity among female prisoners was lower than that of male prisoners. Participation in sport and physical activity for female prisoners was also reported as lower than that of non-incarcerated females, despite positive impacts on psychological well-being, due to extrinsic institutional barriers and intrinsic gendered barriers (Meek and Lewis, 2014b). An over-reliance on SBIs to improve psychological well-being within prisons therefore has the potential to create health inequalities as they will be disproportionately viewed as unappealing or inaccessible to female prisoners. Also, within the male prison population, participation in activities such as weight-lifting and competitive sport can encourage toxic hegemonic masculinities and contribute to hierarchical and violent inmate cultures (Norman, 2017). Although the observations within the current study, including improved relations, team work and inclusivity through SBIs, offer an alternative narrative, stakeholders involved in prison-based SBIs should be mindful of, and work to mitigate, any potential negative consequences arising out of an increased use of SBIs within prison across all populations.

The absence of prisoner's views is acknowledged as a limitation of the current study. As direct end-user stakeholders, their insights into the practical and theoretical understanding of the impact of SBIs are important considerations. However, planned prisoner consultations were not possible within the current study due to persistent operational restrictions on identified sites. However, the findings presented do give voice to the views of stakeholders not prevalent in previous research and are in many cases validated by previous research which has focused on the views of prisoners as highlighted previously. A second limitation of the study is the potential for bias in the participant views regarding the possible benefits to be gained from SBIs, due to their involvement in the design, delivery and/or management of the interventions. In recognition of this, stakeholder views and assumptions were challenged during the interviews and where appropriate this has been reflected in the findings presented.

## 5. Conclusions

The purpose of this study was to: 1) examine how SBIs can impact the psychological well-being of people in prison from the perspective of those who design and deliver them, with the results presented in a thematic framework; and 2) link the framework to appropriate existing psychological theories in line with guidance from the MRC, to strengthen the theoretical foundations of health behaviour change interventions. Accordingly, the results are presented as a framework incorporating six main themes. These themes represent complementary components to maximise the effective design and delivery of prison-based SBIs. Although the six themes are presented separately, with their associated sub-categories (Table 3), they are in many cases co-dependant on each other. Identification of these inter-relations between themes should not lessen the validity of their heterogeneity, but rather serve to demonstrate the complex social and psychological processes inherent when attempting to impact psychological well-being.

The findings reflect and build on previous research which has highlighted the important role prison based SBIs have in facilitating, for example, increased confidence, self-esteem, pro-social behaviours and identities primarily from the participant perspective (Dubberley et al., 2011; Gallant et al., 2014; Leberman, 2007; Meek & Lewis, 2014a) and associated psycho-social mechanisms (Parker et al., 2014). These findings have been extended by conducting an in-depth exploration of how SBIs can positively impact the psychological well-being of people in prison, from the perspective of those who design, deliver and provide oversight.

Themes and sub-categories, which emerged inductively from the data, often resonated with previous findings reported by prisoners, and it is proposed that these parallels afford testimony to the realisation of the perceived impacts. This is cautioned with a need to measure and evaluate the longer-term impacts of SBIs and test for the continued realisation of the supportive mechanisms established therein. Similarly, due to the heterogeneous nature of both prisons (e.g., different categories) and prisoners (e.g., gender, age, ethnicity), further research is also required to test the applicability of the framework and theoretical links identified across differing prison environments and populations.

The current study also extends previous research by presenting the emergent themes within the context of three psychological theories, namely Social Identity Theory (Tajfel, 1972), Self-Categorisation Theory (Turner, 1985) and Basic Psychological Needs Theory (Ryan & Deci, 2001). These three theories were identified from the themes which emerged from the primary inductive thematic analysis and their importance is twofold. Firstly, they provide a psychological insight into why the themes identified ultimately have the potential to positively impact prisoner psychological well-being. Secondly, they are proposed as a starting point for theory-based interventions using psychological theory to guide, and critically evaluate, their design and delivery, in line with MRC guidance, ultimately benefitting the end user (i.e., prisoners). It is not suggested that the theoretical links identified are exclusively applicable to prison based SBIs, but that the current findings highlight and strengthen their validity within the prison environment. With the former point in mind, it is recommended that the framework suggested could be tested to shape interventions outside of the prison setting, as the absence of clear and coherent theoretical foundations have been cited as issues within the delivery of SBIs more broadly for at-risk youth, Hartmann (2001) and Baldwin (2000).

Finally, from a policy perspective and being mindful of the low levels of psychological well-being within secure estates across multiple geographic locations, the study highlights the potential for sport to be more readily identified as one of a number of key services, partnerships or actions, which collectively can target the high prevalence of complex and diverse mental health needs (Fazel, Hayes, Bartellas, Clerici, & Trestman, 2016). The proposed framework also provides practitioners with a research informed tool to better facilitate the purposeful design of SBIs to positively impact psychological well-being of people in prison and progress beyond using sport in the hope of positive collateral damage.

## References

- Amorose, A. J. (2007). Coaching effectiveness. In M. S. Hagger, & N. L. D. Chatzisarantis (Eds.), *Intrinsic motivation and self-determination in exercise and sport* (pp. 209–227). Leeds: Human Kinetics.
- Amtmann, J., & Kukay, J. (2016). Fitness changes after an 8-week fitness coaching program at a regional youth detention facility. *Journal of Correctional Health Care*, 22(1), 75–83.
- Arent, S., Landers, M., & Etnier, J. (2000). The effects of exercise on mood in older adults: A meta-analytic review. *Journal of Ageing and Physical Activity*, 8, 407–430.
- Australian Institute of Health and Welfare. (2015). *The health of Australia's prisoners 2015*. Canberra: AIHW.
- Baldwin, C. K. (2000). Theory, program and outcomes: Assessing the challenges of evaluating at-risk youth recreation programs. *Journal of Park and Recreation Administration*, 18, 19–33.
- Battaglia, C., di Cagno, A., Fiorilli, G., Giombini, A., Borrione, P., Baralla, F., et al. (2015). Participation in a 9-month selected physical exercise programme enhances psychological well-being in a prison population. *Criminal Behaviour and Mental Health*, 25(5), 343–354.
- Biddle, S. J., & Asare, M. (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine*, 45, 886–895.
- Biddle, S. J., Mutrie, N., & Gorely, T. (2015). *Psychology of physical Activity: Determinants, well-being and interventions*. Routledge.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.
- Bryman, A. (2012). *Social research methods*. Oxford University Press.
- Buckaloo, B. J., Parry, K. S., & Nelson, K. B. (2009). Exercise and the low-security inmate changes in depression, stress, and anxiety. *The Prison Journal*, 89(3), 328–343.
- Cameron, M., & MacDougall, C. J. (2000). *Crime prevention through sport and physical activity* (Vol. 165). Australian Institute of Criminology.
- Cashin, A., Potter, E., & Butler, T. (2008). The relationship between exercise and hopelessness in prison. *Journal of Psychiatric and Mental Health Nursing*, 15, 66–71.
- Coalter, F. (2009). *The value of Sport: Crime reduction and community safety*. London: Sport England/UK Sport.
- Coalter, F. (2013). *Sport for development: What game are we playing?* Routledge.
- Collins, M., Henry, I., Houlihan, B., & Buller, J. (1999). *Sport and social exclusion*. Loughborough: Loughborough University.
- Council of Europe. (2001). *Recommendation No. R. (92) 13 REV of the committee of ministers of members States on the revised European sports charter* (Strasbourg, France).
- De Viggiani, N. (2012). Trying to be something you are not: Masculine performances within a prison setting. *Men and Masculinities*, 15(3), 271–291.
- Dubberley, S., Parry, O., & Baker, S. A. (2011). Mending fences: Reparation and the reorientation of young people in the secure estate. *Criminal Justice Studies*, 24(4), 337–350.
- Durcan, G. (2016). *Mental health and criminal justice. Views from consultations across England & Wales*. Centre for Mental Health.
- Fazel, S., Hayes, A. J., Bartellas, K., Clerici, M., & Trestman, R. (2016). Mental health of prisoners: Prevalence, adverse outcomes, and interventions. *The Lancet Psychiatry*, 3(9), 871–881.
- Fox, K. R. (1999). The influence of physical activity on mental well-being. *Public Health Nutrition*, 2(3a), 411–418.
- Gallant, D., Sherry, E., & Nicholson, M. (2014). Recreation or rehabilitation? Managing sport for development programs with prison populations. *Sport Management Review*, 18(1), 45–56.
- Gillet, N., Vallerand, R. J., Amoura, S., & Baldes, B. (2010). Influence of coaches' autonomy support on athletes' motivation and sport performance: A test of the hierarchical model of intrinsic and extrinsic motivation. *Psychology of Sport and Exercise*, 11, 155–166.
- Gunnell, K. E., Crocker, P. R., Mack, D. E., Wilson, P. M., & Zumbo, B. D. (2014). Goal contents, motivation, psychological need satisfaction, well-being and physical activity: A test of self-determination theory over 6 months. *Psychology of Sport and Exercise*, 15(1), 19–29.
- Hartmann, D. (2001). Notes on midnight basketball and the cultural politics of recreation, race and at-risk Urban youth. *Journal of Sport and Social Issues*, 25, 339–372.
- Hartmann, D., & Kwak, C. (2011). Sport and Development: An overview, critique, and reconstruction. *Journal of Sport & Social Issues*, 35(3), 284–305.
- Haslam, S. A., Jetten, J., Postmes, T., & Haslam, C. (2009). Social identity, health and well being: An emerging agenda for applied psychology. *Applied Psychology*, 58(1), 1–23.
- Holt, N. L. (2016). *Positive youth development through sport*. Routledge.
- Jones, G. J., Edwards, M. B., Bocarro, J. N., Bunds, K. S., & Smith, J. W. (2017). An integrative review of sport-based youth development literature. *Sport in Society*, 20(1), 161–179.
- Kay, T. (2009). Developing through sport: Evidencing sport impacts on young people. *Sport in Society*, 12(9), 1177–1191.
- Kehily, M. J. (2007). *Understanding youth: Perspectives, identities and practices. Youth: Perspectives and Practice*. London: Sage/The Open University.
- Lancet. (2016). Physical activity 2016: Progress and challenges progress in physical activity over the olympic quadrennium. 388:1326–1336. Retrieved from [http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(16\)30581-5.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(16)30581-5.pdf).
- Leberman, S. (2007). Voices behind the walls: Female offenders and experiential learning. *Journal of Adventure Education & Outdoor Learning*, 7, 113–120.
- Lewis, G., & Meek, R. (2012). Sport and physical education across the secure estate: An exploration of policy and practice. *Criminal Justice Matters*, 90(1), 32–34.
- Lubans, D. R., Plotnikoff, R. C., & Lubans, N. J. (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.
- Lubans, D., Richards, J., Hillman, C., Faulkner, G., Beauchamp, M., Nilsson, M., et al. (2016). Physical activity for cognitive and mental health in youth: A systematic review of mechanisms. *Pediatrics*, 138(3), e20161642.
- Mack, D. E., Wilson, P. M., Gunnell, K. E., Gilchrist, J. D., Kowalski, K. C., & Crocker, P. R. (2012). Health-enhancing physical activity: associations with markers of well-being. *Applied Psychology: Health and Well-Being*, 4(2), 127–150.
- Mageau, G. A., & Vallerand, R. J. (2003). The coach-athlete relationship: A motivational model. *Journal of Sports Sciences*, 21, 883–904.
- Martin, R. E., Adamson, S., Korchinski, M., Granger-Brown, A., Ramsden, V. R., Buxton, J. A., et al. (2013). Incarcerated women develop a nutrition and fitness program: Participatory research. *International Journal of Prisoner Health*, 9(3), 142–150.
- Martos-Garcia, D., Devis-Devis, J., & Sparkes, A. C. (2009). Sport and physical activity in a high security Spanish prison: An ethnographic study of multiple meanings. *Sport, Education and Society*, 14, 77–96.
- Maruna, S. (2001). *Making good: How ex-convicts reform and rebuild their lives*. American Psychological Association.

- Mason, P., Curl, A., & Kearns, A. (2016). Domains and levels of physical activity are linked to adult mental health and well-being in deprived neighbourhoods: A cross-sectional study. *Mental Health and Physical Activity*, 11, 19–29.
- Meek, R., & Lewis, G. (2014a). The impact of a sports initiative for young men in prison: Staff and participant perspectives. *Journal of Sport & Social Issues*, 38(2), 95–123.
- Meek, R., & Lewis, G. E. (2014b). Promoting well-being and desistance through sport and physical activity: The opportunities and barriers experienced by women in english prisons. *Women & Criminal Justice*, 24(2), 151–172.
- Moore, G., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., et al. (2015). Process evaluation of complex interventions. Medical Research Council guidance. *BMJ*, 2015;350:h1258.
- Nichols, G. (2004). Crime and punishment and sports development. *Leisure Studies*, 23(2), 177–194.
- Nichols, G. (2007). *Sport and crime reduction: The role of sports in tackling youth crime*. Abingdon: Routledge.
- Nichols, G., & Taylor, P. (1996). *West Yorkshire sports counselling: Final evaluation report*. Halifax: West Yorkshire Sports Counselling Association.
- Norman, M. (2017). Sport in the underlife of a total institution: Social control and resistance in Canadian prisons. *International Review for the Sociology of Sport*, 52(5), 598–614.
- Oakes, P. J., Haslam, S. A., & Turner, J. C. (1994). *Stereotyping and social reality*. Oxford: Blackwell.
- Parker, A., Meek, R., & Lewis, G. (2014). Sport in a youth prison: Male young offenders' experiences of a sporting intervention. *Journal of Youth Studies*, 17(3), 381–396.
- Parkinson, M. (1998). *Combating social exclusion: Lessons from area-based programmes in Europe* (p. 37). Bristol: Policy Press.
- Patton, M. Q. (2015). *Qualitative research and evaluation Methods: Integrating theory and practice* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Prochaska, J. O., Redding, C. A., & Evers, K. E. (2008). The transtheoretical model and stages of change. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice*. (pp. 97–117). Jossey-Bass.
- Reicher, S. D., & Haslam, S. A. (2006). Rethinking the psychology of tyranny: The BBC prison experiment. *British Journal of Social Psychology*, 45, 1–40.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52(1), 141–166.
- Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719.
- Sandford, R. A., Armour, K. M., & Warmington, P. C. (2006). Re-engaging disaffected youth through physical activity programmes. *British Educational Research Journal*, 32(2), 251–271.
- Sharp, C., Schagen, I., & Scott, E. (2004). *Playing for success: The longer term impact. A multilevel analysis* (No. RB593). Nottingham, UK: National Foundation for Educational Research.
- Sparkes, A. (1998). Validity in qualitative inquiry and problems of criteria: Implications for sport psychology. *The Sport Psychologist*, 12, 363–386.
- Stewart-Brown, S., & Janmohamed, K. (2008). *Warwick-Edinburgh mental well-being scale*. User guide. Version, 1.
- Strauss, A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks, CA: Sage.
- Tajfel, H. (1972). Experiments in a vacuum. In J. Israel, & H. Tajfel (Eds.), *The context of social psychology: A critical assessment* (pp. 69–119). London: Academic Press.
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.
- Taylor, P., Crow, I., Irvine, D., & Nichols, G. (1999). *Demanding physical programmes for young offenders under probation supervision*. Research Findings 91. London: Home Office.
- Travis, J., Western, B., & Redburn, F. S. (2014). *The growth of incarceration in the United States: Exploring causes and consequences*. National Academies Press.
- Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive theory of group behaviour. In E. J. Lawler (Ed.), *Advances in group processes: Theory and research* (vol. 2, pp. 77–122). Greenwich, CT: JAI.
- West, S. T., & Crompton, J. L. (2001). A review of the impact of adventure programs on at-risk youth. *Journal of Park & Recreation Administration*, 19(2), 113–140.
- Williams, D., Collingwood, L., Coles, J., & Schmeer, S. (2015). Evaluating a rugby sport intervention programme for young offenders. *Journal of Criminal Psychology*, 5(1), 51–64.
- Woodall, J., Dixey, R., & South, J. (2014). Control and choice in english prisons: Developing health-promoting prisons. *Health Promotion International*, 29(3), 474–482.
- Woods, D., Breslin, G., & Hassan, D. (2017). A systematic review of the impact of sport-based interventions on the psychological well-being of people in prison. *Mental Health and Physical Activity*, 12, 50–61.
- World Health Organisation. (2016). *Physical activity strategy for the WHO european region*. Retrieved from [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0014/311360/Physical-activity-strategy-2016-2025.pdf](http://www.euro.who.int/__data/assets/pdf_file/0014/311360/Physical-activity-strategy-2016-2025.pdf).