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# Capitalising upon the Physical: Exercise and Addiction Recovery

The investigation underpinning this thesis explored the experiences of and perceived benefits for recovering addicts participating in Physical Exercise (PE) as an adjunctive treatment alongside their rehabilitation programme. In the UK there is considerably more sport and exercise provision for marginalised groups such as youth offenders than there is for those in recover. Through critical engagement with current literature and a deconstructing of discourses surrounding addiction, this was found to be an effect of the medical gaze upon the officially propagated conceptualisation of addiction and subsequent research trends. In the real world, recovery is greater than the sum of its parts and the benefits of enjoyable exercise within a positive community setting, entirely subjective. Circuit and yoga classes were made available to residents at a Sheffield residential drug/alcohol rehabilitation center. Residents who attended a minimum of eight classes had consultations with strength and conditioning coaches to identify their individual fitness goals and were given gym memberships. Twenty three of these participants were interviewed in individual and group settings to gain emic (insiders/native) perspectives regarding the possible impact of PE upon their recovery. Nine participants chose to focus upon strength development as their training goal and joined Sheffield Hallam Universities "Strong Saturdays" program which prepares athletes for the sport of strongman. Four went on to compete. Ethnographic participant observational data was gathered throughout. The recovery capital model of addiction was altered to include embodied (physical) capital alongside economic, social, cultural and human capital to make sense of findings in terms of habitus development in the fields of chaotic addiction, recovery and of exercise. A thematic analysis of data highlighted decreased recovery capital related to alienation, violence, poverty and child abuse as key features of the field of chaos. Recovery was characterised as centered upon reforming the habitus. The increased confidence, fitness, strength, positive body image, self-efficacy and decreased levels of anxiety and stress attributed to PE were also found to aid positive habitus development. The role of community exercise environments as potential "third places" where recovery capital can be fostered represents a key finding. The organic nature of this research led to a series of further positive outcomes for the services and participants involved including qualifications, paid employment, funding and the formation of a charity.

**Acknowledgements**

I would like to say a huge thank you to my supervisory team for putting up with me for the last three and a half years. I would also like to thank the entire Strong Saturday crew, because our training has kept me sane. I would like to thank all my participants from the bottom of my heart for being so open and sharing of themselves in allowing this thesis to be written. It is not possible to thank you in name as you have been anonymised, but you know who you are and I am indebted to you. I' would like to thank Phoenix Futures for allowing me the access required to carry out this work, and the MBC crew (Jo, Ruth, Sini, Rosie, Yun Fan) for joining me in putting something truly special together. My final thanks are to Kate whose support throughout this process has been solid. I know I have not been the easiest of people as I have struggled to pull this off. Thanks for your help Bear.

*Blind Men Appraising an Elephant* by Ohara Donshu, Edo Period (early 19th century) - taken from Brooklyn Museum (2017).

There was a certain king, and the king said to a certain man, "Come, my good man. Gather together all the people in Sāvatthī who have been blind from birth."

Responding, "As you say, your majesty," the man - having rounded up all those who had been blind from birth - returned to the king and said, "Your majesty, those who have been blind from birth have been gathered together."

"'Very well then, show the blind people an elephant."

"Responding, 'As you say, your majesty,' the man showed the blind people an elephant. To some he showed the head. To some he showed the ear. To some he showed the tusk; the trunk, saying, "This, blind people, is what an elephant is like."

The man returned to the king and said, "Your majesty, they have seen the elephant. May your majesty do what you think it is now time to do."

The king went to the blind people and requested "blind people, have you seen the elephant?"

"'Yes, your majesty. We have seen the elephant."

"'Now tell me, blind people, what the elephant is like?"

Those who had seen the head said, "The elephant is just like a jar."

Those who had seen the ear said, "The elephant is just like a basket."

Those who had seen the tusk said, "The elephant is just like plowshare."

Those who had seen the trunk said, "The elephant is just like the pole of a plow."

Saying, "The elephant is like this, it's not like that. The elephant's not like that, it's like this," they struck one another with their fists. This gratified the king.

In the same way, monks, the wanderers of other sects are blind & eyeless. They don't know what is beneficial and what is harmful. They don't know what is the Dhamma and what is non-Dhamma. Not knowing what is beneficial and what is harmful, not knowing what is Dhamma and what is non-Dhamma, they keep on arguing, quarrelling, & disputing, wounding one another with weapons of the mouth, saying, "The Dhamma is like this, it's not like that. The Dhamma's not like that, it's like this."

**Taken from Tittha Sutta and abridged by Chris Fitzgerald (2017)**

# Contents

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# Part 1

# Chapter 1: Introduction

People with Substance Use Disorders (SUD) are among the most socially excluded. Often, they reside at the fringes of society where addiction intersects with systemic inequality and long term disadvantage. Individually they are often found to suffer low self-esteem and poor health (De Leon, 2000).

Phoenix Futures (PF) is a residential substance abuse rehabilitation centre based upon the Therapeutic Community (TC) model (defined and discussed in Section 2.1). As an athlete from a family with a history of addiction, an academic with a research interest in substance use and SUD's, and as a former member of staff at PF, my desire in undertaking this work was to expand the PF therapeutic repertoire to include Physical Exercise (PE). This translated into the following research question: What are the experiences of, and perceived benefits for, service users participating in PE as an adjunctive rehabilitative treatment alongside the TC program? To answer this question, I set up a PE program with the help of stakeholders at PF, The University of Sheffield and Sheffield Hallam University, and laid out the following aims.

1. Implement inclusive circuit training classes for PF residents and staff.

2. Develop participant ownership of the exercise program by empowering them to plan individual goals and activities.

3. Explore any impact of exercise upon recovery via gaining the emic (insiders/native) perspective of participants and practitioners.

4. Develop a conceptual model for understanding the role PE might play in empowering recovering substance abusers.

5. Remain conducive to PF beliefs and practices.

A Research Setting Chapter (2) provides an overview of the TM model of rehabilitation (2.1), defines key concepts and highlights the physical and psychosocial benefits of PE (2.2). The Critical Literature Review (Chapter 3) entails the critical assessment of empirical findings pertaining to PE within substance use and SUD contexts culminating in a call for greater recognition of socio-structural factors. In Chapter 4: The Social Construction of Addiction: Political and Theoretical Context, I contextualise addiction detailing how theories pertaining

to explain it have developed over time and been effected by political discourse. This provides the backdrop for the following Chapter (5), in which I outline the socio/theoretical concepts and models best suited to converging the literature review findings with my own data. This thesis is not hypothetico-deductively testing the theory outlined there. Rather, the concepts I use emerge from my understanding of the convergence of themes from research discussed in Chapter 3 and those from my research data. These concepts are sociological in nature because my "theoretical gaze" is that of a sociologist (my own positionality is discussed in Chapter 6). I have chosen to present the subsequent theoretical model separately from and before my analysis so that the concepts therein and my reasoning for using them is clear. This structure allows for the smooth application of concepts during analysis without the need for lengthy definitions and explanation. The Research Methods Chapter (6) highlights my methodological approach and data collection, handling and analysis. This chapter includes a discussion of practical and ethical considerations.

Part 2 opens with a brief introduction followed by three analysis chapters (7-9) which detail the story of this research and the people who participated in it. Drawing on Bourdieu's (1990) theory of practice, each of these chapters focuses upon a different "field". This Bourdieusian concept is defined and discussed in detail in Section 5.2. Here it is sufficient to say that a field constitutes an environment, with a set of norms, values and practices particular to it, that people reside in. The most logical way to present my findings was to break the stories of participants down by the fields being discussed: The field of chaos (Chapter 7), detailing life during addiction; the field of recovery (Chapter 8), discussing journeys of recovery; and the field of exercise (Chapter 9), exploring participants' experience of exercise.

Chapter 9 includes a discussion of the wider social impact outcomes associated with this thesis. These are outcomes which occurred in conjunction with the research process but which do not fit neatly under the aims detailed above. The thesis ends with a conclusion (Chapter 10) in which findings are converged, aims revisited and recommendations regarding future research and policy made.

# Chapter 2: Research Setting

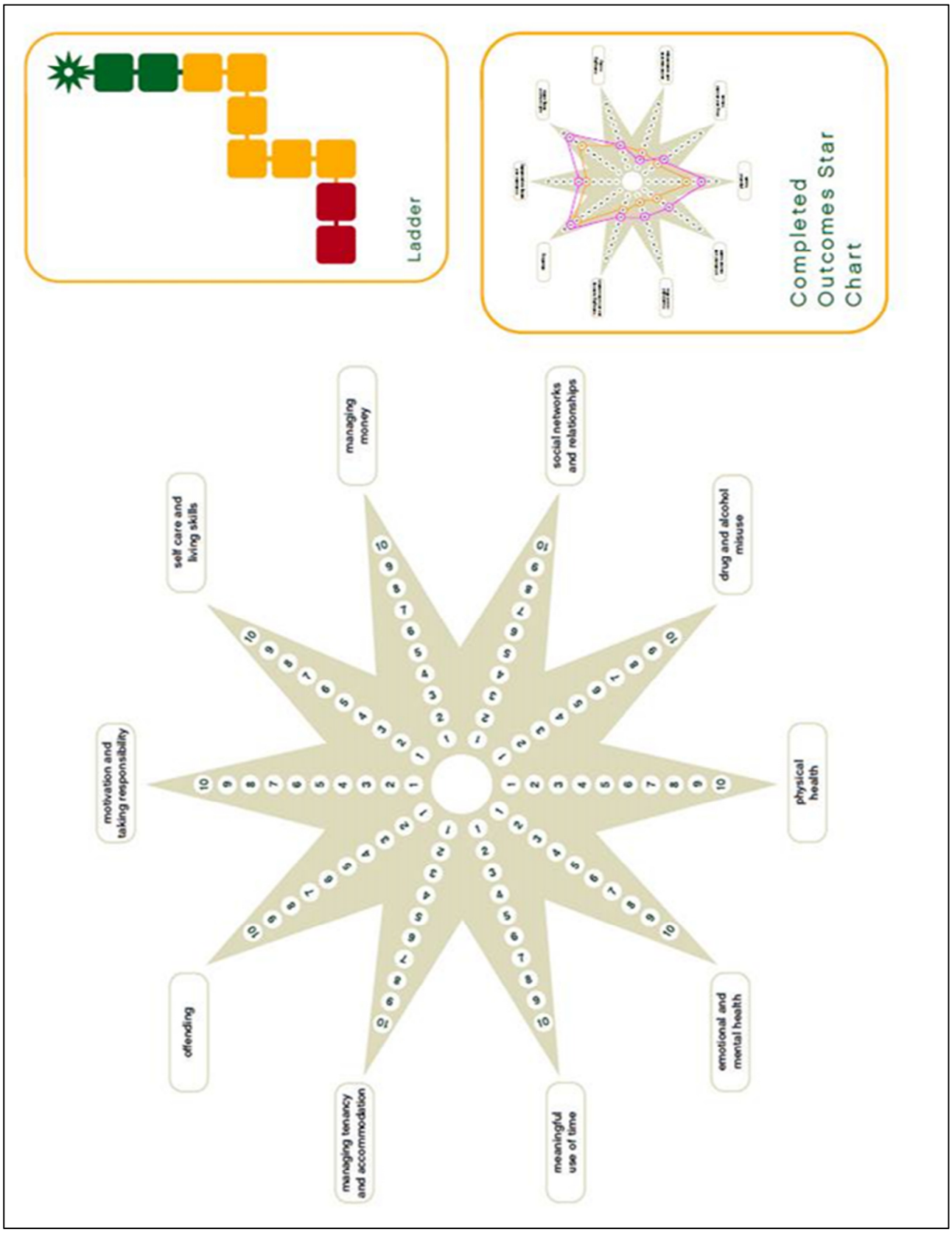
## 2.1 Addiction and the Therapeutic Community

The word "drug" is essentially an evaluative term. It is a function of social power rather than chemistry which defines substances as drugs, medicines, intoxicants or foods (Bancroft, 2009). Coffee, the use of which is now accepted as part of daily routine, was, in the mid-late 1600's, seen as a dangerous substance which had the potential to turn 'every carman and porter' into 'a statesman' (Pincus, 1995, p.825). The assumption that use of a particular substance has a causal relationship with deviant behaviour and subsequent crime levels has long been part of dominant political and social discourse (see Fitzgerald, 2012). Today, this is reflected in daily newspaper coverage of drug stories including 'smuggling syndicates, drug seizures, acquisitive crime, dead addicts, drug mules, gangland murders and even pensioners prosecuted for growing cannabis' (Boland, 2008, p.171).

'Almost all types of drugs are available almost everywhere, at a price' (Pryce, 2012, p.3) and people use them for a plethora of reasons (Bancroft, 2009; Fitzgerald, 2012). Entrenched in the fundamentalist drive for prohibition is the notion that all users will become abusers/addicts (Pryce, 2012). This is not the case (Bancroft, 2002; Pudney, 2002; Nutt, 2010; Fitzgerald, 2012; Pryce, 2012). In reality the lead up to addiction usually has confounding socio/structural determinants which have little to do with specific substances and much to do with trauma (see Chapter 9 for full discussion). The term substance use disorder (SUD) is an umbrella term which includes addiction (Pichot, 1995). Addiction, defined as: the 'compulsive, uncontrollable dependence on a chemical substance' which can result in 'severe emotional, mental or physiological reactions' (Mosby's medical dictionary, 2013 p.37), should be understood within this context. In short: the specific neurobiological processes which characterise addiction (see Section 3.6.2) operate in conjunction with structural-environmental factors including poverty and deprivation (Seddon, 2006; Milkman & Sunderwirth, 2009; Fitzgerald, 2012). The Therapeutic Community (TC) ethos represents recognition of this fact. PF ascribe to what is often referred to as the biopsychosocial model of addiction (discussed in detail in Chapter 4) which conceptualises recovery as encompassing broader biopsychosocial improvements and attainments beyond abstinence (see figure 1). Recovery is conceptualised as a journey, a series of steps in 10 areas or "ladders". Each ladder depicts progress made in one of ten areas. Use of the outcomes star

(figure 1) provides a visual representation of how a resident is progressing and is revisited multiple times during each individuals "programme"

***Figure 1: Outcomes star***



Generally, the term Therapeutic Community (TC) can be applied to any correctional, hospital or educational institution which offers recovery opportunities to service users for developing interests and talents with roles and responsibilities regarding day to day operations (Kennard, 1983). The Department of Health define a TC as: 'A consciously designed social environment and programme within a residential or day unit in which the social group process is harnessed with therapeutic intent' (Lees, 1999, p.208). The key feature here is the function of the community itself as the primary therapeutic instrument (Kennard, 1983; Lees, 1999) allowing the promotion of change within a social context (Manning, 1989). There are three steps to this change; geographic dissociation - moving from the drug taking milieu; social dissociation - forming new instrumental relationships; and mental dissociation - the (re)conceptualisation of one's identity (Biernacki, 1986) through reaching back to a pre-addiction state (Giddens, 1991). A PF resident's recovery is structured to facilitate progression through these steps. *Table 1* details the three PF stages and the recovery objectives required to complete them.

The structured routines of living within the TC "mini society" facilitate ontological security development via the reproduction of social practises within a safe setting (Manning, 1989). While community is the primary therapeutic instrument, residents themselves serve as auxiliary therapists. This is evidenced in the increasing responsibilities of residents outlined on *Table 1*.

To summarise, residence at PF is not just about becoming substance free, it is about changing behaviour and attitudes (PF 2012), it is about recovery. The TC is a "mini society" in which life skills are cultivated through the responsibilities given to residents. On an individual level residents are encouraged to take ownership of their recovery, to climb the 10 ladders on the outcomes star, and to develop agency (discussed throughout Chapter 10). Agency is a form of self-determination. It is 'the ability to chart one's own course in life' (Fetterman, 1994, p.2). In a sporting and exercise context this is often referred to as self-determination: a form of intrinsic regulation entailing the setting and achieving of goals. External motivation can provide the initial impetus towards the development of this form of intrinsic regulation (Mallum & Markland, 1997). This holds true for goals outside of sporting and exercise contexts (Reid, 2002). In encouraging PF residents to develop and progress through fitness related goals I am

prompting them to take charge of their body in the same way they own their recovery. Circuit and yoga classes act as external motivation, a safe place to reconnect with the body, a shoulder to lean on whilst ascending the lower rungs of the physical health ladder (see Figure 1).

***Table 1: Phoenix Futures Recovery Stages***

*Data compiled from PF (2012)*

| **WELCOME HOUSE STAGE** *Recovery Objectives* | **PRIMARY STAGE** *Recovery Objectives* | **SENIOR STAGE** *Recovery Objectives* |
|---|---|---|
| Grasp the purpose philosophy and expectations of the TC | Identify as a community member | Elevated status in the social structure evident in privileges and house functions |
| Establish trusting relationships with staff and peers | Understand and comply with the programme, participating fully in daily activities, setting an example to others | Established role model in the programme, provides leadership in the community |
| Complete an assessment of self, circumstance and needs | Display a practical knowledge of the TC | Accepts full responsibility for his/her behaviour, problems and solutions |
| Make a tentative commitment to recovery | Personal disclosure in groups and in 1:1 sessions | Reveals elevated self-esteem based on status and progress through programme duration |
| Complete detox (if appropriate) | Personal growth evident in adaptability to job changes. Accept staff as rational authorities. | Acquired group and communication skills and is expected to assist facilitators in group progress |
| | Ability to contain negative thought and emotions | |
| | Reveal higher and more stable levels of self-esteem | |

## 2.2 The Benefits of Exercise

> *"No drug in current or perspective use holds as much promise for sustained health as a lifetime program of physical exercise"* (Bortz, Stanford University Medical School. Cited in Milkman and Sunderwirth 2010, p369).

An informed exploration of the value of any form of PE as a health intervention requires an understanding of its relationship with Physical Activity (PA) and physical fitness. PA is defined as 'bodily movement that is produced by the contraction of skeletal muscle and that substantially increases energy expenditure' (US Department of Health and Human Services 1996). Salmon (2001, p.34) differentiates between PE and PA: The former 'implies a regular, structured, leisure-time pursuit', whereas the latter 'also arises in domestic or occupational tasks'. Physical fitness is a closely related concept in that it 'is mainly, although not entirely, determined by physical activity patterns over recent weeks and months' (Blair et al, 2001, p.379). In short, PE represents a focused form of PA which is carried out independently of domestic or occupational tasks and, as such, has the potential for greater improvements in physical fitness. Alternatively, PA represents a form of PE which has goals in addition to/other than increasing physical fitness. The intricate relationship between these two concepts and their relationship with sport participation (which does not always result in a significant increase in PE) is discussed further in Section 3.3. For the purpose of this brief introduction to the benefits of increasing fitness they are used interchangeably.

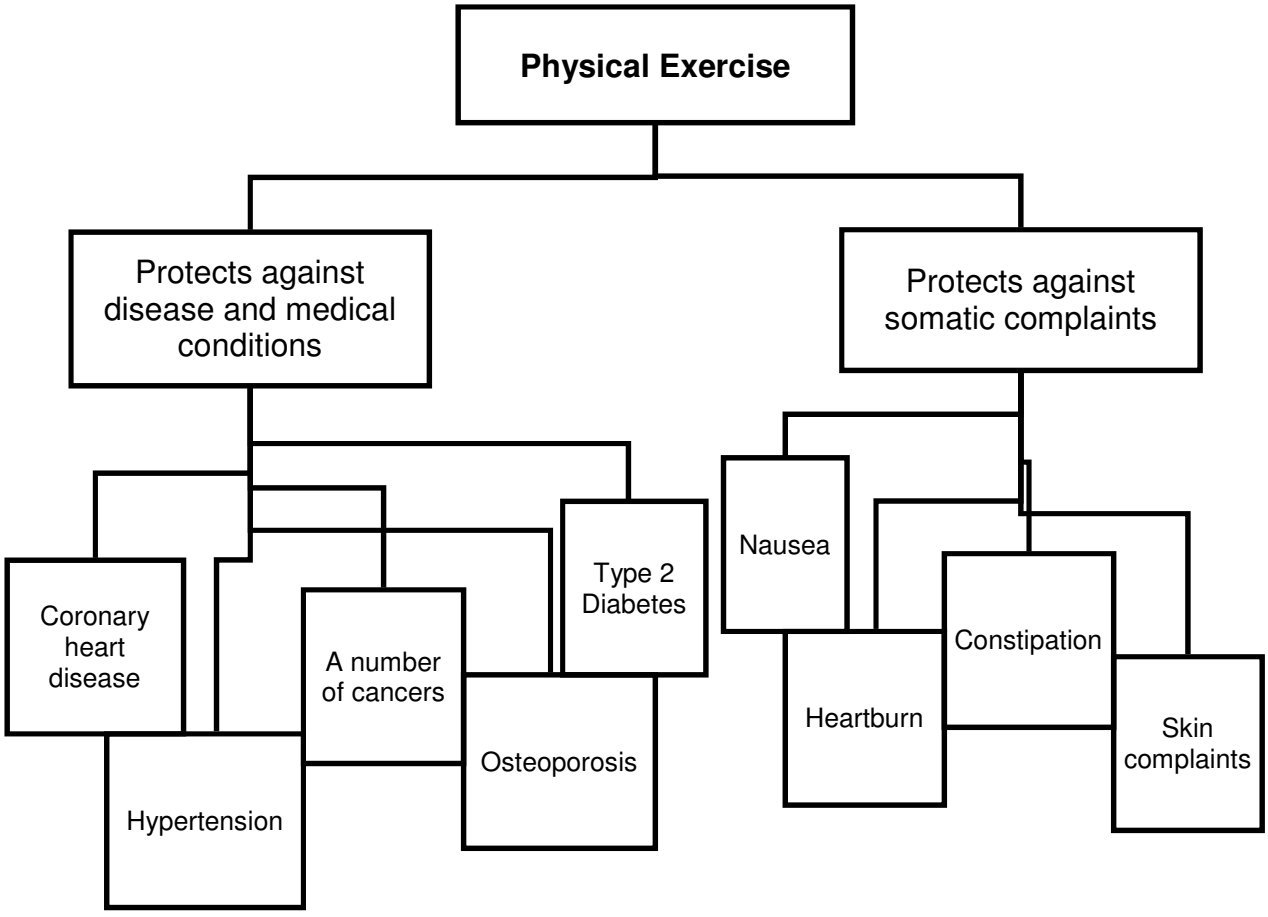
Our understanding of the relationship between PE and health outcomes is constantly evolving (O'Donovan, 2010). The common-sense assumption that PA is beneficial to physical wellbeing was first empirically validated by the work of Morris et al (1953; 1966) in which the coronary heart disease death rates of sedentary bus drivers and telephonists were found to be twice those for physically active bus conductors and postmen. As (particularly post-industrial Western) society becomes increasingly sedentary (Fallon et al, 2005), a wealth of research detailing the physical benefits of an active lifestyle has emerged (Haskell et al, 2007; World Health organisation, 1997) resulting in the inference of a strong relationship between activity levels and all-cause mortality (Paffenbarger, 1988; Blair, et al, 2001; Allender, 2007; O'Donovan et al, 2010).

Sedentary lifestyles are estimated to contribute to 35,000 UK deaths per year and cost the NHS more than £1.06 billion (Allender et al, 2007). This fact is reflected in governmental

guidelines for recommended PA levels. In a recent consensus statement from the British Association of Sport and Exercise Sciences (O'Donovan, 2010), regular exercise was recognised as offering protection against a range of cancers, obesity, type 2 diabetes, hypertension, osteoporosis and coronary heart disease (see Powell & Blair, 1994; Pate et al, 1995; Hillsdon and Thorogood, 1996; Department of Health, 2004; Warburton, 2006 for empirical validation). *Figure 2* is a graphical representation of the physical benefits attributed to exercise.

***Figure 2: The Physical Benefits Attributed to Exercise***

Data compiled from Powell and Blair (1994); Hillsdon and Thorogood, (1996); Scully, (1998); O'Donovan, (2001); NHS, (2013).




O'Donovan et al (2001, p.584) state that genetic and 'lifestyle factors interact to determine one's risk of chronic diseases'. This highlights a certain level of predictive power in identifying at risk groups. Drug addicts (other than smokers) are not mentioned specifically in the ABC of physical activity for health (O'Donovan et al, 2010). However, populations

suffering the negative health consequences associated with addiction (increased risk of cardiovascular disease, stroke, cancer, HIV/AIDS, hepatitis B, C, lung disease and mental disorders [National Instiute of Drug Abuse]) are all identified as potential beneficiaries of PE.

It is certainly the case that the psychosocial benefits of PE are more elusive than the physical (Scully, 1998). This is due to the fact that psychological ailments are by nature difficult to diagnose and their outcomes harder to operationalize. The assumption that a positive relationship exists is however not new (Graves et al, 1994) and has philosophical underpinnings that can be traced back to Buddhist teachings (Marlatt, 2002).

But, 'until recently the [claimed] psychosocial benefits of exercise have tended to precede supportive evidence' (Salmon, 2001, p.33). Morgan's (1969) work represents the first empirical validation for psychosocial benefits derived from exercise. Findings indicated that physically fit psychiatric patients were less depressed than their unfit counterparts (Morgan, 1969). Later cross-sectional and longitudinal surveys highlighted by Salmon (2001) suggest a positive correlation between exercise levels and lower emotional stress and/or levels of depression after controlling for a range of demographic variables (Stephens, 1988; Weyerer, 1992; Steptoe and Butler, 1996; Steptoe et al, 1997).

Since these initial findings, research (Martinsen, 1987; 1990; Camacho et al, 1991; Estivill, 1995; ) and subsequent meta-analyses (Asmundson et al, 2013; Blair et al, 2001) have highlighted a pattern of evidence indicating a robust relationship between exercise and positive mental health outcomes. This has led to an increase in the perceived value of PE as a psychosocial intervention (Salmon, 2001). Research highlights a positive correlation between PE and increases in psychological wellbeing, self-esteem and self-efficacy (McAuley, 1994). Martinsen (1987; 1990); Camacho et al, (1991); Farmer et al, (1988) and Estivill (1995) negatively correlate PE with stress and depression. Exercise has also been found to have a preventative effect on cognitive impairment in later life (Laurin et al, 2001; Rovio et al, 2005; Scarmeas et al, 2009) and a positive impact upon body image.

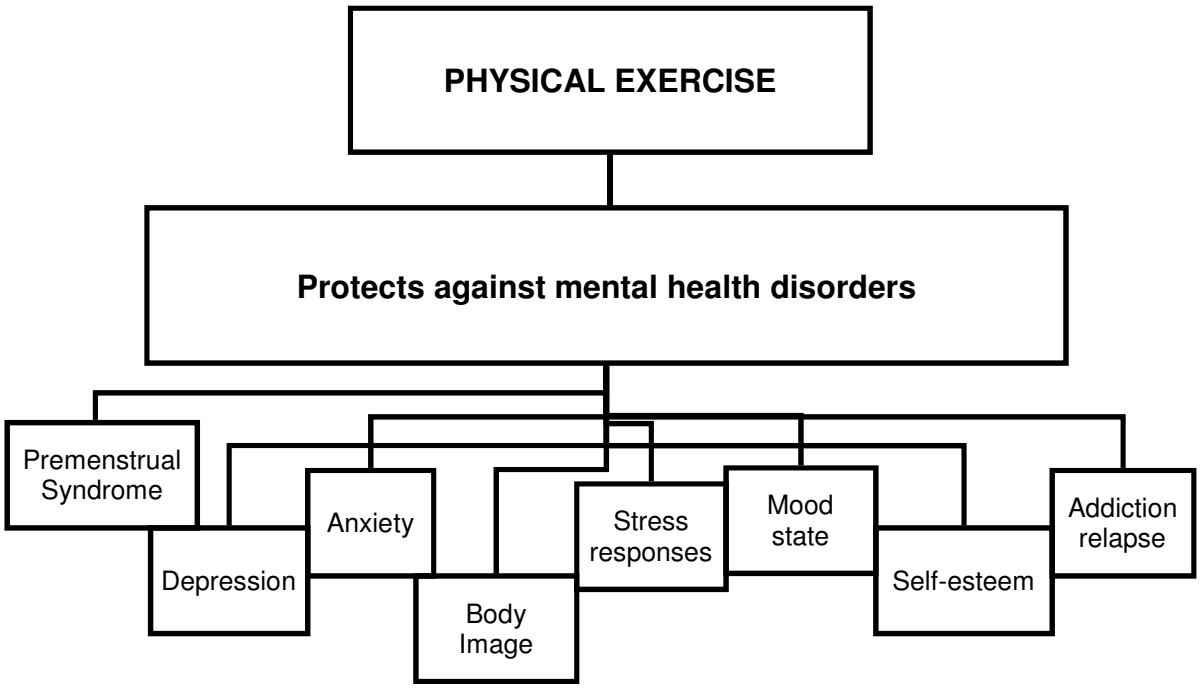
As the evidence base has begun to catch up with common sense assumptions (Glenister, 1998), academic (International Society of Sport Psychology, 1992), popular media (Scully, 1998) and medical (Smith, 1996) discourses on exercise increasingly make reference to psychosocial benefits including 'relaxation, increased social contact, promotion of self-care and self-esteem' (Scully, 1998, p.111). Scully (1998, p.111) made the point however, that on the whole, international public policy documents fail to make 'specific recommendations

concerning exercise and mental health'. The UK situation has developed since 1998 and cursory recommendations exist (NHS, 2013). It is, however, the case that many of the clinical applications of exercise are yet to be exploited (Salmon, 2001).

*Figure 3* details the range of possible psychosocial benefits attributed to PE. It is important to note (Salmon, 2001; Hansen et al, 2001; Mamen et al, 2009) that these 'emotional correlates to fitness cannot simply be attributed to physical fitness' (Salmon, 2001, p.37). In short, positive emotional outcomes can proceed, or occur in the absence of changes in physicality.

***Figure 3: The Psychosocial Benefits Attributed to Exercise***

*Data compiled from Asmundson et al, 2013; Blair et al, 2001*




As was the case with the negative physical outcomes associated with sedentary lifestyles, addicts are also at greater risk of depressive anxiety disorders (Brown et al, 2009; Mamen et al, 2009) and represent a group for whom association between exercise and positive psychosocial outcomes appear to be the greatest (Martinsen, 1990). These key points provide a robust rationale for the application of exercise interventions within the SUD field. Further justification lies in the fact that, despite widespread agreement (Agne and Paolucci, 1982; Taylor, et al, 1985; Martin, 1999; Brown, et al, 2009) on the value of exercise as an addiction, prevention, treatment, and a relapse management strategy, it remains relatively unexplored (Read & Brown, 2003; Brown et al, 2009). I explain my positionality to this research fully in

the methods Chapter (5.1) and throughout the analysis of this piece. Here it is sufficient to say that my personal relationship to PE leads me to, regardless of the evidence base, assume that exercise will be beneficial for those in recovery. My opinion is that the body is an asset. It is a source of capital. It is the medium through which we interact with the world. This notion of physical capital and the potential for the development of meaningful social bonds (social capital) through shared, enjoyable exercise experiences is central to how I conceptualise recovery. This theoretical gaze is based upon a remodel of the traditional recovery capital model and is, following the literature review (Chapter 3), outlined in detail (Chapters 4-5).

## 2.3 Research Setting Summary

Drug use and addiction have been contextualized. The PF therapeutic repertoire has been discussed and tentative inferences concerning how this investigation complements the TC model have been highlighted. The physical and psychosocial benefits of PE have been discussed to provide a backdrop for the ensuing critical literature review which will expand upon the inferences therein by underlining the specific mechanisms through which PE can be employed as an adjunctive treatment within an SUD context.

# Chapter 3: Exercise as a Lifestyle Intervention Within an SUD Context

## 3.1 A Critical Review of Current Evidence: Literature Search Methodology

The purpose of this chapter is to explore in detail, research which specifically investigates possible relationships between physical exercise (PE) and treatment outcomes. This critical review follows an outline of my literature search technique and is followed by a summary of new evidence (Chapter 4) which covers relevant pieces written and/or discovered following the completion of my initial review which was carried out in the first year of my studies (2014).

One hundred and nine distinct pieces of research have been reviewed. This number is made up of 27 substance use studies; 32 substance abuse studies; 32 animal studies, and 15 meta analyses (see Table 2). It would be a mistake to claim that every piece of peer reviewed research in the field of exercise and substance use/abuse is included in this review, but attention should be drawn to the systematic nature of the literature search process employed.

I used the library facilities of two British Universities; University of Sheffield (UoS) and Sheffield Hallam University (SH). Each institution has access to a range of archives including JSTOR, Science Direct, PsycINFO, and PubMed Central and search engines including Open Access Journals Search Engine (OAJSE) and Google scholar. The key terms PE, PA, exercise, activity and sport were used in conjunction with SUD, addiction, recovery, TC, Rehabilitation, drug, alcohol, opiate, amphetamine, and cocaine. On the occasions when articles were found which neither institution had access to, the SH document supply service was used. There were no potentially relevant articles identified during the literature search process which I was unable to gain full access to. *Appendix 1* consists of a list of search terms used for the initial literature search.

Citation and reference list searching of all initial literature was carried out. Reference list searching of the 15 meta-analysis pieces (Smith, 1984; Kunstler, 1992; Read and Brown, 2003; Dutra et al., 2008; Williams and Strean, 2008; Greer et al., 2012; Weinstock et al., 2012; Zschucke et al., 2012; Lynch et al., 2013; Linke and Ussher 2014; Wang et al 2014; Giesen et al 2015; Bardo and Compton 2015; Brellenthin and Koltyn 2016; Stoutenburg et al 2016) was particularly fruitful. Once the point at which new articles were not being identified was reached, the initial literature search stage of the investigation was complete. I also signed

up to receive email alerts should new research be published which cite those studies already identified, and content alerts for key journals.

A thematic analysis (see Section 6.8 for full discussion) identified four types of research (see *Table 2*) based upon sample and outcome variables. It is important to note the distinction between substance users and abusers. As highlighted in Section 2.1, drug abuse is characterised by a compulsive lack of control over drug taking (Koob and Le Moal, 1997). The research covered in Section 3.2 is largely observational and gathered from non-clinical populations. It focuses on drug use. Section 3.3 covers research on clinical populations who are addicts and/or drug abusers.

Fischer et al's (2012) research has not been included because it is not clear whether the participants were drug users or abusers. The finding that class A drug-using inmates entering the prison system had far higher PA levels than expected, and the recommendation that participant opinion regarding possible health interventions be considered are of relevance to this piece. These points are discussed in conjunction with those made by Read and Brown (2003) in Section 3.3.3. The studies in the PE and substance use and PE and substance abuse categories are divided into observational, chronic intervention (programme) and acute intervention (single session). These distinctions allow findings to be discussed in logical groupings based on research design.

The meta-analysis and systematic review category covers research which has applied review methodology to gauge the value of existing empirical evidence. Seven of the fifteen reviews in this category draw heavily upon animal research (Greer et al., 2012; Lynch et al., 2013; Linke & Ussher 2014; Wang et al 2014; Bardo and Compton 2015; Brellenthin and Koltyn 2016; Stoutenburg et al 2016). Animal studies are characterized by the lack of human participants and tend to aim towards the identification of the neural mechanisms of addiction. One could be forgiven for presuming such research is of limited use when exploring human addiction of the type described in section 2.1 as occurring in the real world and subject to converging structural social forces. Indeed I am of this opinion myself but have included animal studies in a distinct category because they feature so prevalently in the meta-analysis and systematic review literature (see Lynch et al, 2012). Animal research makes up a sizable portion of the available evidence on PE and addiction. This category contains 32 pieces of research, the positivist findings of which are frequently attributed higher validity and as such, greater value than studies with human participants but qualitative research design (such as

Burling et al, 1992 and Landale & Roderick, 2014). This issue is discussed in the animal research critical summary section (3.4) where, rather than explore each piece of research in minute detail, I discuss current research trends.

These categories are summarised below (see Table 2). The research from PE and substance use, abuse, meta analyses and animal studies are presented in tables for quick reference in appendices 4-7. Appendix 3 contains table abbreviations. In this chapter, each research category is critically reviewed in turn.

***Table 2: Research Categories***

*Tables are located in Appendices 3-5*

| RESEARCH CATEGORY AND TABLE NUMBER | SAMPLE CHARACTERISTICS | OUTCOME/FINDINGS CHARACTERISTICS |
|---|---|---|
| 3: PE and substance use<br>a: Observational<br>b: Chronic intervention | Non clinical/non problematic substance users | Relationship between PE/sport participation and substance use |
| 4: PE and substance abuse<br>a: Observational<br>b: Acute intervention<br>c: Chronic intervention | Clinical samples of drug abusers | Relationship between PE, physical fitness and treatment outcomes |
| 5: PE and addiction - animal studies | Tendency to disregard qualitative research | Relationship between PE, substance use and neurobiological outcomes |
| 6:Meta-analysis and systematic reviews on PE and drug use and abuse | Tendency to disregard qualitative research | Summarise current body of knowledge and make recommendations for future research |

## 3.2 PE and Substance Use Critical Review

*Tables 3 a-b* (see *Appendix 3*) contain research (n=27) from the PE and drug use category which is characterised by non-clinical samples. The majority of these studies (n=22) are observational. The research findings in this category will be separated and discussed in terms

of substance type (3.2.1) Sports, Athletics And Exercise (PSAE) type (3.2.2) and gendered results (3.2.3). Section 3.2.4 summarises key points of discussion in relation to this investigation.

### 3.2.1 Substance Type

There are 27 pieces of research in the PE and substance use category, two of which focus solely on alcohol or alcohol and tobacco use (Rainey et al., 1996; Pastor, 2003) with no reference to other substances. The vast majority (20) are observational surveys (see *Table 3a* in *Appendix 4*). Of these, a large proportion (16) are studies from the USA. Research samples are all non-clinical and the vast majority (21) are drawn from high school populations (Rooney et al., 1984; Murphy et al., 1986; Collingwood et al., 1991; 2000; Aaron et al., 1995; Pate et al., 1996; 2000; Rainey et al., 1996; Ewing et al., 1998; Garry and Morrissey, 2000; Kirkcaldy et al., 2002; Kulig et al., 2003; Moore et al., 2005; Nelson et al., 2006; Pastor et al., 2003; Peretti-Watel et al., 2003; Terry-McElrath et al., 2005a, 2011b; Werch et al., 2005; Wichstrom et al., 2009; Martinsen et al., 2012;).

One of the most important factors to consider in social research is representation; is that which we speak of the same as that which exists in the social world (Williams, 2003)? In surveys, representation entails 'measuring the presence or extent of what has already been identified as existing' (Williams, 2003, p.2). When exploring associations between substance use and participation in PSAE, both explanatory and outcome variables require operationalisation. The resulting constructs need to accurately represent reality in order to maintain construct validity (Williams, 2003). In short, every aspect of relevant constructs should be considered to ensure results that relate to the real world.

Attention should be drawn to the fact that of the 16 US studies, 7 (Aaron et al., 1995; Pate et al., 1996; 2000; Rainey et al., 1996; Garry and Morrissey, 2000; Kulig et al., 2003 Moore et al., 2005) entailed the secondary data analysis of the Youth Risk Behaviour Survey (YBS). With the notable exceptions of Garry & Morrissey (2000) and Pate et al (1996a), whose studies include prevalence of cocaine use as an outcome variable, these studies either gauge the use of cannabis, alcohol and tobacco in the absence of other illicit substances (Aaron et al., 1995; Rainey et al., 1996), collapse all Illicit Substances Other Than Cannabis (IOTC) into one variable (Kulig et al., 2003; Moore et al., 2005; Nelson et al., 2006) or manipulate their data to the extent that all illegal drug use including cannabis is gauged via a single variable (Collingwood et al., 1991; Pate et al., 2000; Correia et al., 2005; Korhonen et al., 2009). The YBS (2009) questions 45-57 covered solvent, heroin, methamphetamine, MDMA and steroid use (US Department of Health and Human Services, 2009). Data simplification in these analyses (whether due to a statistical power issue or not) constitutes low construct

validity which limits representativeness. This is exemplified when the fact that the US has the highest (1.6% of 15-64 year olds) cocaine-using population in the world (UNDOC 2012) is considered. Research does not reflect the real world if such trends are blurred through oversimplification.

Aside from Garry & Morrissey (2000) all of the research in this category documents negative associations between substance use and PSAE. Murphy et al (1986); Peretti-Watel et al (2003); Correia et al (2005); Terry-McElrath et al (2005); Werch et al (2005) Nelson et al (2006) and Martinsen et al (2012) document negative associations between PSAE and alcohol use. Cannabis is found to be negatively associated with PSAE by Kirkcaldy et al (2002); Pate et al (1996); Peretti-Watel et al (2003); Terry-McElrath et al (2005a and 2011b); Werch et al (2005) and Wichstrom et al (2009). Kulig et al (2003) and Nelson et al (2006) found that IOTC use was negatively associated with PSAE while no significant relationship was found with cannabis. These findings again highlight the lack of construct validity in having cannabis grouped with other substances in a single variable. As such, the assertion that PSAE is negatively associated with all illegal substance use (Collingwood et al., 1991a, 2000b; Pate et al., 2000; Correia et al., 2005; Strohle et al., 2007; Korhonen et al., 2009) should be treated with caution.

Two of the investigations in this category (Terry-McElrath et al., 2005; Martinsen et al., 2012) specifically explore possible relationships between PSAE and steroids/performance enhancing drugs. Interestingly the findings from these studies refute each other, with Martinsen (2012) finding lower levels of performance-enhancing drug use among adolescent elite athletes and Terry-McElrath (2005) suggesting increased steroid use is associated with higher PSAE levels. After systematically reviewing literature on steroid use, Kanayama et al (2010) suggests that at least 3% of Western males have tried steroids during their lives. Broadly in line with this estimation, Pallesen (2006) gauges the Norwegian figure to be 3.6% for lifetime prevalence of use. These findings suggest that reasons other than geography are behind the difference in findings between the work of Martinsen et al (2012) and Terry-McElrath et al (2005). It is assumed here, perhaps surprisingly, that the negative relationship highlighted in Martinsen's (2012) work applies specifically to the elite athlete population. Justification for this assumption lies in steroids' frequent use to change physical appearance rather than enhance sporting performance (Buckley et al., 1998; Hildebrandt et al., 2011). Pope (2011) argues that muscle dysmorphia is the driver for such use, and highlights that changes in physicality are not necessarily related to sport participation. These points highlight

a further construct validity issue in having sports participation measured in the same variable as PA and PE levels. PE rather than sport participation may predict steroid use, while the social/interactional aspects of sport team membership and affiliation are entirely separate from PE levels.

### 3.2.2 PSAE Type

The YBS (2009) question 80 covers PA levels within the last seven days. Questions 83 and 84 cover PE lesson participation and sport team affiliation respectively. Of the aforementioned YBS studies, two (Pate et al., 1996a and Rainey et al., 1996) do not differentiate between PE and sport. Aaron et al (1995) and Kulig et al (2003) do, but have different findings, with Aaron reporting that highly active and sport participating males are more likely to use alcohol than their less active counterparts, and Kulig finding no significant relationship. Garry & Morrissey's (2000) finding of a positive association with tobacco, alcohol and cocaine was based solely on sports participation but sampled middle school participants (11-14yrs) rather than high school students. Epidemiological findings consistently suggest that prevalence of alcohol and drug abuse 'increases with age during adolescence and peaks in early adulthood' (McGorry, et al., 2011, p303). As such Garry & Morrissey's (2000) findings only relate to users with an unusually low age of onset.

Terry-McElrath (2005) differentiates between sport participation and PE, finding PE to be negatively associated with tobacco (smoke), cannabis and alcohol but that athletic team participation at age 18 was positively associated with alcohol use. Rooney at al (1984), Ewing et al (1998), Ford (2007), Kircaldy et al (2002), Pastor et al (2003), and Wichstrom et al's (2009) investigations focus specifically on sport participation. Rooney et al (1984) uncovered no significant relationship between sport participation and "mood altering drugs" but, as suggested earlier (3.2.1) such oversimplified outcome variables are problematic. Ewing (1998) uncovered gendered use patterns, with male athletes displaying higher cannabis use than non-athletes, a pattern which was reversed for females (see Section 3.2.3). Kirkaldy's (2002) focus upon endurance sport uncovered a negative association between participation and cannabis use but no association for beer drinking. For Kirkaldy (2002, p.546), the logic behind having an outcome variable limited to just one type of alcoholic beverage lay in the un-referenced assumption that beer represented the main alcoholic

beverage in this part of Germany. Such methodological oversight limits the value of these findings.

Black et al (1999) propose that levels of participation in sport should be considered, particularly with regards to alcohol consumption with findings suggesting that men are more likely to drink excessively when socializing with sporting team mates compared to other groups. Slater et al (1996) relate this phenomenon to positive responses from adolescent males towards beer advertisements during televised sporting events. This is perhaps a reductionist explanation but, when considered alongside masculine identity construction, the "macho" image associated with "mateship" and sporting prowess (Lawson and Evans, 1992) and alcohol's cultural function as a medium of celebration (Mäkela, 1983), a plausible explanation begins to emerge.

Pastor (2003) found negative associations between tobacco (smoke) and alcohol use and sport participation. Moore et al (2005) differentiated between sport types and location (in school or out of school) and found differences across location type and gender (see *Table 3a*) but do not differentiate between team and individual sports.

Martinsen et al (2012) and Peretti-Watel et al (2003), who focus upon elite level sport, uncovered negative associations between participation and cannabis and tobacco (smoke). Martinsen et al (2012) found significantly higher levels of alcohol use among female, compared to male athletes. For Peretti-Watel et al (2003) this relationship was reversed. Peretti-Watel et al (2003) also found significantly more alcohol use among team compared to individual athletes aluding that the "socializing with team mates" variable might also hold explanatory power at the elite level.

Three (Murphy et al.,1986; Correia et al., 2005; Werch et al., 2005) of the five chronic intervention pieces documented on *Table 3b* are Randomised Controlled Trials (RCT). The two Collingwood et al (1991 and 2000) pieces are quasi experimental designs as they lack randomly assigned controls. As chronic exercise interventions, all five of these investigations control for any normalized sport-related behavior involving alcohol. Collingwood et al (2000) reported PE being negatively associated with tobacco use but not with any other substance including alcohol and illicit drugs. Interestingly this refutes Collingwood et al's (1992) earlier piece which documented a negative association between PE and illicit substance use. This is likely to be because Collingwood et al's (2000) participants had low levels of drug use at baseline. It is also possible that the oversimplification of the illicit drug category (see Section

3.2.1) has an impact upon content validity here. For Murphy et al (1986); Correia (2005) and Werch (2005), alcohol was negatively associated with exercise.

### 3.2.3 Gendered Differences

Ewing (1998) uncovered gendered substance use patterns with male athletes displaying higher cannabis use than non-athletes, a pattern which was reversed for females. Martinsen et al (2012) found significantly higher levels of alcohol use among female, compared to male athletes, but this relationship was reversed for Peretti-Watel et al (2003). US adolescent drug use trends are gendered and differ across ethnic groups. Wallace et al (2003) found that generally, adolescent US males used more drugs than their female counterparts with the exception of Native American girls for whom illicit drug, alcohol and tobacco use was unusually high. Gender and the social construction thereof clearly has some explanatory sway over these statistics as with those produced by Ewing (1998), Peretti-Watel et al (2003) and Martinsen et al's (2012). However, the fact that gendered substance use and PSAE findings are not conducive suggests the existence of confounding variables. It is assumed here that socioeconomic status is likely to be of greater explanatory power than either gender or ethnicity in this instance as it is across educational attainment (Gilborn and Mirza, 2000), physical and mental wellbeing (Marmot et al, 1997) and likelyhood of being a victim of crime (Young, 1999). In short; of all the large scale demographic variables, socioeconomic class usually has the most explanatory power. This is the case regarding exercise levels (Collins & Kay, 2003), access to leisure facilities (Collins, 2003) and problematic drug use, in that poverty and heavy substance use may not be related, but greater levels of poverty increase harms for given level of use (Room, 2005; Seddon, 2006). Failure to account for this represents a significant gap in the existing literature on the relationship between PSAE and drug use. The importance of recognising socially deterministic structural forces within the field of substance use disorders is discussed at length in Chapters 5 and 6.

### 3.2.4 PE and Substance Use Critical Review Summary

The following themes have emerged from the research detailed on *Tables 3a-b*: Oversimplification of survey data characterises low construct validity for both explanatory and outcome variables. This is particularly the case for the secondary analysis studies carried out on the YBS. The separation of PE and sport participation, and individual substances

would control for this in future studies. Inferences of a meaningful relationship between PE, sport and substance use can, however, still be made from the data highlighted here. Aside from Garry and Morrissey (2000), every piece of research listed uncovered a negative association between PSAE and substance use outcomes. No association and positive associations between PSAE and substance use tend to cover alcohol use and sport team participation. There is some empirical support for the notion that normalised alcohol-related behavior among athletes competing at high school level may transfer to the elite level. Gender, sport type and level of participation all impact upon substance use, but possibly have a confounding relationship with each other and with socioeconomic class. More research should be carried out in this area. Kirkcaldy et al (2002) and Wichstrøm et al (2009) suggest that endurance athletes have lower levels of substance use but the reasons proposed for this remain speculative. The logical assumption that a higher level of sport participation is typified by increased levels of PE suggests that PE may in fact have more impact upon substance use than sport participation.

## 3.3 PE and Substance Abuse Critical Review

*Tables 4a-c* (see *Appendix 5*) contain 34 studies from the drug abuse and exercise category which is characterised by the use of clinical samples. Unlike those covered in the PE and substance use category, the majority (26) of these pieces are intervention designs (Chronic: *Table 4b* and Acute: *Table 4c*) rather than observational investigations (*Table 4a*). The research findings in this category will also be separated and discussed in terms of substance type (3.3.1), research design (3.3.2) the service user perspective (3.3.3) and outcome variables (3.3.4). Section 3.3.5 summarises key points of discussion in relation to this investigation.

### 3.3.1 Substance Type

As with research in the PE and substance use category, a large proportion of the abuse studies focus solely on alcohol (Gary et al., 1972; Frankel et al., 1974; Sinyor et al., 1982; Palmer et al., 1988; Donaghy et al., 1997; Ermalinski et al., 1997; Brown et al., 2008; Weinstock et al., 2008; Brown et al, 2014; Stoutenberg et al 2015). In Section 3.2.1, generalising alcohol outcome variables to other substances was criticised for having low construct validity when

exploring drug use trends. Substance abuse/addiction is a different phenomenon to substance use (see section 2.1). I argue here that the dangers of viewing drug use as a unitary phenomenon (Babor and Caetano., 2006) lose resonance when exploring abuse, particularly within a TC context. In short; primary intoxicant has no effect upon the central TC aim to 'achieve personal change in a social context' (Manning, 1989, p74). The transferability which underpinned the direct application of the AA 12 step program to narcotics anonymous (Humphreys, 2004) applies here. Mamen et al's (2009) finding that primary intoxicant had no significant impact on direct measurements of fitness (see Section 3.2.1) constitutes empirical validation for this argument. This critical review shall, as such, focus on data relating to themes other than substance type.

### 3.3.2 To RCT or Not to RCT: Research Design Issues

Thirteen of the pieces of research in this category are RCTs (Gary et al., 1972; Palmer et al., 1988; Palmer et al., 1995; Donaghy, 1997; Ermalinski et al., 1997; Ussher et al., 2004; Marefat et al., 2011; Brown et al 2014; Rawson et al (2015); Rawson 2015; Beitel et al 2016; Unhjem et al 2016 and Wang 2016). Of these, Unhjem et al's (2016) study stands out for two reasons. First, because it is the only one which covers SUD as a whole rather than focusing on one substance, and second because it is the only study I have come across which explores the impact of maximal strength training as a form of exercise. Palmer et al's (1995) work (see Table 4b in Appendix 5) did have a bodybuilding exercise group who reported significantly reduced depression scores but failed to increase fitness or strength. Unhjem et al's (2016, p1) work is different in that all participants made significant strength gains, leading to the conclusion that 'systematic strength training should be implemented as part of clinical practice'.

Recognising the benefits of RCT methodology without emphasising the value of data thus gained over other forms of knowledge is a central component of the pragmatically informed research approach I employ in this investigation (see Section 6.5). The positivist assumptions which place quasi-scientific data upon a methodological pedestal are culturally coercive (Oakley, 1989). An abductive relationship with empirical findings entails recognition of this (see Section 5.6). The common sense assumption that PE can be therapeutic within a drug use and SUD contexts (see Section 2.2) has empirical support which dates back to 1888 ([Siegel, 1985], see Sections 3.7.1 and 3.8 for full discussion). It is, however, my firm belief that the

pursuit of "good research practice" endemic in RCT's often dictates that admitting uncertainty around specific mechanisms of change requires a continuation of a blinkered pursuit of the gold standard of causation.

*Table 4b* (see *Appendix 5*) contains 2 acute interventions which exemplify this phenomenon. In the first, Ussher et al (2004) explore the impact of single 10 minute, moderate intensity (40-60% of heart rate reserve) and very light intensity (5-20% of heart rate reserve) exercise bike interventions upon the urge to drink alcohol, uncovering a decreased urge to drink during but not after moderate PE. In an attempt to appease positivist assumptions and uncover the specific mechanisms through which PE affects craving, Ussher et al (2004) make tentative inferences towards the entirely common sense assumption that doing something takes your mind off things. The reason that a single moderate intensity exercise bike session decreased the urge to drink is likely to be because the act of exercising constituted a momentary distraction. The probable reason that this effect did not continue beyond the intervention is that a stand-alone bout of activity is not conducive to the conscious decision to improve physical wellbeing which one assumes may reinforce resolve to not drink. It is an equally common sense assumption that the reason why the light intensity intervention had no significant effect on urge to drink is because such low intensity training does not pose enough of a challenge to constitute a distraction. Conversely, it is also possible that repeatedly asking participants to rate their urge to drink during the intervention might well cancel out any distractive qualities the PE may have been having.

The second piece of research highlighted here is in direct contrast to the point made in the last section (3.3.1); that there should be transferability between data pertaining to different substances when exploring the impact of PE upon substance abuse/addiction. If an individual has transitioned from use to abuse, substance type is far less important than the social/structural variables that may have led to such a transition. Wang et al (2014) focus upon one substance and then continue to perpetuate the creation of reductionist works concluding that; 'Results support the value of exercise as a treatment component for individual using [meth-amphetamine] 18 or fewer days per month' (p331). The inference in this statement is that findings cannot be transferred to other substances or to individuals who use for 9 or 20 days a month. This is needlessly specific. PE is of benefit to everyone (Milkman and Sunderwirth 2010) regardless of levels of substance use and if research design parameters enforce the use of language which refutes this, then those parameters must change.

Again, I'm not arguing that Ussher et al (2004) and Wang et al's (2014) data is of no use. All knowledge is useful but it is my strong belief that a more pragmatic “real world” approach which assumes equality in value between positivist and interpretivist forms of data is required. I make this point throughout this chapter, but particularly in Sections 3.4 and 3.5 where I discuss animal studies and explore meta and systematic reviews. To be clear, the problem I am highlighting is this: RCT's are not the best way to assess complex interventions. The ontological assumptions 'of stability and equilibrium, of linearity in the relationship between variables, and of proportionality of change in response to causal influences are not appropriate' (Sanderson, 2000, p442). The resulting analytical techniques, such as linear regression, typically attempt to isolate the effect of each variable on the outcome. To do so requires holding all other variables constant rather than showing how they combine to create outcomes (Fiss, 2007).

In 2012 Bonnel et al coined the term "realist RCT" arguing that such trials are 'useful in evaluating [complex] social interventions because randomised control groups actually take proper account of rather than bracket out the complexity of social causation' (p 1). They propose synergy, rather than opposition between realist and random evaluation by incorporating realist philosophy into an RCT design. I would like to clearly state that this is not equivalent to the real world approach I mention above and outline in detail in Chapter 7. I propose recognising the transferability of data produced using epistemologically opposed methodologies, comparing and contrasting of findings using abductive reasoning (discussed in detail in Section 7.6), fitting method to phenomena rather than squeezing phenomena into a shape compatible with a particular set of methodological assumptions, and finally, recognising the intrinsic value in *all* data. If, as stated above, the RCT is not the best approach to study complex human interaction, then bolting on a "bit of realism" will not change the fact that the tools of measurement are fundamentally positivist and therefore not suitable for exploring the fluid interaction between social variables. For this reason, I add my voice to those critical (see Marchal et al, 2013) of Bonell et al’s (2012) work. As Pawson & Tilly (2004) summarise, it simply does not account for the layers of social reality which surround interventions.

### 3.3.3 Service User Perspective and Baseline Fitness

Kremer et al's (1995) observational study stands apart in this category due to its exploration of the emic/insider's perspective of practitioners within the field of recovery rather than that of service users. Kremer et al (1995) highlight a strong belief among professionals in the efficacy of PE as part of a treatment Programme.

Powers et al (1999) and Okruhlica et al (2001) explore service users' opinions regarding sport and PE and previous PSAE levels respectively. Okruhlica et al (2001) highlight that 75% of the addicts in their sample regularly took part in PSAE up until the age of 15. Giddens' (1991) notion of reaching back to a pre-addiction state (see Section 2.1) is applicable here. It is assumed that the act of reaching back to a physical state could have a complementary relationship with the reaching back to a pre-addiction mental state. It should also be noted that Mamen et al's (2009) direct testing of service user fitness revealed scores that were significantly higher than those produced in submaximal tests and only slightly below national averages. The seldom sedentary "hectic" addict lifestyle (Bourgois and Schonberg, 2009) which, for Read et al (2001) accounted for 46% of participants being active three or more times a week, may offer some explanation here. Either way the "common sense" assumption that service users will have low fitness levels is brought into question.

Powers et al (1999) also found that the social/interactional and entertainment aspects of sport spectating (defined here as fandom) were deemed important by 72% of participants. For Abrantes (2011) and Read et al (2001), recognition of the importance of PSAE translates to high levels of service user interest in partaking in PE programs (95% and 75% respectively). Fischer et al (2012) and Read & Brown's (2003) suggestion that the PSAE interests of service users should be used to inform treatment packages applies here. This notion of an increased exercise and affect relationship when participant PE preferences are considered has received empirical validation in non-clinical (Daley & Maynard, 2003) and service user populations (Neale et al., 2012). Stoutenberg et al (2015) and Linke et al's (2015) later work builds upon this premise, with the former suggesting participant opinion is also important regarding intervention delivery method, and the latter that interventions should be individually tailored. These are essentially issues of participant ownership. Burling et al's (1992) creation of a community based softball team in which participants can be players, coaches and/or support personnel is a fine example of this important form of empowerment in practice. Participants

were involved at every level of this intervention. Decision making power and as such, ownership, was facilitated. Burling et al (1992) found that participants were more than twice as likely to complete their treatment program than those under control conditions. Opportunity to practice coping and communication skills acquired in treatment within socio/recreational settings, and an enhanced level of interpersonal connectedness are suggested as possible mechanisms (Burling et al, 1992). It is a key assumption of this investigation that allowing participant opinion to influence the formation of interventions will reduce attrition and facilitate participant ownership. Increased participation based upon ownership is foundational to TCs in general (2.1). The specifics of applying this research value to this investigation are discussed at length in the Methodology (Chapter 6). Here it is important to note that Neale et al (2012), using Bourdieu's (1978) theory of practice as a theoretical lens, argues that the success of work like Burling et al's (1992) is due in part to the removal of barriers to exercise. Engagement in PA is facilitated by social, cultural and economic capital stocks (Neale et al, 2012). The concept of habitus: A durable set of principles installed through a process of socialisation, is central to this understanding. These Bourdieusian terms also underpin the concept of recovery capital. Defined loosely here as the resources which can be drawn upon to initiate and sustain recovery, this concept is central to my own theoretical lens and discussed at length in Chapter 5. Here it is sufficient to say that a participant owned activity designed with inclusivity and the removal of potential barriers to participation represents a place to develop capital stock and as such, to address problematic aspects of habitus.

The final piece of research in this category breaks the mold completely. In Section 2.1, recovery was highlighted as encompassing broad biopsychosocial improvements and attainments beyond abstinence such as meaningful relationships, employment and the support of social groups. Landale and Roderick's (2014) work represents recognition of this idea: that meaningful activities within the community and supportive social networks increase. It is also the only application of the recovery capital model to the field of PE and SUD. The paper follows the 12 month journey of two substance misusing offenders engaged in Second Chance (a community based sports program) for whom identity transformation was facilitated through a confluence of meaningful routine activities, informal social controls and personal agency (Landale and Roderick, 2014). I am an advocate of this type of research which, along with Burling et al's (1992) exploration into the recovery impact of softball team participation, has many participatory action research qualities. This is to say they are organic;

exploring solutions which exist in the local rather than imposing institutionalised research structures upon the journeys of participants (Fetterman and Wandersman 2004). Both recognise the shifting nature and variety of addiction and recovery in the real world. They provide longitudinal and meaningful insights which de-emphasise generalisation. In each example recovery entailed self-change; a shift in habitus. These investigations facilitated the opportunities required for this to occur.

It is important to note that neither of these key pieces of research were included in any of the systematic reviews discussed in section 3.3.5 due to not meeting restrictive methodological requirements. The same un-reflexive drive which requires needless specificity in target population and substance type deems such research as methodologically unsound. This is a significant problem with the current SUD research culture.

### 3.3.4 Intervention Outcome Variables

Three of the studies in this category report gendered differences in exercise preference with Stoutenberg et al (2015) reporting greater interest in yoga/stretching among females, and Bietel et al (2016) finding males more likely to prefer exercising on their own rather than in a group environment. Twelve (Gary et al., 1972; Palmer et al., 1988; Palmer et al., 1995; Donaghy et al., 1997; Ermalinski et al., 1997; Marefat et al., 2011; Brown et al., 2014; Rawson et al., 2015a; Rawson et al., 2015b; Beitel et al., 2016; Unhjem et al., 2016; Wang et al., 2016) of the 18 chronic intervention pieces documented on

*Table 4b* are RCTs. Weinstock et al's (2008) study entailed the secondary analysis of previous RCT studies. Seven of these investigations produced significant substance use outcomes. Sinyor et al (1982) and Weinstock et al (2008) highlight increased abstinence among exercisers while Ermalinski et al (1997) reports a significant reduction in craving measured via self-report. Brown et al (2014) found that aerobic exercise reduced the alcohol intake of drinkers with active SUDs, while Wang et al (2016) infers that moderate PE reduces craving for methamphetamine. These results are in line with the before and after studies such as Buchowski et al's (2011) which documented significantly reduced craving and increased abstinence. Rawson et al (2015) reported that the greater the addiction the less effective PE is as an intervention. I assume this to be the case for any intervention geared towards the reduction of addictive behavior.

Nine interventions report positive physical health outcomes. The increased physical strength of Unhjem et al's (2016) participants was highlighted above (Section 3.3.3). Gary et al (1972), Sinyor et al (1982) and Donaghy (1997) document increases in aerobic fitness when compared with control conditions. Donaghy's (1997) work also reports anaerobic gains. Ermalinski et al (1997) refers to increases in fitness when compared with control conditions without specifying type. The before and after studies on *Table 4b* have significantly increased fitness outcomes based on; decreases in mean resting heart rate (Frankel et al., 1974); improved submaximal $V0_2$ max test scores (Brown et al., 2008; 2010); improved direct maximal $V0_2$ and lactate threshold testing (Mamen et al., 2010; 2011). Mamen et al's (2009) findings suggest (see Section 3.3.3) that those entering SUD treatment were fitter than previous research suggests (Frankel et al., 1974; Sinyor et al.,1982; Murphy et al., 1986; Collingwood et al., 1991) via sub maximal testing. This highlights a potential issue of construct validity. Direct testing is by definition a more representative measure of fitness, but this should be weighed against potential harm to participants.

Positive psychological outcomes range across significantly increased measures of subjective wellbeing; self-perception, esteem (Palmer et al., 1988), internal locus of control (Ermalinski et al., 1997), self-cathexis (Gary et al., 1972) and decreases in co-morbid conditions associated with addiction; anxiety, depression and social phobia (Frankel et al., 1974; Palmer et al., 1988; Mamen et al., 2011; Rawson et al, 2015; Beitel et al, 2016; Unhjem et al, 2016). Palmer et al (1995) also found significantly reduced depression levels but only among a body building exercise group (as opposed to step aerobic and circuit [mixed] groups). Roessler's (2010) was the only investigation to measure body image as an outcome. The finding that

positive body image increased following a broad training program combining aerobic and strength training with team sports supports Sonstroem and Morgan (1989); Sonstroem et al (1994); Cash (2002); Anderson et al (2010); and Appleton (2012) findings from the general population (see Section 2.2). Langdale & Roderick (2014, p468) use qualitative methods to frame these developments in terms of 'identity transformation facilitated through a confluence of meaningful routine activities, informal social controls and personal agency'. In spending time with participants and asking about the meaning they attach to the PSAE made available to them, Langdale and Roderick (2014) shed light on the cumulative effect of such factors rather than attempting to isolate each individually in an unnatural setting. It is also important to note that inclusion of the participant voice in research output constitutes a further form of participant empowerment of the type described in the last section (3.3.3)

The PSAE types employed in the interventions detailed in this category vary from strength specific (Unhjem et al, 2016) through comprehensive combined aerobic, strengthening and team based sport mixes (Roessler, 2010; Mamen et al., 2011) to video recorded protocols which participants complete at home (Donaghy, 1997). With the exception of Mamen et al's (2009) one time measurement, every study in this category, regardless of PSAE type, documents at least one (substance, physical or psychological) significantly improved outcome which serves to highlight the value of PE as an adjunct treatment for SUDs. There is no discernable pattern which suggests a particular PSAE type facilitates a particular outcome, but the likelihood that enjoyment and a choice of activities will reduce attrition and increase engagement has been highlighted via Burling et al (1992) and Neale et al's (2012) work.

### 3.3.5 PE and Substance Abuse Critical Review Summary

Each piece of research in this category which measured the impact of PE within an SUD context reported positive outcomes of some description with the explanatory power of substance and PSAE type appearing to be superseded by participant levels of "ownership" and personal change. It is important to note that this research value is entirely in alignment with the key TC aim of empowering people to change within a social context (see Section 3.3.1). These findings were gained through Burling et al (1992), Neale et al (2012) and Landale and Roderick's (2014) use of qualitative methods to offer emic insight. In the current investigation, the same has been achieved through interview and observation. These pieces of research also use represent important theoretical development with Landale and

Roderick (2014) combining the traditional Bourdieusian concepts of economic, social and cultural capital which Neale et al (2012) used under the umbrella term of recovery capital. Once immersed in my own data and after a few key changes (discussed at length in Chapter 5) I also found this model best suited to understanding the meaning my participants attached to addiction, recovery and exercise.

The assumption that service users will have low fitness levels has been challenged leading to the firming of my belief that successful interventions should be inclusive across a range of fitness levels. In this thesis, inclusivity and increased participant ownership fitted well with the PF ethos and, I believe, helped decrease attrition rates.

## 3.4 PE and addiction - Animal Studies Critical Summary

*Table 5* (see *Appendix 6*) contains research (32) from the PE and addiction animal studies category. Whether exploring the impact of prior exercise experience or the introduction of PE following addiction, all but one (Werne et al., 2002) of the experiments in this category found PE to have some form of negative association with addiction. Unlike studies covered in the last two sections, all of these pieces are RCTs. The blinkered pursuit of the gold standard of causation and lack of understanding of social reality highlighted as being prevalent in human based RCTs (see Section 3.3.3) are magnified here.

This category of research features prominently in the majority of the meta analyses and systematic reviews covered in the next section (3.5) As such, these investigations are worthy of mention here but, as discussed in Chapter 1 and Section 3.1, I have chosen not to cover them in the minute detail afforded to the human based research. To paraphrase Bruce Alexander (2008), former animal researcher and current proponent of a new approach to understanding addiction which accounts for dislocation from traditional sources of psychological, social and spiritual support; "Rats are rats, how much can they tell us about the human condition?" Provided here then, in place of a full critical review of literature is a summary of the contribution of animal research to the field of PE and SUDs and a discussion of the problems therein.

In Section 3.3.1 the argument that primary intoxicant was of limited relevance for recovering addicts, particularly within a TC setting, was introduced. Animal research aims to identify the specific mechanisms through which PE may associate with addiction. As a result, substance

specificity is deemed important despite questionable transferability to the real world. I question the logic of this approach.

There is for example, scant evidence suggesting that MDMA use regularly develops into addiction for human users (McCandless, 2006). It is also the case that poly drug use (commonly co-used substances are alcohol, cannabis and stimulants) represents a recurring theme within the majority of MDMA focused research (Gouzoulis-Mayfrank and Daumann, 2006). In short MDMA is seldom the primary intoxicant of recovering addicts. This brings the relevance of studies such as Chen et al's (2008) exploration on the impact of compulsive treadmill activity on the hedonic value of MDMA among mice into question. In order to properly reflect the "real world" to which animal studies claim to pertain on an ontological level (Taylor et al., 2008), experimental focus should reflect actual addiction trends.

A further issue with the research in this category is that of construct validity. The crux of positivist research is the ontological assumption that only that which exists can be studied, this is objectivism (Bryman, 2012). As highlighted by Williams (2003) in Section 3.3; representation should be a key consideration here. Measuring the causal power of an independent variable upon a construct entails assuming that the construct has "ontological validity"; that it exists. Brocardo et al's (2012) finding that oxidative stress was reduced through PE was gained through obtaining brain tissue samples used to determine glutathione levels in alcoholic rats. Findings relating to anxiety and depression however were, based upon phonotypical behavior observations. These observations were made during Elevated-Plus Maze (EPM) and Forced Swim tests (FST). Essentially both tests require rats to be subjected to stress allowing observation to gauge the instance of symptoms which have been pre-determined to signify anxiousness and depression. For Pellow et al (1985), the EPM has construct validity based upon the assumption that when under the influence of drugs known to have anxiolytic qualities, rats exhibit fewer anxious symptoms. Essentially the validity of FTS findings relies upon the representativeness of another construct. The issue is that the 'construct validity of the FST is difficult to establish' (Petit-Demouliere et al., 2005, p247). For West (1990), this is because measuring immobility as a symptom of depression assumes that it is an accurate representation, rather than being attributable to (for example) an adaptive response to an inescapable situation. The point being made here is that such tests merely appear to have face validity (apparent accuracy) to those operating within the paradigm of animal studies.

What we have here is a body of research which, alongside every intervention listed in this literature review that was carried out on human participants, suggests that there is a negative relationship between exercise and substance misuse. This is useful but, as is pointed out in the next section (3.5), empirical research has suggested this has been the case since 1888. Deciding what a rat looks like when it is stressed and then observing one that has been given methamphetamine and forced to exercise is not a good use of time or energy, neither does it do anything for humans who could be benefiting from a meaningful drive towards actually implementing PE into rehabilitation settings.

## 3.5 Critical Review of Meta-Analyses and Systematic Reviews on PE and SUD's

Three of the fifteen pieces in this category (see *table 6* in *appendix 7*) cover research on a range of aftercare approaches to substance abuse (Smith, 1984: Kunstler, 1992; Dutra et al., 2008). Kunstler (1992) covers PE as part of a range of therapeutic recovery approaches, the common element being the potential to function as an enjoyable alternative to drug taking but provides little empirical substantiation. Smith (1984, p9) also points out that PE is a frequently used aspect of SUD programs and cites personal communications from Ron Siegel (1982) describing relative success 'using LSD (long, slow, distance) running therapy with cocaine freebasers'. Seigel (1985, p1) traces the first published account of PE being used in the treatment of cocaine addiction back to Hunter (1888) who claimed success via a program of 'seclusion, absolute withdrawal, nutritious food, care, rest for the body and exercise'. Dutra et al's (2008) review is deserving of mentioning here only insofar as it is a meta-analysis of SUD treatments which fails to mention any PE research whatsoever.

The remaining twelve (Read & Brown, 2003; Greer et al., 2012; Weinstock et al., 2012; Williams & Strean, 2008; Zschucke et al., 2012; Lynch et al., 2013; Wang et al., 2014; Giesen et al., 2015; Bardo and Compton, 2015; Linke and Ussher, 2015; Brellenthin and Koltyn 2016; Stoutenberg et al., 2016) reviews in this category are systematic, meaning that there was a method for assessing the value of relevant research which has met a predetermined inclusion criteria. The call for more research into the use of PE in SUD treatment is a common theme across these works.

This call is made using the same overly specific focus and reductionist discursive practices highlighted as a key feature of both SUD and animal research. By way of example, Giesen et al (2015, p1) highlight their rationale for carrying out a systematic analysis focusing solely on alcohol: 'Although several publications have summarised studies focusing on physical activities in substance use disorders, no systematic review exists summarising the evidence of exercise interventions in AUD'. This statement is false. Six of the thirteen reviews discussed here cover alcohol along with illegal substances under the banner of substance use disorder, while Read and Brown (2003) have it as their sole focus.

The work of, Williams and Strean (2008); Zschucke et al (2012); Lynch et al (2013); Wang et al (2014); Bardo and Compton (2015); Linke and Ussher (2015) covers substance abuse in general whereas the remaining reviews focus solely upon stimulants or alcohol (Read & Brown, 2003; Greer et al., 2012; Giesen et al., 2015; Stoutenberg et al., 2016), cannabis (Brellenthin and Koltyn, 2016) or opiates (Weinstock et al., 2012). As covered in Section (3.2.1), it is, (particularly within the TC context) needlessly reductionist to focus upon one substance, or family of substances, as effective treatment facilitation requires viewing addiction as a more unitary problem. This is perhaps recognised in Weinstock et al's (2012) work, which in attempting to construct an intervention specifically for opiate addicts, draws extensively on research focusing on other substances. Failure to recognise the transferable qualities of addiction research assumes that findings are so substance specific that they cannot be applied outside of exact research design parameters. This is a logical approach for studies aiming to identify neurobiological outcomes associated with particular drugs (see Section 3.4) but an illogical manifestation of the culturally coercive properties of science in all other contexts.

An overtly positivist approach to research is evident in Lynch et al's (2012) review which assumes transferability of animal models of addiction to human populations, yet fails to draw on any qualitative findings from studies on humans. This almost obsessive drive towards producing RCT's and generalisable statistics in the relative absence of any real qualitative analysis is symptomatic of a research culture stuck within the positivist research paradigm. Ferrell, Hayward & Young (2008, p.163) argue that this is a consequence of a recent shift towards 'assembly line research methods and objectivist measures of disciplinary productivity' which have increasingly relied upon 'corporate management practices and a bureaucratic culture of actuarial control'. The paradigm, in which research is shaped 'to appease a pseudo-scientific process' to obtain funding (Hyatt cited in Arnot, 2006, p.1) constitutes the philosophical underpinnings of the animal research paradigm highlighted in 3.4 and has similar qualities to the paradigmatic nature of current international and British drugs legislation (Fitzgerald, 2012; Pryce, 2012).

Ethnographies into user experiences have been popular in the past (Becker, 1963; Patrick, 1973) and there have been some more recent contributions (Clatts et al, 2002; Bourgois, 2003; Bourgois & Schonberg, 2009) to this relatively under researched field. Emic understandings of drug use, abuse and treatment are however largely absent from social scientific literature. This is clear to see in the 3-31 ratio of qualitative to quantitative research

found in the literature search for this review. For Hunt (2001, p.171) this is symptomatic of the 'collapse of ethnography as a central mechanism of data collection and analysis'. This void of knowledge about the individual and subjective nature of drug addiction encompasses the use of PE as a mode of treatment. Discourse around addiction functions to empower the medical and legal professions while subordinating individual addicts (discussed at length in Chapter 5 - see also Fitzgerald, 2012). Macro level research provides demographic insight concerning who enters rehabilitation and the relative success of different treatment programs, but fails to reveal the meaning that service users may attribute to behaviour changes. Animal research focuses on specific neurobiological mechanisms disregarding the explanatory power of structural social forces and downplaying the contribution "real life" participants might make to developing knowledge via qualitative means. Systematic literature reviews with inclusion criteria which discount qualitative works perpetuate this problem. They are symptomatic of what Giddens (2013) defines as a cycle of structuration; they are created yet function to recreate a scientific bias which is evident in the ratio of animal to human studies Lynch et al (2012) draws on to discuss associations between PE and withdrawal (5/1).

Brellenthin and Koltyn (2016) exemplify this issue carrying out a review covering cannabis use disorder (CUD) only. If this little used term becomes part of the research vernacular then I presume it will justify the writing of a series of overly specific papers which will provide the impetus for the research careers of those riding the CUD wave whilst having little impact on the real world of recovery. I'm not arguing that such research is pointless; the crux of my pragmatic approach to data (discussed throughout Chapter 3 and detailed in Section 6.5) is recognition of the transferability of all data. Rather, I am arguing that this research is misdirected. It is a further example of the culturally coercive properties of science (highlighted in Section 3.3.2). There were over 160 new psychoactive drugs synthesised and sold on the internet during 2011-12 (Power, 2013). I firmly believe that rather than create a new disorder specific to each individual substance; writing systematic reviews highlighting a need for research so specific in substance type, target population and PE dose that it no longer relates to the real world; following this up with successive methods proposals, pilot studies and actual study papers which end with conclusions which are, at best, tentative inferences of possible positive outcomes with a firm recommendation for more research (see bibliography for Brown et al's multiple papers on alcohol, Rawson's pieces on meth-amphetamine or Smith et al's 6 practically identical animal studies) we should be ensuring that PE is made available to those in recovery. In his 'archaeology of knowledge' Foucault

(2012) highlights such "scientific knowledge" as un-reflexive and typical of an epoch in positivism is the dominant paradigm.

The discursive practices employed in these papers serve to stabilise and recreate a culture of un-reflexive caution typified by continuous calls for more research rather than pushing forward change. This is exemplified by Giesen et al (2015) who, following their systematic review of exercise interventions for alcohol use disorders, conclude that 'exercise may have beneficial effects on certain domains of physical functioning including VO2max, basal heart rate, physical activity level and strength'. To claim any uncertainty around PE having a causal relationship with such changes in physicality is frankly ludicrous.

Zschucke et al (2012) and Greer et al (2012) have similar biases towards positivist works and, despite the suggestion of objectivity, favour the RCT over all methodological alternatives in precisely the manner warned against in Section 3.3.2. The main criticism both reviews make regarding the current state of literature on the topic of possible association between addiction and PE is that when compared with smoking, there are very few alcohol and no illicit drug RCTs (Greer, 2012; Zschucke et al., 2012). In short, the point Zschucke et al (2012, p16) make is that most alcohol and all illicit substance studies suffer from 'severe methodological limitations which constrain possible conclusions'. The cross-substance transferability of findings detailed in Section 3.3.1 is entirely absent from Zschucke et al's (2012) work which, like Greer et al (2012) and Lynch et al's (2012 appears to advocate cautiously drawing conclusions from animal studies or alternative populations, rather than recognising the value of data which is not numeric. Drawing from these sources Zschucke et al (2012) and Greer et al (2012) suggest the potential mechanisms listed on *table 7* for the impact of PE in SUD populations.

Weinstock et al (2012) cover the same potential mechanisms of action but also cite the work of Prendergast et al (2006) and Lussier et al (2006) as empirical support for the value of contingency management functioning to reduce attrition rates across various SUD treatments. The point they make is that the positive reinforcement of desirable behaviour via shopping voucher (see Lussier et al., 2006; Pierce et al., 2006; Prendergast et al., 2006) could potentiate the efficacy of PE interventions. This seemingly cynical approach to rehabilitation should be understood in the context of the frequently socioeconomic 'obstacles confronting those who desire to start and maintain an exercise program' (Weinstock et al., 2012, p357). This issue is revisited in Section 6.3.

Read and Brown (2003) take a less neurobiological and more psychosocial approach to reviewing literature focusing upon self-efficacy as a potential mechanism of action. Operationalising self-efficacy as 'a belief in one's ability to master particular skills', Read & Brown (2003, p50) apply Tuson and Sinyor's (1993) mastery hypothesis, suggesting that self-efficacy for exercise may generalise to other areas such as maintaining sobriety. This idea is touched upon in section 2.2 and will be discussed in detail in section 5.8. Read and Brown (2003) also highlight the importance of group activity and social support in the field of recovery and adherence to exercise programs within (Palmer et al, 1995) and outside (Murphy et al., 1986) of SUD contexts.

***Table 7: Potential Mechanisms for the Impact of PE for SUD Populations***

*Adapted from: Zschucke et al (2012, p16-17)*

| POTENTIAL MECHANISM | NOTES |
|---|---|
| Neurochemical alterations | PE may alter malfunctioning dopaminergic, glutamatergic and opioidergic neurotransmission and be linked to neuroprotection and plasticity |
| Reduction of acute craving | PE can acutely downgrade craving and withdrawal related negative mood |
| Endogenous reward | PE can induce pleasurable alternatives to substance use |
| Mood regulation | PE can improve mood and wellbeing |
| Reduction of anxious and depressive symptoms | PE is an effective long term intervention for anxiety and depressive disorders |
| Stress reactivity | PE can protect against everyday stress |
| Group activity and social support | A social network which is not focused upon substance use could be a key factor in relapse prevention |
| Coping | PE may act as an alternative coping strategy to substance use |
| Maladaptive cognitions and self-efficacy | Supervised PE may increase body related self-efficacy |

*Table 8* represents the biopsychosocial model of recovery adopted by PF. It is an holistic overview of the variables commonly associated with addiction created by Willams and Strean (2008) who, drawing on a range of the sources covered in Sections 3.2 and 3.2 of this literature review argue that PE has potential as an adjunct to drug abuse treatment. The biopsychosocial model of addiction is discussed in detail in Section 4.3. Here suffice to say that this approach is a vast improvement on reducing explanations of addiction to biological factors whilst ignoring the social. Lynch et al (2012) falls into this trap in outlining the logic for breaking addiction into distinct phases; initiation of use, progression to addiction and

chronic exposure lies in the fact that neurobiology varies over time as addiction develops. During initiation psychostimulants increase dopamine in the *nucleus accumbens*. Lynch et al (2012, p1623) highlights that 'blocking this pathway can disrupt drug self-administration' referring to instances where this has been achieved using antagonist and dopamine receptor blockades (Corrigall et al., 1992; Chang et al., 1994). This is undoubtedly relevant to the field of SUD, but suggesting that such treatment should target individuals during drug use initiation is pointless when contextualized against the frequently refuted yet empirically founded fact that the majority of early drug use constitutes experimentation which does not progress to addiction (Baan Commission, 1972 cited in Cohen, 1994; Parker et al., 2007; Nutt et al., 2007a; 2010).

Lynch et al (2012) draw on a range of primarily animal studies to highlight the role of the glutamatergic pathway in providing further motivate drug use in the later stages of addiction. The chronic levels of substance exposure which characterise long term addiction can lead to mesolimbic hypofunction. Citing a review by Melis et al (2005), Lynch proposes that the behavioural result of hyperfunction could be continued use to compensate for a dopamine deficit. In short, that neurobiological enforcement is a common factor across substance and stage of addiction (Williams & Strean (2008). For Lynch (2012), the efficacy of PE interventions across these stages of addiction lies in an empirically validated (Shuman, 2000 cited in Williams & Strean, 2008) inference that it can “jumpstart” biogenic amine neurotransmission. These findings provide support for my work but again, are of little use in real world situations.

***Table 8: Common Factors Associated with Addiction***
*Adapted from: Williams & Strean (2008, p85)*

| NEUROBIOLOGICAL | PSYCHOLOGICAL | SOCIAL AND ENVIRONMENTAL |
|---|---|---|
| Dopaminergic system reinforcement | External locus of control | Peer pressure |
| Opioid system reinforcement | Inadequate coping skills | Family conflict |
| Serotonergic system reinforcement | Lack of emotional and cognitive maturity | Limited social support |
| GABA system reinforcement | Rebelliousness | Cultural norms |
| | Low self-esteem | Drug availability and accessibility |
| | | Crime |
| | | Poverty |
| | | Unemployment |
| | | Racism |
| | | Lack of education |
| | | Inadequate accessibility to health care |

## 3.5.1 Critical Review of Meta-analysis and Systematic Reviews Summary

This section has served to highlight the fact there have been common sense applications of PE in the field of SUD since 1888 but that evidence from studies other than RCTs is often viewed as anecdotal at best. As such, the universal call for more research into the efficacy of PE as an adjunct SUD treatment discussed here is essentially a call for more RCTs. This bias is criticised as being paradigmatic and having culturally coercive characteristics similar to those which underpin the outdated prohibition approach touched on in Section 2.1 and discussed in detail in Section 5.1. Given the void of knowledge concerning the subjective user experience in the majority of drug research, the point is being made here that a more holistic acceptance of other types of empirical validation would be prudent. Again, as stated in Section 3.3.2, mine is not a call for an end to RCT's. Rather, I am arguing that data from

qualitative sources should be recognised as equally valuable and recognised in meta-analyses and systematic reviews which pertain to be offering a summary of the current state of empirical evidence. Currently, things are massively skewed in favour of RCTs. Contingency management has been highlighted as a viable method of lowering potential attrition rates and the notion of a transferable self-efficacy has been introduced as a potential beneficial outcome.

## 3.6 Critical Literature Review Conclusion

Each piece of research discussed in this chapter details positive outcomes of some kind. Observational studies on nonclinical populations infer a negative correlation between PE levels and substance use, but social variables appear to have a confounding role in the instance of alcohol. Unhjem et al's (2016) recommendation regarding the efficacy of strength training for those in recovery stands out and offers some empirical support for the strength focus that a lot of my participants' training ended up having (discussed in detail throughout Chapter 9). Some of Foucault's key concepts have been introduced to highlight the illogical systems which govern research into SUD's. His theoretical tools are used again in Chapter 4 to explore officially propagated theories of addiction and the social/historical context from which they emerge. Here they allowed me to articulate a call for real world research which offers insight into participant opinions and intervention ownership. Essentially, exercise works, even for addicts. It does not matter what kind of exercise nor type of substance, but participant ownership of interventions appears to be advisable.

In the few cases where qualitative research has been carried out, useful insight into the interplay of potential PE benefits within a recovery setting has been gained. Through these investigations the recovery capital model has been introduced and contextualised against the Bourdieusian notion of habitus. These concepts form the backbone of my own theoretical lens and are discussed at length in Chapter 5.

Chapter 2 outlined the TC model of rehabilitation with its emphasis upon developing the agency of residents. Here in Chapter 3, the complimentary role which PE can play in this setting has been discussed with particular reference to the emancipatory possibilities attributable to the actualising of residents' individual fitness related goals. The pragmatically informed approach to data employed in this thesis has been highlighted. This approach allows

recognition of the transferability between all types of data while accounting for methodological limitations. For example, I recognise the value of data produced from animal studies in providing insight to neurobiological factors relating to SUDs, but highlight the limitation of crossover to human populations who live in a world of socio structural variables. I therefore question the inclusion of animal studies in meta-analyses which do not include qualitative work on human populations.

# Chapter 4: The Social Construction of Addiction: Political and Theoretical Context

*'The greatest cause of crime, as all law-abiding people know, is drugs*' (Hawkins, 2004).

In Section 2.1 the assumed causal relationship between substances, their users and crime, within dominant political discourse was highlighted as socially constructed. As is the way with officially propagated discourses, this manner of viewing drugs and the myriad issues surrounding their use has become a norm (Seddon 2009; Fitzgerald, 2012). This entrenched perspective is exemplified by Conservative Member of Parliament, Nicholas Hawkins' declaration at the opening of this section. In this chapter I unpick the drug/crime discourse along with the medical profession's assertion that addiction is a disease. These perspectives became polarised with the introduction of the 1920 Dangerous Drugs Act which 'set in train a still unresolved dilemma as to which arm of the state should "own" the drug problem' (Barton, 2003, p.17). Although often referred to as opposing positions (Boland, 2008), each claim of ownership sees drug use as anomic and drug users as problematic. It is this hegemonic and essentially moral stance that sees drug users as deviant, which informs any public discussion of drugs. The combined weight of these discourses with their institutional backing quashes the more 'politically challenging position that drug use is *sui generis'*: a largely unproblematic - non deviant phenomenon (Stevens, 2007, p.86).

PF's community as method approach (introduced in Section 2.1), the stories of those in recovery presented in the analysis (Chapters 9-11) and the formation of theoretical models for understanding addiction, all occur within an epoch defined by this dilemma. Following a brief mention of governance, the ensuing discussion will contextualise the TC and developments in theories of addiction against this political context and legislative framework.

## 4.1 Fear and Governance

Fear is symptomatic of an area as politicised as drug use. Policy making in highly politicised areas is 'subject to ever-changing forces and fashions' which frequently trump the evidence base'(Melrose, 2006). The 1916 Defense of the Realm Act, a precursor to the 1920 Dangerous Drugs Act, was a legislative reflection of fear that the cocaine and opiate use of British and Canadian service men returning from the trenches of WW1 would have a negative impact upon munition factory output (Barton, 2003; Monaghan, 2008). Prohibition

which deemed possession of cocaine or opiates illegal, while accepting caffeine, tobacco and alcohol as relatively non-problematic substances, was enforced (see Seddon, 2010 for full discussion). This legislation represents the birth of a societal norm which has since seen both 'state and non-state institutions (family, education system, medical profession, government, judiciary and police) socialise people into accepting a dichotomy between legal and illegal drugs' (Boland, 2008, p.176). This Eurocentric/Americanised model of prohibition went international with the signing of the Treaty of Versailles, and global with the Single International Convention on Narcotic Drugs of 1961 (Barton 2003). The Misuse of Drugs Act 1971 reflects British adherence to this model, and there have been no significant changes in legislation since its enactment.

The term governance refers 'to the shaping of the field of action by determining the rules of discourse' (Delanty, 1999, p.104). In this Foucauldian understanding, discourse 'defines and facilitates the social practices of the individual' (Layder, 2001, p.95). It becomes "truth". In the SUD sphere discourses define the treatment of addicts and the types of services available to them. In Section 9.2 this notion is discussed in relation to the labelling and treatment of recovering addicts in methadone maintenance programs. In Chapter 4, similar governance was shown to influence the research culture surrounding SUD's. Here its constraining effect upon theories of addiction will be discussed

## 4.2 Morality and the Disease Model of Addiction

> *'We not only had an abnormal craving for alcohol but we frequently yielded to it at the worst possible times. We did not know when or how to stop drinking. Often, we did not seem to have sense enough to know when not to begin'* (Alcoholics Anonymous cited in Pycroft, 2010, p46).

In Section 2.1, addiction was defined as the 'compulsive, uncontrollable dependence on a chemical substance' (Mosby's medical dictionary, 2013 p.37). The key factor is a lack of autonomy regardless of any awareness of damage being done to the self or loved ones (Heather, 1998). The main challenge for theories of addiction is to 'explain how this violation of the individual's freedom of choice occurs' (West, 2001, p3).

In the western world, early addiction theories concentrated on the relationship between the individual and the substance. The most influential of these was the disease model which was created in the 18th century but gained traction once adopted by the Christian temperance movement during the late 19th and early 20th centuries (Lindstorm, 1992). Initially, the disease model applied solely to alcoholism. By 1935 it was promulgated by AA (Pycroft, 2010) and bolstered by their observations. Implicit in defining the problem of alcoholism as a disease is the claim to ownership of the solution by the medical profession mentioned in the last section (5.1). A positive outcome of this paradigmatic shift was a move towards public health interventions and away from Victorian penalty based solely on the notion of morality (Pycroft, 2010). The result of this shift was however a system of penal welfarism that retained a moral framework in which addiction was quite removed from the semantic notion of disease (Seddon, 2010). This system viewed deviant behaviour as caused by disorders of moral will, the "contraction" of which can be avoided through discipline and moderation (Johnstone, 1996). Inherent within this model is the difference between the mutually exclusive categories of addict and the non-addict, the deserving and the undeserving. Simply put, the addict contracts addiction through making poor choices. As such they are morally culpable. In AA, this is reflected in the emphasis upon the moral awakening required to move through the 12 step program (Pycroft, 2010). The disease model paved the way for everything which has come since. Conceptualising addiction as a welfare rather than purely judicial issue constituted a huge leap in theoretical understanding, while AA and latterly NA continue to represent an effective bottom up community-based form of self-motivated treatment. It is, however, the case that despite these benefits, this model and the treatments/interventions premised upon it are molded by penal welfarist governance.

## 4.3 Dependency Syndromes and Harm Reduction

> *'Certain individuals use certain substances in certain ways, thought at certain times to be unacceptable by certain other individuals for reasons both certain and uncertain'* (Burglass and Shaffer, 1984, p19).

The disease model based 12 step programme of AA and NA assumes something fundamentally pathological in the makeup of the addict which separates them from the non-addict. The "cure" requires surrender to a "higher power" to facilitate a moral awakening of

the type mentioned at the end of the last section (4.2). The problem with this one size fits all view of addiction as an acute disease is the assumption that abstinence is the cure (McKay and McLellan, 1998). The Abstinence Violation Effect, when feelings of guilt due to a single lapse result in full blown relapse, is an oft cited negative result of this (Pycroft, 2010). In an attempt to limit this effect, Edwards and Gross (1976) proposed defining dependence as a syndrome and as such, dimensional rather than unitary. Subsequent research clarifying the clinical dimensions of Alcohol Dependence Syndrome in particular formed the basis for diagnostic criteria adopted by the World Health Organisation (Li et al, 2007). This was a watershed moment in the clinical approach to working with addicts.

Where the disease model was based largely upon the observations of the AA community, addiction syndrome discourses were based on "empirical" research. They were owned by professional experts (Pycroft, 2010). Seddon (2010, p,94-95) draws on the work of Mills (2005), highlighting that this privileging of scientific knowledge results in 'an almost deterministic account in which the social, cultural and political context for both scientific endeavour and policy making is largely ignored'. The systematic literature reviews with inclusion criteria which discount qualitative works, highlighted in Section 3.7.1, emerged from this context and serve to recreate it. The same applies to the discursive practices of un-reflexive caution typified by the majority of the research covered across Chapter 3. These investigations were focused on PE and addiction rather than on SUDs alone, but the fact remains that they reflect discourses of governance around what constitutes good acceptable knowledge and the pathological nature of addiction.

From the point of intersection between discourses of policy and science, of medicine and punitive punishment, psychological explanations of addiction began to emerge. In line with the growth of interest in the work of Freud, Khantzian's work during the latter half of the 21$^{st}$ century proposed a psychodynamic understanding based upon identities spoiled by early trauma. This approach recognised the impact of trauma and emphasised the importance of an empathic therapeutic relationship between service user and provider (Pycroft, 2010). During the same period, Skinner and Ellis developed a cognitive behaviour model based upon conditioning. This led to developments in understanding the mechanisms of positive reinforcement associated with substance use (Pycroft, 2010). PF (2011) recognises these developments as ground-breaking, but suggest that no model adequately explained the complex nature of addiction or the cultural and individual differences noted in treatment until

the later conception of Zinberg's (1984) biopsychosocial model of addiction. Reflecting a general shift in psychology towards a more holistic understanding of human behaviour (see Engel, 1980), this new model recognised physiological, psychological and environmental (social and cultural) factors in its conceptualisation of addiction (Griffiths, 2005). It fits perfectly with the TC view of addiction as a disorder of the whole person (see Section 2.1) and has explicit mention in the PF manual (2011).

For PF (2011), applying this model entails recognising that an individual's experience of 'addiction is affected by the nature of the substance, the situation in which they find themselves and their personal belief in their own worth and ability' (PF, 2011). This application assumes recovery to be multifaceted (see Section 5.2 for full discussion) and grants environmental pressures explanatory power equal to that of biochemical factors. The weakness in the general/wider application of the biopsychosocial model of addiction is an inherent hierarchy in which "bio" factors are given more explanatory power than "psycho" or "social" ones. This criticism can be generalised to cover mainstream health psychology which prioritises data that complements biomedical findings and is amenable to statistical analysis and modelling (Crossley and Owens, 2001). The reductionist research discussed in Chapters 3 is a reflection of this trend. As health psychology has become more acceptable to medical clinicians and researchers well versed in the discourse of scientific progress, recognition of subjective human experience has drastically diminished (Crossley and Owens, 2001). The biopsychosocial model is seen through, and, subject to, what Foucault (1988) calls the "medical gaze". In a recent (2016) review of current literature, Lewis concluded that despite the advent of the biopsychosocial, 'the disease model of addiction is [still] accepted—in fact nearly unchallenged—by the medical community, the psychiatric community, research funding bodies, and governments themselves' (p, 1). It has provided the knowledge base for Big Pharma and a host of services who distribute maintenance treatment drugs and are the biggest proponents of the addiction as disease definition (Bamber, 2010; Lewis, 2016). Again, we see the cycle of structuration highlighted in Section 3.6.1, in which knowledge that is accepted as scientific, supports powerful institutions who define what acceptable knowledge is. Observations regarding addiction, including the opinions of those who have been through it (see Section 3.3.3) which more often than not, disagree with the disease conceptualisation (see Dawson et al, 2006; Bamber, 2010; Heyman, 2013), are ignored.

## 4.4 The Social Construction of Addiction: Summary and Conclusion

> *'Addiction is not the same as an acute medical problem and therefore should not/cannot be treated as such'* (Pycroft, 2010).

The manner in which PF apply the biopsychosocial model of addiction gives equal weighting to its three constituent parts. Outside of this closed environment the model is subject to the medical gaze. In this chapter, a Foucauldian "archaeology of knowledge" (2012) has been carried out to provide the political and legislative context to these phenomena. Put simply, I have "dug" into the past to reveal the illogicality of our current understanding and subsequent treatment of addiction.

Throughout Chapter 3 I highlighted recognition of the value of different forms of data and types of understanding as central to my pragmatic approach to research. The biopsychosocial approach, like the disease and syndrome models before it, still however operates within a penal welfarist political context which views illegal drug use and all addiction as "deviant". Meanwhile an aggressively positivist research environment undervalues the addict's opinion. I firmly believe that application of the "sociological imagination" (the focus of the next chapter) is a way to understand and unpick the impact of such structures providing insight into the individual experience at the core of addiction and the multifaceted nature of recovery.

# Chapter 5: The Sociological Imagination

> *'Where drugs such as heroin and crack-cocaine are concerned, the most serious concentrations of human difficulty are invariably found huddled together with unemployment, poverty, housing decay and other social disadvantages'* (Pearson 2001 p53).

As described in the introduction (Chapter 1), I have chosen to present my theoretical model separately from and before my analysis, so that the concepts therein and my reasoning for using them is clear. This structure allows for the smooth application of concepts during analysis without the need for lengthy definitions and explanation. This thesis is not hypothetico-deductively testing the theory outlined in this chapter. Rather, the concepts I use emerge from my understanding of the convergence of themes from research discussed in Chapter 3 and those from my research data.

The sociological imagination enables us to distinguish between our own 'personal troubles' and 'public issues' (Mills, 1959), or more pointedly, to begin to conceptualise the relationship between the problem of individual experiences in relation to broader processes of social continuity and change. Mills (1959) coined the term as a way to describe the type of insight offered by the discipline of sociology. It is 'the application of imaginative thought to the asking and answering of sociological questions (Giddens 1989, p750) which affords us the analytical ability to articulate social injustice rather than accept it as the norm. The previous chapter contextualised the biopsychosocial model adopted by PF against past understandings of addiction and the current political legislative and research framework. PF is located on the front line of service provision where there is tacit awareness of the explanatory power of social as well as psychological and biological aspects of addiction. This awareness is lacking in wider penal welfarist discourses which "own" the problem of addiction (see Section 4.3). In short, outside of PF, the biopsychosocial model of addiction is not being correctly applied. Put another way, the further from the real world of service provision you get, the less accurately the biopsychosocial understanding of addiction is applied. Social injustice lies in trenched within the bio-politics of addiction. In this chapter I apply the sociological imagination to explain this via Bourdieu's (1990) concepts of capital, habitus and field which were highlighted in Neale et al's (2012) work and applied in Landale

and Roderick's (2014 - see Section 3.3.3). Using the structure action dualism which lies at the heart of the social sciences as a starting point, these and other relevant theoretical concepts are discussed in detail. They provide an analytical lens through which my data is explored and converged with literature review findings.

The term structure refers to institutionalised and deterministic social arrangements whereas agency describes free will: the power to operate independently of such arrangements. These are the two main determinants of social outcomes (Jary and Jary, 2000). The dualism between structure and action has dominated the social sciences since classical (including but not exclusively; Weber, 1930; Durkheim, 1964; and Marx, 1977) theorists first attempted to conceptualise societal shifts triggered by the repercussions of modernity (Lockwood, 1964; Mouzelis, 1997; Layder, 2005). Later theorists have explored the complex interactions between the dialectically opposed notions of freewill and determinism (see Habermas, 1987; Bourdieu, 1990: Giddens, 2013a). The similarity between these contemporary theorists is that they have all engaged with the dualism on some level, the difference between their respective theories is the level of power they ascribe to individual action.

For Milkman and Sunderwirth (2010), freewill is the most important determinant of happiness. For Habermas, (1987) reduced freewill is a result of the colonisation of the lifeworld by the system. Prior to this, Marx (1963) can be paraphrased stating that people make history, but not in circumstances of their own choosing. These points regard the same issue; our ability (or lack of) to carve our own destiny. It does not matter what theoretical constructs are used to conceptualise this issue, decision making power being curtailed by the intersection of socio/institutional structures (the economy, culture, religion, the media, etc.) which function to define the norms, values and tastes of marginalised groups as morally questionable (Bourdieu 1984), results in alienation. For those at the bottom of society's hierarchical structures, for those with the fewest resources at their disposal, the combined weight of these societal pressures should be recognised as lumpen abuse (Bourgois and Schonberg, 2009) stemming from class based hegemony (Althusser, 1971). It massively reduces freewill.

It is no coincidence that the most visible and problematic examples of drug use invariably occur in areas already suffering poverty and exclusion, and to those alienated through the structural violence of lumpen abuse (Seddon, 2006). The structurally imposed suffering of

lumpen abuse frequently results in counter cultural and destructive subjectivities including criminal behavior and/or substance abuse (Bourgois, 2003; Seddon, 2006; Bourgois and Schonberg, 2009). Such non-conformity is highlighted by the guiding media (Habermas, 1987) via the politics of electoral anxiety (when political concerns "trump" evidence base [Melrose, 2006]) labeling perpetrators as deviant (Becker, 1963; Taylor, 2008) and recreating inequality in a cyclical manner. Strain and stress models of deviant behaviour (Merton, 1938) or specifically drug use (Vega et al., 1994) attempt to explain this in terms of a society structured in a manner which makes it difficult for those of limited (particularly economic) capital to achieve societal goals via legitimate means; a "strain discrepancy" (Vega et al., 1994). Strain theories however, tend to underplay the fact that structural violence; 'the violence of poverty, hunger, social exclusion and humiliation' (Scheper-Hughes and Bourgois, 2004), begets strain discrepancies and resulting deviant behaviour. Similarly, Giddens' (2013) structuration theory is also criticised for overstating freewill (see Thompson, 1989; Loyal and Barnes, 2001). The crux of these criticisms lies in Giddens' (2013) key concept; the "ontology of potentials", which assumes a permanence of freewill indicating that 'every agent can potentially have acted in a way different from the way they happened to in any given case' (Inglis, 2012 p226). The danger of such an assumption is the instrumental manner in which it can be utilised (Loyal and Barnes, 2001) to inform a laissez-fare politics (Bourgois, 2003) which views deviant behavior, particularly drug use, in pathological terms (Bourgois and Schonberg, 2009). Such reductionist application of theory fails to account for the potential cumulative effect of structural variables upon choice, upon 'life trajectory' (Elder 1985), in precisely the same manner as the neurobiological findings highlighted in Section 3.4 fail to recognise the impact of the environment on potential substance use and addiction levels. In reality, the ontological strength of one's potentials is based largely upon their economic status. Extending the existence of such a notion to those in the throes of addiction and suffering associated deprivations undermines harm-reduction strategies and perpetuates discursive practices which criminalise misery (Stevens, 2007; Bourgois and Schonberg, 2009; Seddon, 2009).

The central role of morality in the theories of addiction discussed throughout Chapter 4 should be understood as stemming from such reductionist conceptualisations. At the core of any pathological model of addiction lies an assumption of bad choices made on behalf of the addict. Alternatively, Bourdieu's theory of practice has been successfully applied by Waquant (1992); Reay and Lucey (2000); and Skeggs (2004) to analyse the surreptitious forms by

which power inculcates itself within our personal and bodily dispositions as expressed in daily life. Besides being so 'good to think with' (Shilling, 1991; Jarvie and Maguire, 1994), the value of Bourdieu's conceptual tools rests in their transcending the dualisms of structure and action and mind & body.

## 5.1 Structure, Action, Capital and the Game of Life

> *'In the game of life, these forms of capital, serve as the aces in a game of cards'* (Bourdieu, 1985 p.724).

Bourdieu's (1990) work represents a rethinking of the relationship between individual action and social structure (Elliot 2014) achieved via the key concept of habitus, which accounts for how well-practiced habits bridge individuals and the social structures they are part of. Essentially, habits are learned behaviours through which an individual interacts with the world around them. Habitus then is that individual's stock of habits. As such I shall, from this point onwards, be using the terms habit and habitus interchangeably.

Bourgois (2003) and Bourgois and Schonberg's (2009) applications of Bourdieu's work explore deeply embedded inequalities which allow specific forms of cultural capital to maintain dominance over others, resulting in criminal counter cultures centered around crack distribution and heroin addiction. Rather than reduce the issues associated with drug abuse to individual choice they carefully map the subtle mechanisms of symbolic violence within fields characterised by poverty and deprivation highlighting the habitus as 'historically and socially situated [within] conditions of its production' with little opportunity for unpredictable novelty (Bourdieu, 1990 p55). The field then is a structured space of positions within which the individual is located. There are various kinds of field; educational; economic; artistic. Each is such that an individual's position, rather than their personal attributes, dictates the manner in which they are treated; the power they wield (Thompson 1984, p49). The primary reason for this is economic capital: command over monetary assets. It is the baseline for all social order, cultural and symbolic (Bourdieu, 1977). It is the foundation for social capital; command over social networks and cultural capital; style, speech patterns, appearance (Bourdieu, 1985). By way of example, in his ground breaking exploration into drug

robberies, Contreras (2013, p179) documents the structural pressures within fields populated by young second generation Dominican Immigrants in New York during the 1980-90's crack epidemic: 'A marginal neighborhood, terrible schooling, little social capital, and the crack era contextualised against the US value of achievement which urges high profit and self-interest - that values money and consumption over non-economic or material goals'. Essentially, it is highlighted that free market ideology filters into every aspect of every field. For those who have it, economic capital can be converted into social and cultural capital which allow greater exercise of autonomy. Levels of access to “third places” can be seen as an example of this. Defined here as a core setting of informal life (Oldenburg, 1999), the third place is distinct from first (family unit) and second (workplace) places and serves as a community hub. Oldenburg (1999) offers the British pub, Greek taverna and Turkish barbershop as examples of such spaces that bring people together, facilitating command over social networks through the development and exchange of social capital. Economic capital plays an important role here, in that there are fewer examples of third places in deprived areas and that money usually exchanges hands in them.

These Bourdieusian terms, along with the notion of the third place, can be applied to explore the positive outcomes of Burling's (1992) research (see Section 3.3.3) in which a recovery community softball team was formed. A twofold increase in rehab programme completion was documented. Enhanced levels of interpersonal connectedness and a safe space to practice coping and communication skills acquired in treatment were proposed as mechanisms of action. One could argue that, with economic barriers which prevent taking part in leisure activities removed, the participants' habitus was developed through the accumulation of social and cultural capital in a field with third place qualities. In this example, the community that is Burling's (1992) softball team mirrors the defining qualities of the PF "community as method" approach (see Section 2.1). In both, community is 'a source of healing, a repository of underexploited resources and knowledge, a … cultural ecology that fosters and supports the recovery process and the fabric in which psychosocial integration and identity reconstruction occurs' (Bamber, 2010, p10).

My hope upon beginning this work was that opening the field of PE to PF residents would allow similar opportunities for habitus development. The following section builds upon Bourdieu's theory of practice and outlines some recovery-specific theoretical conceptualisations.

## 5.2 The Mind, The Body: Physical and Recovery Capital

The TC rehabilitation program (discussed in detail throughout Chapter 7) emancipates service users by allowing them to take/re-take control of their lives and by helping them develop their capital stocks. Recognition of the deterministic nature of society's structural forces represents an important aspect of this process. I shall employ the concepts discussed in the last section to articulate this, to apply the sociological imagination. Building upon this solid theoretical grounding, the more recently developed concepts of recovery capital (Cloud and Granfield, 2009) and physical capital (Shilling 1991) will also be used. Each is discussed in detail here.

The term recovery is used to encompass broader biopsychosocial improvements and attainments beyond abstinence (Kelly and Hoeppner, 2015). It is a construct that has gained considerable momentum globally (Kelly and Hoeppner, 2015). The UK drug policy commission (2008) defines it as "sustained control" characterised by improvements in “health and wellness”. It should, according to Kelly and Hoeppner (2015), also be understood to include elements of citizenship and social participation which foster community relationships (PF 2013), strengthens institutional bonds and develops supportive social networks (Best and Laudet, 2010). The US National Institute on Drug Abuse (2002, p2) describes recovery within a TC as 'habilitation: learning, [often] for the first time, the behavioral skills, attitudes, and values associated with socialised living'. The term habilitation therefore describes the forming of new, pro-social habits: the rebuilding of habitus.

Following an attempt to measure the capital stockpiles of recovering addicts, Granfield and Cloud (2001, p1564) found that 'those who possess larger amounts of social capital, perhaps even independently of the intensity of [substance] use, will be likely candidates for less intrusive forms of treatment'. They conceptualised social capital as engagement and commitment to the community as well as the immediate social networks of friends and family that a person can call on in times of need (Best and Laudet 2010). This work led to the defining of recovery capital as the amount of internal and external resources that can be drawn upon to initiate and sustain recovery (Granfield and Cloud, 1999, 2004).

In later work Cloud and Granfield (2009) further developed the recovery capital concept, arguing that it had four components. Components one and four are social and cultural capital.

They adhere to Bourdieu's original conceptualisation. Components two and three however differ.

> *2: Physical capital is defined in terms of tangible assets such as property and money that may increase recovery options (e.g. being able to move away from existing friends/networks or to afford an expensive detox service).*
>
> *3: Human capital includes skills, positive health, aspirations and hopes, and personal resources that will enable the individual to prosper. Traditionally, high educational attainment and high intelligence have been regarded as key aspects of human capital, and will help with some of the problem solving that is required on a recovery journey* (pp1973-1974).

Human capital is an important aspect of this conceptualisation. It originates from the work of Coleman (1988) who, writing during the same period as Bourdieu, sought to account for an individual's own skills and expertise (Gauntlett, 2011). Human capital is defined as a 'secure sense of self-identity, confidence in expressing one's own opinions, and emotional intelligence [which] enables young people to become better learners' (Gauntlett, 2011, p4). It is an emergent property of social capital (Coleman, 1988) originating from interactions with the family (or other sources of primary socialisation) which prompt 'changes in persons that bring about skills and capabilities that make them able to act in new ways' (Coleman, 1988 p,100). Human capital is as such an important reflexive, reflective and linguistic aspect of an individual's ability to understand, articulate and shape the world around them. Irving, A (2011) and Irving, J's (2014) work highlights the transformative qualities of the "language of recovery". This term is discussed in detail throughout Chapters 9-11. Here, suffice to say that one's command of the language of recovery is command of the concepts and techniques, often but not always, taught as part of rehabilitation that facilitate comprehension and articulation of the external world and one's position in it. I make the argument here that the language of recovery is a prime example of the learned skills which make up human capital under Coleman's (1988) definition and, as such, contribute to recovery capital.

While human capital might be a relatively new term, recognition of the importance of being reflective; to "know thyself" dates back, in western philosophy at least as far as Plato's (428-347 BC) description of the inscription on the temple of Apollo to that effect (Milkman and

Sunderwirth, 2010). The same principle is present across eastern spiritual disciplines, and is often collectively referred to in the west as mindfulness (Robins, 2004; Milkman and Sunderwirth, 2010). In Buddhism, mindfulness in essence means 'non-judgmental, present centered awareness' (Kumar, 2002, p42). Groves & Farmer (1994, p189) suggest it entails a meditative state through which 'whatever enters the field of attention is observed in a non-judgmental way'. Modern sociological theory labels this reflection or "reflexivity" (Giddens, 1984); monitoring ones' behavior and giving thought to how one may act in future situations. Templeton (1998, p.144) summarises this notion, stating that 'men are not disturbed by things which happen but by their opinions about things'. Choosing to think differently, "remaining [in the] present" is the crux of modern day western spiritual teachings (see Eckhart Tolle, 2004). This can be linked to the concept of mental toughness; a resilience factor which has a strong association with individual perception and emotional reactivity to adverse circumstance (Rutter, 1993; Beck, 2011; Gerber et al., 2013). This cognitive strength variable is known to be associated with high performance at the elite sport level (Gucciardi et al., 2009; Crust and Azadi, 2010). The work of Gerber et al (2012; 2013) explores associations with stress resilience outside of the sporting environment, concluding that those with higher PE levels had higher levels of mental toughness (2012) which mitigates the relationship between depression and high stress situations (2013). Crust et al (2014) draws on the work of Gucciardi and Mallett (2010) to define this as Exercise Mental Toughness (EMT). The concluding point made in Section 3.3.5 was that PE is likely to have a greater impact on substance abuse than sport participation. The concept of EMT could help explain this. The points being made here are that, rather than being a new idea, self-awareness developed via reflective practice shares much in common with Buddhist mindfulness (Marlat, 2003); that EMT is a form of self-awareness learned from exercise, and that human capital represents a recovery field specific concept which can serve as an umbrella term for such mental coping strategies. It is in this manner that I apply the concept in my analyses

As explained above (6.1), the term habitus concerns the dispositions and habits a person has imprinted upon them whilst in the field. Capital, in its various forms, plays an important role in habitus development. It dictates the manner in which a person is treated and plays a deterministic role regarding the choices available to them. Embodied identity is, according to Bourdieu (1990), also molded in the social world. Put simply 'the body is in the social world, but the social world is also in the body' (Bourdieu 1990, p190). Our social experience influences our bodily development (Laberge, 1995) yet it is through our body that we

exercise our respective autonomy. As such Bourdieu (1985, 1998) highlights the body as central in the reproduction of cultural capital. Shilling (1991) however argues that, rather than being seen as a subdivision of cultural capital, the physical should be recognised as a distinct form of capital in its own right playing an equal role in habitus development.

Shilling's (1991) physical capital refers to the social formation of bodies through sporting, leisure and other activities. It is the embodiment of habitus; the manner in which we treat our bodies reveals our deepest dispositions and often expresses our location within life's various fields (Shilling, 1991). As suggested above (6.1) locational fields differ across contexts. Some are further from material or financial want than others, but all are governed by capitalism. As such, the opportunities for gaining physical capital are unequal. Its initial accumulation requires an investment in time and economic capital (Shilling 1991). It is class dependent. In this thesis, the concept of physical capital is used to make sense of changes in physicality occurring in participants due to exercise, and more importantly, to explore the role of the body in the production of habitus and the ways in which it may serve to mediate between social structures and individual action.

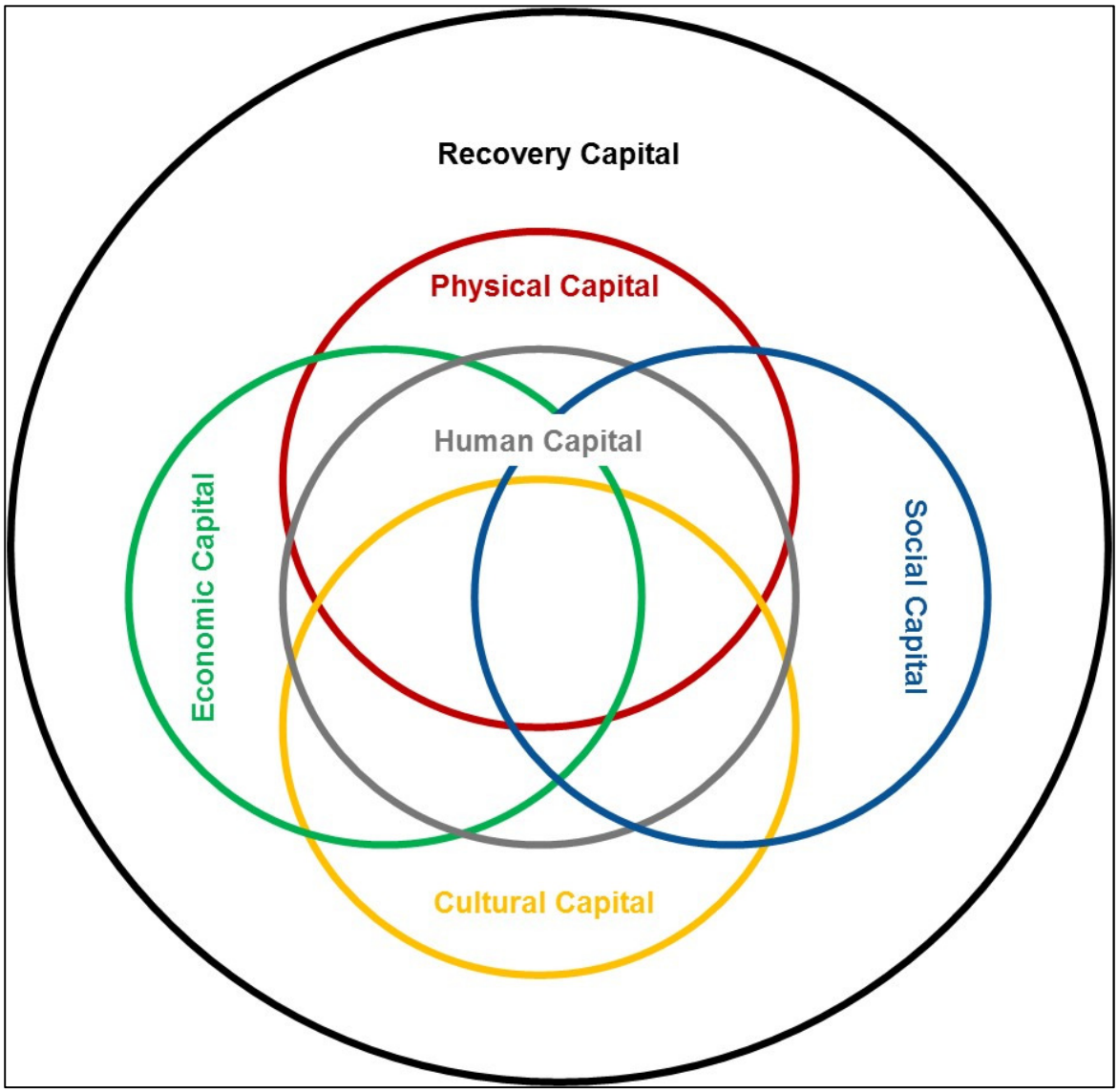
In Cloud and Granfield's (2009) updated recovery capital model physical capital is used as an umbrella term covering the material assets which originate from and can be readily converted back to economic capital. I argue here that these material assets should remain delegated as economic capital. There are three reasons for this. 1: Cloud and Granfield's (2009) conceptualisation can easily be subsumed within the existing forms of Bourdieusian capital. Indeed '[one] of the key qualities of Bourdieu's theoretical tools […] is that they are kept to a minimum […] and are not to be added to (Grenfell 2010: 18). 2: Shilling's (1991) definition of physical capital clearly highlights why it should be seen as separate to economics and as such is a more useful tool. 3: Shilling's (1991) definition covers physicality, ergo it is far more relevant given the topic of this thesis. Section 6.1 opened with a Bourdieu quote describing social, cultural and economic capital as "aces in the game of life". In the model I propose here, physical capital is the fourth suit and final ace in this game and effective recovery management entails developing one's gamesmanship.

## 5.3 The Sociological Imagination: Summary and Conclusion

In this chapter, my sociological imagination; the theoretical lens through which I explored emergent interview themes, has been outlined. The structure action dualism was explored and the work of Bourdieu highlighted as a theoretical model of practice which recognises the explanatory power of both sources of human action. Habitus, field and Bourdieu's original conceptualisation of capital was discussed. This provided the foundation for an exploration of Cloud and Granfield's (2009) work on recovery capital. After one important modification, this recovery specific model of understanding has been selected to provide the conceptual backbone of this thesis. Cloud and Granfield's (2009) notion of physical capital as encompassing assets such as property which can easily be converted into economic capital has been removed from the model used here. Rather, the work of Shilling (1991) has been used to re-conceptualise physical capital as an embodied form of capital which allows the body itself to become a source of human, cultural and social capital. This conceptualisation of the body as a resource allows for a model of understanding (see *Figure 4*) which is specific to PE as well as to recovery. The key role of human capital in the formation of recovery capital, and the argument that human capital encompasses reflexivity, mental toughness, exercise mental toughness and command of the language of recovery has been made.

What we have here then is a collection of theoretical tools which I use to shed light upon emergent interview themes. It is important to note that, due to the unstructured and organic nature of this investigation, as is often the case, data arises which does not fit neatly into this model. During the analysis I draw upon other concepts and theories as and when they are required. The model outlined here does not represent a structure so rigid as to ignore observations which are not a good fit. Note that in *figure 4,* recovery capital is depicted as being made up of cultural, social, economic, human and physical capital. Note also the overlap between each of these. This reflects the notion of recovery encompassing biopsychosocial development beyond abstinence and the positive impact an increase in, for example physical capital may have upon cultural, social, economic and human capital stocks.

*Figure 4: The Updated Recovery Capital Model*



# Chapter 6: Methodology Introduction

Research which specifically investigates possible relationships between PE and treatment outcomes has been explored in detail, a conceptual model has been outlined and the logic underpinning the decision to use qualitative methodology for this investigation has been discussed. Assessing habitus change and the subjective experiences which underpin it requires the type of ethnographic insight gained by Bourgois (2003), Bourgois and Schonberg (2009) and Contreras (2013). Their findings, described in section 5.1, had depth and a level of understanding which is unattainable through positivist means. Social phenomena cannot be understood outside the specific time and setting in which they occur (Giddens, 1984). This is why the opinions and experiential knowledge of those actually living through such phenomena is of high explanatory value. Recognising this fact, Burling et al (1992), Neale et al (2012) and Landale and Roderick (2014) produced the most useful and insightful of the investigations covered in Chapter 3.

In this chapter, the Research Setting Section (6.1) describes my relationship to the investigation and details the practicalities of designing an intervention which remains in alignment with core Phoenix Futures (PF) values (see Section 2.1 for breakdown of PF ethos). This is followed by an intervention section (6.2) in which research design specifics and timings are discussed and the challenges of adapting to best fit stakeholder and service user requirements are introduced. In Section 6.3, I develop this discussion and outline other practical issues including data management (recording, protection, storage), participant attrition and contingency management. My sampling approach is then identified (6.4) and my pragmatic approach to methodology outlined (6.5). In Section 6.6 I detail my ethnographic interview and observation methods. In the ethics section (6.7) the possible physical and psychological risks and benefits of participation are discussed in detail. This chapter ends with an analysis section (6.8) highlighting the key methodological concepts pertaining to thematic analysis and a discussion of how convergence is be employed to draw the different forms of data produced in this investigation together.

## 6.1 Research Setting

This project represents an amalgamation of two of the most important areas in my life; my research area of drug use and my passion for PE (particularly strength sports). I left compulsory education with one GCSE (a D in Resistant Materials), an undiagnosed learning difficulty and a chip on my shoulder. My journey back into education has been an unusual one, but I attribute my relative success to two things; writing about and researching in an area about which I am passionate and using PE as my "anchor point". The courage, discipline, and commitment which I have developed over years of training punctuated by competition are, for me, directly applicable outside the gym environment. In short, training has forged my habitus and developed within me a sense of mindfulness (see Section 6.3) which has been a driving force behind my relative success in other areas of life. PE has been an emancipatory force in my life and it is my firm belief that it could do the same for others. The increased measures of subjective wellbeing; self-perception, esteem (Palmer et al., 1988), internal locus of control (Ermalinski et al., 1997), self-cathexis (Gary et al., 1972) and decreases in co-morbid conditions associated with addiction, anxiety, depression and social phobia (Frankel et al., 1974; Palmer et al., 1988; Palmer et al.,1995; Mamen et al., 2011) outlined in Section 3.3.4 constitute empirical validation for this assumption.

This is not the first time that I have facilitated exercise programmes for PF residents, whose desire to take part in PE constituted a recurring theme during the two years I spent working for PF (2010-2012). With the agreement of service managers and the assistance of collaborators at Sport Hallam (SpH), weekly circuit classes were run for residents (participants) and staff (practitioners) during this period. Positive feedback was received from all parties concerned but, for a variety of reasons, including my leaving PF, these initial classes ground to a halt.

It is important to recognise that my time spent working for PF and the relative success of the early circuit classes provides the context for this investigation. I remained affiliated with PF when my employment there ceased, and this project was formulated specifically with its residents in mind. During my 18 month search for project funding, contact with the PF management team was maintained to allow discussion concerning research design particulars.

Ensuring a complementary relationship between my research aims and the core philosophy of PF (see Section 2.1) was of primary importance during this project's inception. Essentially, this entailed balancing the PF agenda with that of Sheffield University's (SU) School of Health and Related Research (ScHARR) doctoral program and that of Sport Hallam (SpH) and Sport Sheffield (SpS) who agreed to provide facilities and expertise.

Central to the TC model (see Section 2.1) is the desire to empower people to take responsibility for their lives (Manning, 1989; Kennard, 2004) via emersion in a supportive environment with formal treatment programs. This is recognised at PF through the development of confidence, motivation and employment skills of service users alongside the core aim of abstinence: "Clean living" as opposed to simply "being clean". The main therapeutic tool here is an inclusive community/peer group (Manning, 1989) with progression being evidenced via (for example) adaptability to job changes, setting examples to others, and higher and more stable levels of self-esteem (PF, 2012).

The "democratic" nature of addiction is reflected in PF resident demographics. Service users come from every walk of life and range across class, gender, ethnicity, age and physicality. In keeping with PF's inclusive ethos, it is essential that PE is accessible across these strata. My decision to use circuit classes to (re)introduce PE into the weekly routine of residents was based upon their inclusive nature (SpS, 2014) and the success of previous classes mentioned above. SpS define their circuit classes as an integral part of the "group fitness programme" which functions to allow beginners to improve fitness levels while allowing intermediate exercisers the freedom to set their own pace (SpS, 2014).

## 6.2 Intervention

SpS and SpH should be highlighted as stakeholders in this project for providing twice weekly circuit classes and 6 month gym memberships respectively. It was important to me that the option to exercise became a normal part of the PF service repertoire. As such, one of my first goals upon attaining funding was to introduce circuit classes. The classes began on 25/05/2014. Participation in classes was entirely voluntary; they were open to any resident who had progressed to the primary stage of their recovery (see Section 2.1). After consultation with PF staff it was initially agreed that participants should not receive their gym

membership until they had completed a minimum of one class a week for twelve weeks consecutively. This was, however, an unrealistic goal (see Section 7.3) and was soon revised to eight. By 15/4/2016 weekly yoga classes were also offered, providing further opportunity to qualify for a gym membership (see Sections 11.1 and 11.6 for full discussion). *Appendix 2* contains an "8 stamp loyalty card" used to track class participation. Upon completion of the loyalty card, residents attended a gym induction at SpH which included the formation of exercise programmes tailored to individual fitness goals.

Data gathering began on10/10/2014, once ethical approval was attained. It is important to emphasise that my intention was for PE to become a permanent part of the PF service package. As such classes operated before, during and after data gathering.

## 6.3 Practical Considerations

This intervention took place at the intersection of service user, service provider, academia and sports facility. At the point where these different sets of values and norms met, things needed to be flexible in order to work. Significant changes were made to the methods I originally proposed. My initial plan was to take objective measurements of physicality as well as gather qualitative data. Ethnographic data was always to be the backbone of this piece but converging data illustrating changes in maximal heart rate (via submaximal testing) and strength (via 1 min sit up and push up activities) over time with participants' own thoughts and feelings would provide as holistic an understanding of interplay between physical and psychosocial outcomes as possible. Quantitative data was to be collected prior to participants partaking in circuit classes (data collection point 1), upon completion of 12 consecutive weeks of at least one class a week (data collection point 2), and after 8 weeks of having a gym membership (data collection point 3). This would allow the tracking of any changes in participant physicality. The interview schedule was to mirror this time frame.

The reason I rapidly revised this approach was that I did not, despite multiple attempts, ever manage to carry out any tests upon a resident who then actually went on to attend any circuits let alone 12 consecutive ones! There were a few reasons for this, the first being that residents enter PF on an *ad hoc* basis. As such they do not move up from welcome house to primary stage (see Section 2.1) in waves. The main issue however was that there was no "right time" to come in and test a group. The residents I did test often ended up leaving rehab or, to use

the slang from PF, *"walking down the drive"* before doing any circuit classes. Twelve consecutive weeks of attendance was, with hindsight, a completely unrealistic expectation. When I discussed this issue with friends and colleagues they would nod knowingly, assuming recovering addicts to be a difficult group to work with. Adherence is an issue endemic in PE research in general (Donnelly 2003) but the difficult people I dealt with during this project were, without exception, cheerful robotic university bureaucrats of the type described in Mill's (1951) somewhat dystopian theoretical works. The service users involved in this thesis were not difficult at all but the demands of fitting this intervention around the timetable of PF and that of SpS was very difficult. PF residents would miss classes through no fault of their own (timetable clashes at PF, family visits, doctors' appointments etc.) or through *"sanctions"* for bad behaviour resulting in a ban from leaving the house. A person could, in practice, complete their PF program without managing so many classes consecutively. Quantitative data would have provided a nice addition to this thesis; "a cherry on the top" but, for the reasons highlighted throughout Chapter 3 and summarised above (Chapter 6), ethnographic data on the meaning behind possible links between PE is of great value yet paradoxically, it is what is lacking from the current body of knowledge.

Interview and observation data (see Section 7.6 for details) was stored on an encrypted laptop to which only I have access, provided by SH to protect data related to my teaching. Interview and observational notes were penned during data analysis and then digitised and shredded within 24 hours.

Participant attrition represents a confounding variable across the majority of research into SUD (Crits-Cristoph and Siqueland, 1996; Simpson et al, 1997). Contingency management (CM), defined here as procedures 'that provide incentives for specific behaviours' (Petry et al., 2001, p33) is highlighted by Katz et al (2001) and Silverman et al (2004) as a viable technique to counter this issue.

The eight week gym memberships functioned in two ways. The first was to empower participants to take control and shape their own fitness programs; the second was as a form of CM to minimise attrition rates. In essence, the gym membership served as a reward for completing a set amount of circuit classes. It was my intention that the incentive of gym memberships coupled with the fact that classes are becoming a normalised aspect of the PF care package would mediate the high attrition rates typical of work in this field.

## 6.4 Sampling

My sampling technique was purposive. I made circuit, and later, yoga classes available, and then interviewed those who attended them and had agreed to take part in data collection. As suggested above (7.3), PF and specifically the Sheffield residential rehabilitation centre was chosen as the site of this investigation due to my ongoing affiliations. Participation in classes was entirely voluntary and open to all PF residents who had completed the first 5 weeks (welcome house stage) of their recovery (see Section 2.1). At maximum capacity PF has 35 residents. Up to 10 of these may be part of welcome house at any one time. As such the maximum participation for circuit classes did not exceed 25.

In keeping with inclusivity, residents who participated in classes did not have to participate in data gathering. Recruitment here was entirely voluntary. I requested volunteers for interviewing once ethical approval was gained. Interview data was gathered from 23 residents. This amount of data allowed adequate depth of analysis. Follow up interviews were carried out when key points required clarification allowing iteration; further "saturation" (Glaser and Strauss, 1967) of the intervention participation experience. A term commonly associated with the 'continuous meaning-making and progressive focusing' of data analysis (Srivastava & Hopwood, 2009, p76), iteration in this instance refers to data collection (Polkinghorne, 2005). Initial interviews allowed the construction of preliminary descriptions of experience while follow up interviews facilitated the expansion or challenge of them (Polkinghorne, 2005). I also had access to the wider recovery population through word of mouth and some social media advertising. During data gathering, having heard it was free to them, people in recovery would drop by to attend Strong Saturdays. Some stayed and some did not. Kevin and Craig had both recently left PF having completed their program when I first met them and they became long term Strong Saturday athletes and interviewees.

Generalisation is defined as 'the ability of a statistical model to say something beyond the set of observations that spawned it' (Field, 2011 p786). The weak generalisability of the data gleaned from this investigation is a reflection of a qualitative methodology combined with a relatively small sample of service users attained via a purposive sampling technique. The pragmatic methodological approach, however, assumes first, that such data can have an abductive relationship with other forms of data, and second, that inferences from findings can

and should be made outside the specific research context. Issues of transferability and the logic behind abductive reasoning are fully explained in the next section.

## 6.5 A Pragmatically Informed approach to research

It is a mistake to view research methods as dichotomous (Johnson and Onwuegbuzie, 2004; Morgan, 2007; Bergman, 2011). This point was made throughout Chapter 3 and revisited in Chapters 4 and 5. Doing so entails the acceptance of purist perspectives in which researchers assert that their paradigm represents the most effective theory base and methodological approaches for studying societal phenomena in the same way that Lynch et al (2012); Zschucke et al (2012) and Greer et al (2012) do-by discounting qualitative data from meta-analysis or systematic review. This metaphysical model which polarises qualitative and quantitative research designs and the associated epistemological and ontological positions is useful for conceptualisation, and allows for a degree of theoretical justification for mixed methodologists drawing from both sides of the "paradigm wars". However the point made in Section 3.3.2, regarding Bonnel et al's (2012) work rings true. Attempting to combine realist principles with randomised controlled studies which have an inherent epistemological bias towards quantification does not constitute equality in value between qualitative and quantitative data. It is however a central assumption of my research that it is still possible and beneficial to move beyond dichotomous research models via the pragmatic approach advocated by Bergman (2011), Morgan (2007), Johnson and Onwuegbuzie (2004) and Creswell et al (2003). This is outlined below.

The data produced in this investigation are predominantly qualitative. As explained above (7.3), my intention was to converge this data with objective measurements of physicality taken at before, during and after stages of each participants' involvement in PE. This proved unrealistic but there has been, as part and parcel of the coaching and exercise programing which has taken place during and alongside this investigation (see Chapter 11 for full discussion), a significant amount of quantitative data produced. Sean for example started circuits whilst on crutches and recovering from a broken ankle having just finished his detox program. He was interviewed as he transitioned into having his gym membership. A simple beginners training program was written for him by one of SpH's strength and conditioning

coaches. After a period of self-motivated training Sean showed interest in strength-specific training. I coach Sheffield Hallam's powerlifting and strongman teams and invited Sean to train with us. He was the first of many PF residents to join our group, indeed our "Strong Saturdays" community ended up playing an important role in the recovery capital development of a number of participants (see Sections 11.6-7 for full discussion). From joining us until qualifying as a personal trainer (see Section 11.7), Sean's exercise programing was carried out either by myself or fellow coach Paul. We tracked his progress, as we do for all of our athletes. This process provides detailed measurements of increases in strength and fitness and will from this stage onwards be referred to as programming data. Essentially, I ended up with a substantial amount of quantitative data pertaining to Sean's physical development. This pattern was repeated for Kris, James, Kevin and Anthony, all of whom, as part of joining the Strong Saturday community, were provided with programs and logged their own programming data. As they discussed their PE experiences in follow up interviews, I was able to use this unexpected quantitative data in a complementary fashion. In my third analysis chapter exploring the field of exercise (Chapter 11) it is converged with interview and observation findings in much the same way as I intended to with the originally proposed measurements of physicality. My pragmatic approach to research, my not valuing one type of data over another and readiness to recognise complementary and transferable findings, allowed me to adapt my methodology in order to suit these shifting practicalities of real world research.

This is pragmatism, an approach in which laws and theories are seen as 'principles which guide our actions, rather than literal descriptions of the world' (Jary and Jary, 2000, p.482). Pragmatism recognises the relevance of epistemology while rejecting the 'top down privileging of ontological assumptions in the metaphysical paradigm as simply too narrow an approach to issues in the philosophy of knowledge' (Morgan, 2007, p.68).

In line with the work of Morgan (2007), my argument is that the rigorous conformity to ontological assumptions which typify the metaphysical paradigm can be detrimental to the quality of research data. This is particularly true if research questions are formulated to fit ontological assumptions rather than selected on their suitability to the specific research context (see Section 3.3.2).

The polarisation of qualitative and quantitative research strategies has developed diametrically opposed research cultures; 'One professing the superiority of deep rich observational data and the other, the virtues of hard generalisable … data' (Sieber, 1973, p.1335). The goal of pragmatic and mixed methodologies is to draw on the strengths while minimising the weaknesses of these approaches (Johnson and Onwuegbuzie, 2004). Morgan (2007) specifies how this can be achieved the concepts highlighted on *Table 9*.

***Table 9: A Pragmatic Alternative to the Key Issues in Social Science Research Methodology***

*Adapted from Morgan (2007, p.71)*

| | QUALITATIVE APPROACH | QUANTITATIVE APPROACH | PRAGMATIC APPROACH |
|---|---|---|---|
| **Connection of theory and data** | Induction | Deduction | Abduction |
| **Relationship to research process** | Subjectivity | Objectivity | Inter-subjectivity |
| **Inference from data** | Context | Generality | Transferability |

Abductive reasoning 'moves back and forth between induction and deduction - first converting observations into theories and then assessing those theories through action' (Morgan, 2007, p.71). A common application is to use findings from inductive research to inform goals for deductive work and vice versa (Creswell and Stick, 2006). I thematically analysed participant accounts and my own observations, combined these with exercise programing information as and where possible and then converged these findings with the themes highlighted in relevant literature via abductive reasoning.

The term intersubjectivity refers to 'shared experiences between people' (Jary and Jary 2000, p.314). Central to gaining the emic perspective, this concept highlights how the meanings of an individual's lifeworld can be grasped by others with whom experience is shared (Cheal, 2005). I took part in a lot of exercise with participants during the course of this investigation but I did not foresee how important the Strong Saturdays community was to become. This is explained in detail in Section 11.6 but here, suffice to say that, just as I entered the lifeworld of PF residents, both as a worker in the past and as a researcher now, those participants who chose to pursue strength training specifically entered my lifeworld as a strength athlete and coach. They became part of my community. Together we built a third place and shared experiences.

Morgan (2007) proposes the transcending of the context specific or generalisable knowledge dualism via the use of transferability. This argument is based upon two central assumptions; that 'statistical generalisation does not have to be the only form of generalisation suited for all

situations' (Smaling, 2003, p.52), and that no data is so context specific that it has no application beyond its research setting. Transferability focuses on factors which effect the degree to which knowledge can be taken from one context and applied to other settings as an "empirical" issue (Guba & Lincoln, 1985). Smaling (2003, p.60) argues that this entails researchers conveying their findings in a reflexive and transparent manner to enable a reader with 'adequate knowledge of the researched situation' to highlight 'sufficient relevant similarities that make it plausible that the research conclusions should also hold, in other situation[s]'. This pragmatic ideal which focuses on what people can do with the knowledge they or others produce, rather than the theory which underpins it (Morgan, 2007), forms the basis for the methodological approach employed here.

To summarise; exercise programming information and individual achievements relating to strength development have been drawn upon when available. Through abduction, this data was converged with interview and observational data. The interviews provided an emic understanding of the subjective participant experience while my own observations complemented this data and detail the developing of rapport.

## 6.6 Methods: Interviews and Observations

As described in Section 6.4, I interviewed 23 volunteers. I strived to gain the emic (native or insider) perspective (Fetterman, 1989) from them regarding PE. To this end, observations (of classes, gym inductions and training sessions) also took place on a bi weekly basis. The psychosocial impacts of participation highlighted from this data were converged with programming data and the key themes from the literature review (see Section 7.8 for full discussion of convergence). This section outlines my interview and observation technique focusing on the ethnographic concepts of reflexivity, positionality and rapport.

My interview technique (Fitzgerald, 2012) is based upon the semi-structured conversational/informal model. I word questions reflexively. This spontaneity allows the development of conversational flow while maintaining focus upon the topic in question (Patton, 1987). Past engagement with physical sport and/or exercise (PSAE) prior to and during addiction was covered, while the "organic" nature of conversation allowed for participants to introduce topics they felt were of importance to their rehabilitation. *Appendix 6* contains a list of the general questions asked in each interview. Again, emphasis should be

placed on the fact that these questions were not set in stone and that I remained free to word them in whatever manner best fitted conversational flow.

The key here is that in my interviews I did not seek to elicit choices between alternative answers to preformed questions, but rather to emancipate the interviewee to discuss what they deemed to be important (Lofland, 1971). Artificial responses typical of laboratory conditions were avoided in favour of utilising my own senses as ‘sensitive and perceptive data gathering tools’ (Fetterman, 1989, p.41). This aids the avoidance of any underlying tacit message that participants are being tested; that a "correct" answer exists (Johnston et al, 1995).

This type of interview is ethnographic in nature (Westby, 1990). Ethnography is defined as ‘the art and science of describing a group or culture’ (Fetterman, 1989, p.11) and was applied here as an "umbrella term" covering interviews and observations. A successful ethnography allows social action in one world to be understood by outsider cultures (Agar, 1986). This understanding occurs via the emic perspective. The value of ethnographic data depends upon emic validity (Whitehead, 2005) and the researchers’ ability to understand and present it coherently. This entailed a reflexivity on my part which was not dissimilar from that discussed in Section 6.2; behaviour monitoring with thought given to how one may act in the future. Shared experiences from instances of participation and observation facilitated my understanding, while my experience working and researching (Fitzgerald, 2012) at PF allowed me to be sensitive and imaginative while probing where necessary to "round out" the general accounts of interviewees (Lofland, 1971).

Minimisation of bias via preconceived ethnocentric concepts characterises ethnography (Johnston et al., 1995; Spradley, 1979). This required reflexivity upon my positionality. In my previous SUD research (Fitzgerald, 2012) this has involved reflexive effort to place addiction and associated self-destructive and deviant behaviours in a structural (cultural, economic and historical) context (refer back to Chapter 6 for full discussion). Understanding one's positionality requires recognition that our "historicity" informs preconceived bias (Gadamer 1976; Geanellos, 1999) and that achieving an emic perspective entails distanciation from these to achieve an "open mind" (Alvesson and Skoldberg, 2009). Of relevance to the current investigation is my historicity regarding PSAE. General intervention inclusivity and interview rapport development requires my recognising that, as an individual with a grain of mastery within the gym environment, exercising humility gained through

trying PSAE which is outside of my comfort zone helps minimalise any negative impact my presence may have, particularly for those for whom PE is a new experience. By way of clarification, I am a strength athlete who is comfortable moving heavy objects, typically for a low number of repetitions. I do however seek out other sporting experiences which are outside this rather narrow specialist field. My experiences in mountain marathons, playing squash, mixed martial arts and climbing (for example) have taught me humility because they take me outside my comfort zone. In short I am not good at these sports! Exercising humility gained via such activities and my participating as "part of the group" helps define me as less of an outsider.

Investigator-participant rapport dictates emic validity levels. Good rapport; a sense of trust and understanding between parties is essential to carrying out a successful ethnography (Merton et al, 1956; Spradley, 1979; Patton, 1980; Stewart and Cash, 1988; Fetterman, 1989; Westby, 1990; Johnston et al, 1995). Rapport development began with my attending PF evening meetings, (re)introducing myself and my work and participating in circuit classes. Making repeated explanations, restating what informants say, and asking for use rather than meaning represent three principles which facilitate the development of rapport within the interview context (Spradley, 1979). Repeated explanations for interviews and observations were made. My presence as part of the PF community ensured that residents were aware of the PE options available to them. Research design specifics were restated whenever I requested volunteers for data gathering (*Appendix 9* contains a copy of the participant information sheet and consent form). The purpose of interviews and observations was also verbally restated immediately prior to data gathering.

My repeating back of participant answers during interviews served to demonstrate interest and convey understanding (Westby, 1990). It is important to note that 'restating is not interpreting - a process in which the interviewer states in different words, what the other person has said' (Westby, 1990, p.106). The key to using the respondents' familiar language lies in the researcher's ability to understand the specialist terminologies (*Appendix 11* consists of a glossary of specialist terms from each on the fields). Personally, this understanding is based upon years of working and researching in the sphere of drug use/SUD. Westby (1990) emphasises cultivating this tacit sense of interest and understanding between interviewer and participant to establish effective communicative interactions. Stewart and Cash's (1988)

ethnographic interview model suggests these interactions occur on three levels as highlighted in *Table 10*.

***Table 10: Levels of Communication***

*Information consolidated from Stewart and Cash (1998) and Westby (1990)*

| CONVERSATIONAL LEVEL | RELATIONAL DISTANCE | FREQUENCY | QUESTION TYPE |
|---|---|---|---|
| Level 1 | Distant | High | Safe - non threatening |
| Level 2 | Moderate | Moderate | Intimate - low threat - deals with specific thoughts and feelings |
| Level 3 | Close | Low | Highly intimate - may include information that is not directly related to interview questions |

The closer the relational distance the more intimate the conversation. The research aim of gaining emic perspectives upon the intervention requires rapport characterised by my ability to make the transition to the third level of conversation through being a tactful listener. Taking on this role can be aided by a certain level of self-disclosure (Oakley, 1981; Daly, 1992; Reinharz, 1992). Here, reciprocity informs a model of qualitative research which is 'run on the principles of fair exchange' (Daly, 1992, p.5). It is assumed that this sharing process helps form an understanding relationship between interviewer and participant and helps cultivate a discourse in which each party feels more comfortable talking about difficult/traumatic experiences (Acker, 1991; Daly, 1992; Dickson-Swift et al, 2007). My shared experience from classes and my professional and personal experiences relating to drug use and PE entail experiences and lessons which I was able to draw on where necessary.

## 6.7 Ethical Considerations

The most complex issues under consideration to ensure the ethical viability of this investigation are:

1. Are there any possible negative consequences of participation?
2. What is the potential for participants to benefit from the research?
3. How can I ensure informed consent and minimize coercion?

This section entails discussion of these key questions along with the standard considerations of anonymity and participants' rights.

Of paramount importance was the management of physical risk associated with PE. Residents who wished to attend circuit classes completed the PAR-Q+ 2013 (see *Appendix 10*), the primary function of which was to highlight individuals for whom exercise was contraindicated. All PF residents are registered with a local GP. Consultations were set up in two instances where this was the case. In each instance the doctor advised that light exercise was permissable and the circuit class was suitably adapted. All classes were run by qualified practitioners whose remit was to provide an inclusive activity in which no one was pressured to push themselves beyond what they felt capable of (this is verbally stated at the beginning of each class). SpS and SpH practitioners are required to maintain membership on the Register of Exercise Professionals (2014) which ensures adherence to the UK health and fitness industry agreed national occupational standards. Participants who engaged with the circuit class program and were given SpH gym memberships partook in an induction which functioned to ensure the safe usage of PE equipment.

Whilst physical safety was of paramount importance, attention should also be drawn to the positive physical outcomes detailed in this research. My assumption that exercise would be complementary to the PF model and facilitate the accumulation of recovery capital was strongly supported (discussed throughout Chapter 9).

The risk of revealing information which participants might find distressing or damaging to self-esteem during the interview stage of the investigation represented a key ethical consideration. Interviews can be intense experiences particularly if they relate to stressful

topics (Morse and Field 1995). Some of the interviews were included in this category due to the chaos and destruction that accompanies addiction (McIntosh and McKeganey, 2002). I relied on my own reflexivity (discussed at length in Section 7.5) to manage the possible negative ramifications of potentially stressful interview topics. For Dickson-Swift et al (2007, p.3) this entails carrying out dynamic assessments gauging the research impact upon participants. In my previous capacity as a member of staff at PF, this "reflexive monitoring" (Fetterman, 1989) took place on a regular basis in group therapy sessions. The crux of the matter here is that the difficulties of maintaining boundaries, developing rapport, reflexivity and management of emotions become compounded when researching sensitive or taboo subjects (Dickson-Swift et al, 2007). Attention should be drawn to the danger of participants disclosing information they later regret (Kvale, 1996). The seductive openness and intimacy of the interview (Kvale, 1996) combined with a lack of people who are willing to listen in the lives of interviewees (Patai, 1991) can constitute possible reasons for such disclosure. This raises the concern that qualitative sampling could be construed as somewhat predatory in that those selected may be participating due to the want of a forum to voice their opinions or experiences. This danger of coercion is balanced against the fact that the act of listening to participant stories can validate their experiences (Dickson-Swift et al, 2007) while facilitating reflection. As highlighted in Section 5.2, reflection characterises mindfulness. As such this process should be understood as a potential positive aspect of interview participation. To clarify: these interviews can be seen as contributing to the work that residents are required to do “upon themselves”. PF focuses upon the lifeworlds/stories of individual residents in an attempt to induce a reflective state (mindfulness) in which residents can address aspects of their norms and value systems which may have contributed to their addiction and unprocessed trauma suffered in the past. This approach to resident led therapy aims to change behaviour through realization which comes from in-depth discussions often focused on highly sensitive topics including abuse and illegal activity. The interviews carried out here share many of these characteristics. Multiple participants reported finding the interviews to be therapeutic.

As discussed in the last section (6.6), informed consent was requested from each participant when they agreed to be interviewed (see *Appendix 9* for participant information and consent forms). The participants' right to withdraw was restated at the end of each interview. I asked for verbal permission to use *Images 1-4* and the photos for Sean's poster (see *Appendix 13*) as they were taken and again during the final stages of thesis write-up. Conversely, anonymity

goes against the grain with the "loud and proud" nature of the modern day recovery movement. Many participants expressed disappointment that this work was to be anonymised.

## 6.8 Data Analysis

Thematic analysis is defined here as ‘a method for identifying, analysing and reporting patterns (themes) within data’ which is recognised for its flexibility (Braun and Clarke, 2006, p79). In my past research (Fitzgerald, 2012) I have piloted the methods employed here within the field of drug use. Although the research aims of this investigation are different from those before, thematic analysis, specifically the notion of thematic convergence, remains the crux of my approach due to its flexibility. Initially, thematic analysis was employed in its traditional form as a method to draw themes from interview and observational data (Braun and Clarke, 2006). As with my interview methodology (see Section 6.6), a reflexive understanding of my own positionality and historicity is required to avoid misinterpretation via historically influenced prejudice (Geanellos, 1999). Meaning was developed from participant accounts via a form of iteration similar to that described in Section 6.4 but characterised by repeated engagement with data (Geanellos, 1999, Srivastava and Hopwood, 2009). I then converged these emergent themes with programming data where possible and themes from the literature review to produce a 'coherent whole' (Onwuegbuzie and Leech, 2006) to which theoretical concepts could be applied. In plain English, each interview transcript and field note was read and coded using felt pens. Each time a new piece of data was coded and a new theme emerged I would re-read everything which came before it to see if the new themes applied there. *Figure 5* at the opening of Part 2 represents the end of this process

This process is laid out and discussed in detail across the next three chapters (7-9). Each opens with a figure depicting the themes discussed therein and manner in which they relate to each other. This diagram and the manner in which the themes are presented was created through the process of iteration described above.

The key points which emerged are synthesised into a set of conclusions in the final Chapter (10) where a statement regarding the suitability and practical application of PE as an adjunct to the PF care package is made.

# Part 2

> *"To subject to scrutiny the mechanisms which render life painful, even untenable, is not to neutralize them; to bring to light contradictions is not to resolve them. But, as sceptical as one might be about the efficacy of the sociological message, we cannot dismiss the effect it can have by allowing sufferers to discover the possible social causes of their suffering and, thus, to be relieved of blame"* (Bourdieu, 1999, p629).

Part 2 of this thesis comprises an analysis: the application of the sociological imagination outlined in Chapter 5 on all the data I have gathered. Appendix 12 consists of a participant profile for each interviewee, providing demographical contextual information and a brief 'pen portrait' detailing their journey through the fields of chaos, recovery and exercise. The profiles were created to provide a point of reference for myself and readers that can be referred back to so that the snippets of information provided in the following three chapters can be situated in each individual's biography and so that the overlaps between individual journeys (those of the Strong Saturday community for example) are clear.

This is followed by a visual representation of the interview themes (*figure 5*) which highlights important collective and individual topics that have emerged from the interview data. A CD containing interview transcripts is available on request.

The analysis itself comprises three layers of data. The first of these was gleaned from interviews. Recording interviews has allowed me to use participants' precise wording and present conversations as they occurred. I have used ellipsis (…) to highlight where quotes are abridged to remove long or confusing dialogue; overly long sentences with no clear beginning, middle or end and repetitive slang such as "*you know what I mean*". I have presented in this way because, 'although not distracting [to me] in real conversation, too many of them on paper may distract readers from a dialogue's meaning' (Contreras 2013, p14). Aside from this, whereever possible, participant voices are presented verbatim. This includes the use of colloquialisms and specialist language. I define these terms as and when they arise using footnotes and collate them together in Appendix 11. All direct quotes are presented in italics and bracketed in quotation marks

The second layer of data comes from my own observations. These have taken place across multiple settings from my participation in circuit or yoga classes and evening meetings at the rehabilitation centre to the "Strong Saturday" sessions I have been coaching, to conversations had over a coffee that have been regurgitated into field notes at a later date. Aside from the aforementioned ellipsis and abridging, I have made no attempt to alter and sanitise language or discursive mannerisms. Making this decision to preserve the richness of my data has allowed me to embrace my own unique, gendered social positionality: to embrace my own habitus using linguistic patterns from fields I have occupied in the manner advocated by Dorothy Smith (1987). In Section 7.1 I discussed my positionality in terms of an unusual journey through education and the central role that strength sports have played in my life. I have spent a lot of time in the field of exercise and this is reflected in my habitus. Also, reflected in my habitus, buried beneath a layer of discursive patterns and specialist terminologies befitting a lecturer in a respected institute of higher education, are the experiences of a southern, white, working class boy who spent his late teens living in sheltered accommodation and a fair amount of time, albeit without developing an addiction, in the field of chaos. Following this, I worked through my undergraduate and master's degrees as a self-employed landscape gardener and contractor. *"Hard graft in the real world"*. I no longer feel like an imposter in the field of higher education like I did at the beginning of my lecturing career but I have, over the last eight years, developed a minute sensitivity to the socially constructed nature of reality. I now possess the language to articulate the undirected anger and frustration felt in my past. Baldwin (1963, p1) calls this 'the paradox of education … that as one begins to become conscious, one begins to examine the society in which he is being educated'. This effect is magnified for the sociologist who is given the conceptual tools of Marxist praxis (1977) and the social constructivism of Foucault's archaeology of knowledge (2012, see Chapter 4). This knowledge and my use of these critical tools reflect a further layer to my habitus. One that is reflected in my points concerning problems in how addiction is defined (see Chapter 4), the stagnation of research around PE and SUD's which is hidden behind the specialist language of science (see Section 3.6) and the discrediting of the addict opinion as a source of credible knowledge (see Chapters 4 and 5). These are serious problems. Alarm bells are ringing. The data I present in the following chapters represents my truth based upon immersion in this project and a full-blooded swing at gaining the emic perspective of my participants. I use *our* language: specialist terms born from the fields *we* have occupied. Doing so has been emancipatory for me.

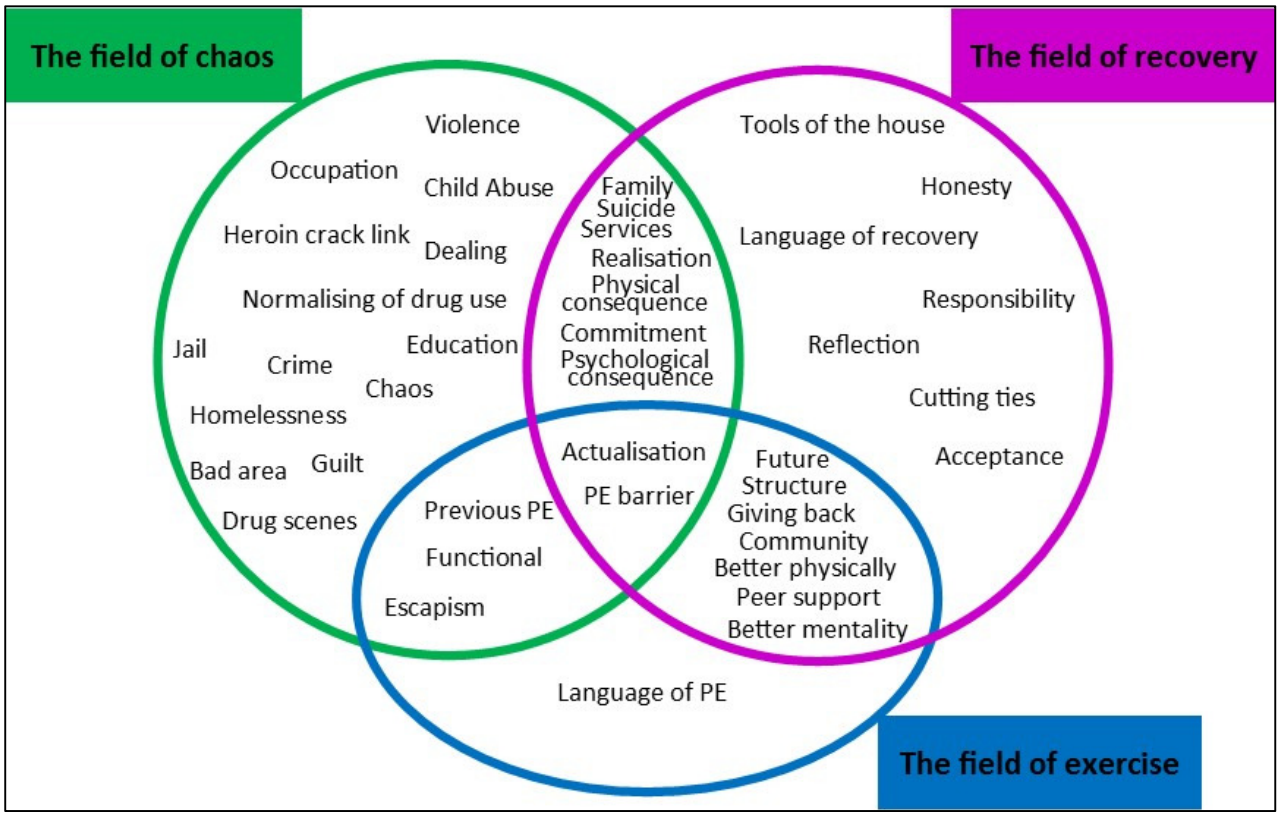
Appendix 11 consists of definitions of the three distinct sets of specialist terms used by the participants. Specialist terms emerge from discourses pertaining to particular groups and social settings. By definition, their meaning eludes outsiders (Fetterman, 1989). The first set of terms used by the participants in this investigation arose from frequently chaotic drug taking and often criminal fields. The second set of specialist terms are defined by Irving (2014) as the language of recovery. These linguistic techniques (Irving, 2014) are used by participants who have *"bought into"* or *"taken ownership of their recovery"*. Their use of this discursive practice is a key emergent theme from the field of recovery (Chapter 7).

Finally, *some* interviews are further punctuated with a third set of specialist terms which are defined here as part of the language of exercise. An interviewee can be said to be using the language of exercise when they discuss their 'exercise career' using terms pertaining to a habitus in which exercise has become important or normalised. Discursive practices of this type tend to be used by interviewees who have bought into exercise in much the same way as recovering addicts employ the language of recovery to reframe and make sense of their changing identity.

These emergent discursive practices provide an ideal way to categorise the themes highlighted in *Figure 5*. The topics focused upon in each interview tended to detail: life before rehab (in a field defined by drug abuse); life in recovery (in the field of recovery); and the experience of the exercise opportunities facilitated by this research (in the field of exercise).

It is important to note that not all interview topics fit neatly into these categories. A defining feature of ethnographies is the organic nature of the data produced. Any attempt to over operationalise such data would not be conducive to this. The spaces where the boundaries of each field overlap and the transitionary themes which occupy them depict this (refer to *Figure 5*). Categorising themes via a Venn diagram thus provides a loose structure for analytical purposes. Each of the following three chapters discusses a field and the themes (including transitionary) within are covered in a logical order. Each section within these chapters opens with a brief introduction which includes a breakdown of which themes are covered. For references purposes *figure 5* is reprinted at the beginning of each chapter.

*Figure 5: Interview Themes*




As per the aims of this thesis, of particular interest is the point at which, for some interviewees, exercise is discussed as part of the recovery process and becomes a possible vehicle for maintained abstinence in the future. This is the point at which the recovery field overlaps with the exercise field. Of relevance here is the communal nature of the exercise in which interviewees have partaken with me. The TC is a tight community characterised by firm bonds formed in intense group situations where openness and honesty are key (explored in Sections 7.1-7.5). Running this intervention has required me to spend a significant amount of time at PF facilitating activities and speaking to residents but I am, importantly, still an outsider. I have not laid my soul bare to the community in the manner that all residents have as part of their life story activity (see Section 7.4 for full discussion). However, community lies at the very core of how exercise is conceptualised in this intervention; activities are facilitated in a way which has a lot in common with Oldenburg's (1999) concept, the third space. This notion was introduced in Section 5.2 and will be explored in detail throughout Chapter 9. For now, it serves to remind the reader that the third place is a mixer, a place where people get to know each other that contributes to a sense of community. A successful third place is a core setting of informal life (Oldenburg, 1999). In my opinion, a gym environment with a positive atmosphere and strong community spirit is the perfect third

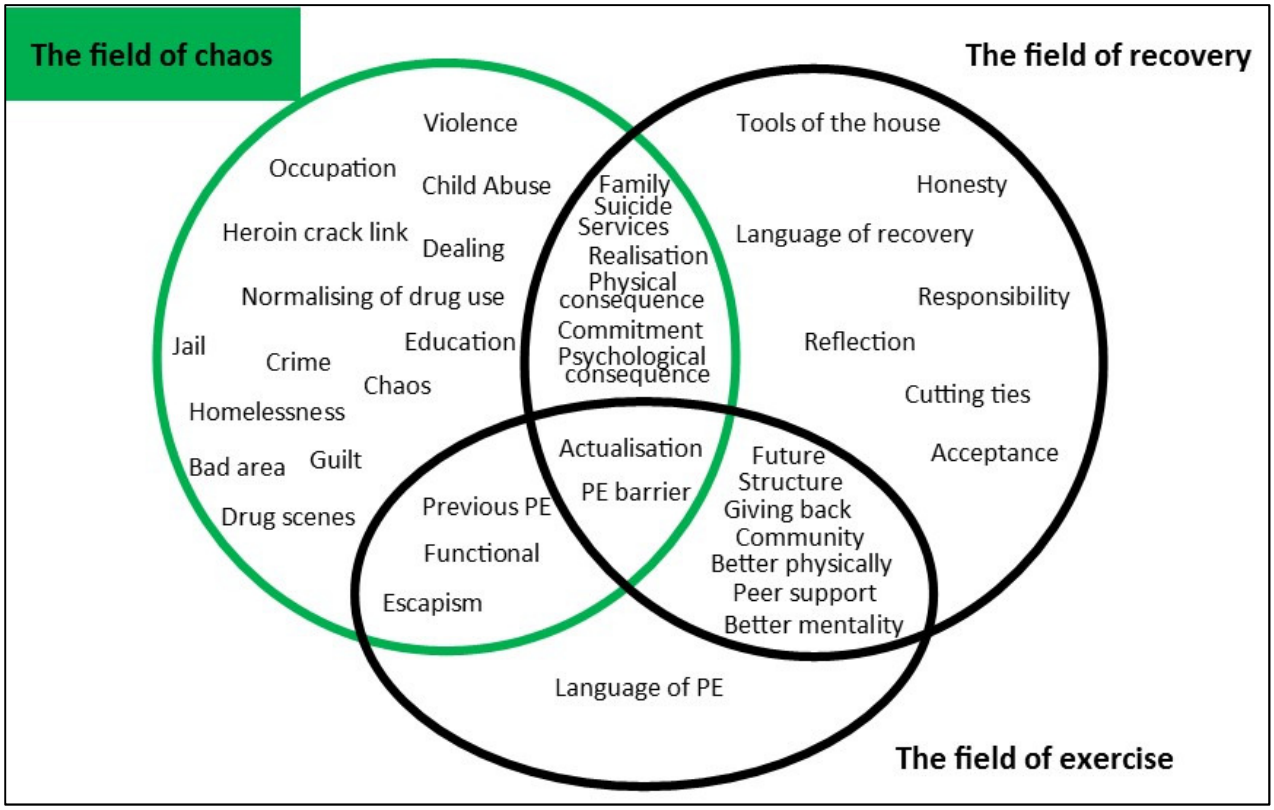
space. Sharing experiences and testing myself alongside participants in such settings has served to strengthen bonds whilst massively increasing rapport among all concerned. This is particularly the case for those who joined the Strong Saturday programme. By the end of this thesis they had been coached by elite level athletes, coached by me, coached alongside me, competed as strongmen (multiple times for some) and served as "*corner men"* for myself and other athletes. It is this rapport, coupled with reflective TC residents for whom the vast majority of a highly-structured day is spent in therapy sessions in which reflecting upon one's life is the backbone, which allowed for my direct questioning regarding drug abuse and its taboos. As covered in my previous work (Fitzgerald, 2012), TC members are often ideal interviewees due to the reflective nature of the rehabilitation program. In short, they are used to spending long periods of time in what Westby (1990) coined the third level of conversation, in which topics are highly intimate and answers deeply reflective (see Section 6.6).

# Chapter 7: The Field of Chaos: Introduction

> Kevin: "*For 10-15 years it just grabbed me. Totally and utterly. Destroyed everything."*

In this chapter, similarities in the stories of participants abusing the same primary substance are highlighted where relevant. Aside from this, I have decided not to pigeonhole my findings with reference to substance or substance type. This reflects the point made throughout Chapter 3: that once use has developed into addiction, the relevance of substance specificity declines. As highlighted in Section 6.6, the interviews detailed here were very loosely structured and informal. I had topics I wished to discuss (such as how people were experiencing the intervention) but wanted to remain free to word questions spontaneously and discuss topics which the participant deemed relevant to the conversation (see Patten 1987). Openness about the chaotic nature of addiction and individual journeys into rehabilitation was a universal theme across all interviews. My interviewer reflexivity was essential in developing rapport allowing such information to flow freely. As mentioned at the beginning of Part 2 (Chapter 8), my positionality here was key (my background, particularly my time sent working at PF), as it afforded me understanding and the ability to frame my questions in language familiar to the participant. The themes discussed here are depicted below as emerging from the green field of chaos.

*Figure 6: Interview Themes - The Field of Chaos*




## 7.1: Child abuse, the family, and normalised/functional drug use

John: *"It helped me shut down every problem that I've ever had."*

The majority of the interviews detailed here opened with my asking simply,*"would you mind telling me how it is that you ended up here at PF"*. A common theme across answers is growing up in geographical areas and often within family units, within fields where certain forms of drug use were somewhat normalised. The term normal is being applied here its simplest form: the embedding of a technique or organisable practice in everyday life (Jary and Jary, 2000). This should not be confused with normalisation theory which describes common, normalised and largely non-problematic recreational drug use (see Blackman, 2007). Sasha was introduced to the drink which often accompanied an evening meal. What sets her situation apart from the norm was the fact that alcohol rapidly began to allow her to control (or feel like she was controlling) a pre-existing eating disorder. Using alcohol as a coping technique became normal *to her*.

Sasha: *"[it] was as double whammy for me. I liked the taste, I liked the way it made me feel and it also suppressed my appetite … my two mechanisms for coping, if you like, came together … starvation or over eating and purging or drinking."*

Sasha's drinking served a function. For Katie, the substance was different. She also lived in a far less affluent area with less opportunity, but an early introduction to a substance within the family unit setting was the same;

Katie: *"My journey started when I was twelve years old. I tried my first substance with my mum … I smoked two lines of it [heroin] ... I was sexually abused by my mum's boyfriend at the time, erm I told my mum, she didn't believe me, she broke my nose, gave me two black eyes, but the next day, she was guilty, all sorry .... she went, do you want some of this to calm you down?*"

John's cocaine use also served an immediate and transformative function;

John: *"I re-invented myself … the drugs helped me do it … they [the drugs] took someone who was really struggling, really unconfident. The way I see it back then was that they took a wimp and turned him into a man … the cocaine happened for me because I got massively bullied in high school and went into a pub one day and reinvented [pause] well I say reinvented … I didn't, I lied about who I was. The two bullies who… bullied me every day … they beat me up two or three times a week, sometimes every day for years … I never told anyone because I never wanted anyone to know what was happening … there I was, I walked into the pub… the lads were in there and they started [acting aggressively]. Well I was about to leave the pub when one of the lads I was with at college showed me the stuff, showed me the coke. So, I had some and I managed to take care of four years of bullying in less than 30 seconds. Ever since then I've never been bullied … learnt to pick up violence, I learnt how to be that way"*

Essentially, cocaine played a significant role in John's habitus development. It allowed him to deal with the violence of childhood bullying. It facilitated the exercising of autonomy. For Kris alcohol functioned to *"block out the paranoia and the voices"* brought on by what was, at the time, diagnosed as a drug induced psychosis. This eventually led to an alcohol addiction. It is likely that drug use had an associative relationship with Kris's paranoia. But he also describes an upbringing which he thought of as normal until prompted (in rehab) to reflect upon it. This reflection was;

Kris: *"A bit of an eye opener ... my dad ... he was a bit of a dealer, err me mum, she er, she, well she's a nice woman do you know what I mean but she's manipulative. Like, she didn't realise it but she taught me how to manipulate and stuff like that, but she used, like dabbled when I was younger."*

Chris: *"What did she use?"*

Kris: *"Amphetamines, when I was younger ... my auntie, she was on heroin and my uncle, he was in the army, er he ended up stabbing his wife. My auntie was beaten up with a baseball bat by her partner."*

The situations outlined here occurred within chaotic and often violent fields in which drug use is normalised, an acceptable aspect of habitus: those practices which bridge individuals and the structural aspects of the fields they inhabit (see Section 5.1). Sasha and Kris's alcohol, John's cocaine and Katie's heroin use were serving a function offering a modicum of control, an escape route into oblivion or a sense of self efficacy: confidence in one's abilities. Drinking allowed Kris respite from his paranoia. For John, the confidence which characterises the cocaine high (Boles and Miotto, 2003) led to what Hayward (2004) describes as an 'expressive' use of violence. In his own words, the cocaine functioned to allow the *"picking up"* and using of violence. Given time, this allowed him to climb the criminal ladder (discussed at length in section 7.3). For Sasha, the embedded, or normalised family practice of an evening drink functioned to allow a feeling of control over an eating disorder. Katie's heroin use quickly became an escape from a chaotic lifestyle which was not of her own making, a coping mechanism, a technique passed down the generations, an inherited habitual practice, an aspect of her habitus. Alcohol, along with tobacco, caffeine and a range of pharmaceuticals, is widely used 'to manage, maintain or change the experience of the self in the world' (Bancroft, 2009, p.5). To use it for this function is a normalised process. In this nation-wide context, heroin, the most taboo of drugs, is not used as such but in Katie's immediate family unit it was. The children of drug abusers, 'the children of the children', are particularly at risk from a range of such criminogenic pressures (Bourgois 2003, Andrews et al 2009). Empirical support for this statement can be found in any of the numerous pieces of research carried out using the US Adverse Childhood Experience Study as a data set (see Dube et al, 2003; Anda et al 2006). Alienation as a result of abuse increases the likelihood of health risk behaviours including problematic drug abuse (Anda et al 2006). Coupled in this instance, with the likelihood of the mimicking of trends in parental drug use,

Katie's life path has frighteningly deterministic qualities. It takes no great leap of the imagination to envisage how the use of an opiate pain killer to manage physical and psychological trauma and *"nod"* her problems away (See also MacDonald et al, 2007; Bourgois & Schonberg, 2009) might be learnt.

Sexual abuse represents a well-trodden path into addiction (Bellis et al, 2014). From this small sample alone, six disclosed having suffered sexual abuse as children. For those who didn't, violence and chaotic home lives were prevalent themes in their upbringing. Sean explains that he has "*complicated thoughts"* as a symptom of PTSD relating to the abuse he suffered as a child. He states that being abused by a close friend of the family resulted in his *"finding it hard to know right from wrong"* when growing up. For Daniel, being raped by his step father at the age of seven turned him into *"such an angry bastard … lacking in compassion."*

Both Sean and Julia kept the abuse they had suffered a secret from their family. Upon reflection, in a rehab setting, Julia attributes her drink, not only to the abuse itself but also to the act of keeping it a secret for so long, highlighting the day she told her family, particularly her father, about the abuse she suffered at the hands of her grandfather, one year prior to entering rehab:

Julia: *"Because it was his dad and it was like the worst thing. I told my family in one circle hit and I told my dad on his own and it was probably the worst day of my life."*

The language of recovery will be discussed in detail in section throughout Chapter 8. It is, however, worth a cursory mention here with reference to the reflection through which Sean makes sense of his experience in attributing his drug use to his emotional state; *"you start using because you don't like the way you feel ... you act on … you use on your feelings [it] basically took me outside of my feelings"*. Childhood pain and alienation is a commonality across these stories. We live in a society that readily prescribes medication for physical injury, a route to escape pain. One only need look at the exponentially high levels of substance use and abuse among soldiers during and after war (LePage and Garcia-Rea, 2012) to recognise that escapism is also sought by those in traumatic situations, suffering the psychological pain associated with alienation. Addiction is the disease of loneliness and various substances function to help people deal with this in various ways, providing 'the sensation of feeling calmer, manic, or numbed [or] whatever it does for you' (Haari, 2015, p184). Addiction occurs when, through repeated self-medication of this type, a psychological

state of feeling that the drug is *needed* to function is reached (Johnson 2003). The argument being made here is that physical addiction occurs after this embedding of substance use within the habitus.

Sean summarises this notion, stating that right from the beginning drug use served to *"take me out of my mental state…. I really wasn't happy with my self".* A few years down the line he needed to escape his feelings to get through the day and could be found drinking beerin the morning on the bus to college. His typical teenage, cannabis, alcohol and party lifestyle transitioned into something else. The likely reason for this represents the first key point made at the close of this section; that, as highlighted above by Bourgois (2003), Andrews et al (2009), Anda et al (2006), Dube et al (2003), alienation due to abuse and trauma suffered as a child massively increases the chance of casual substance use becoming abuse. The second is that prior to this, substance use is initially functional, it serves a purpose. The third key point concerns how different substances are normalised to different levels in different fields. Cultures contain and constrain how drugs are used. Increased likelihood of using a substance which is taboo in wider society is one of the criminogenic pressures felt by the dispossessed, particularly if their immediate family unit is engaged in drug distribution and/or using networks.

## 7.2: Loss, Abuse and Chaos: Everyday Violence, Secrecy and Methadone Stories

> Callum: *"I'd always said I'd never get myself on methadone because you hear all the stories."*

Of particular interest to me during my time spent working and researching (Fitzgerald, 2012) in recovery is the point at which drug use transitions into drug abuse. As highlighted in Section 2.1, the officially propagated view of addiction is based upon the assumptions that 1: Everyone wants to try drugs. 2: If they try them they will become addicted. 3: This will ultimately lead to the downfall of society (Pryce, 2012). In reality, research suggests (Pudney 2003) that the vast majority of drug use represents experimentation by young adults, a very small number of whom become addicts (Seddon 2006; MacDonald et al 2007). A constant across the stories of the people documented in this thesis are the themes of loss, abuse and

chaos. These are the routes through which people develop addiction, to paraphrase Alcoholics Anonymous (2001); the substance is but a symptom. To quote John; *"I hated myself and I didn't know how to stop hating myself"*. His drug use was a symptom of low self-worth. What remains experimental for many British youths is more likely to become a functional habit for those from culturally, socially and/or economically impoverished backgrounds; the dispossessed suffering alienation and social exclusion, those lacking in legitimate cultural capital. These individuals have little influence on the structural forces which create their environment, but that environment sets the stage for their lives (Contreras, 2013). It would be a mistake to assume that uniform starting points among the dispossessed all end in disaster (MacDonald et al, 2007) but, to echo C. Wright Mills, the socially excluded experience their lives as a sequence of traps. Put another way; structural opportunities dictate the where, how and why of both ritualist and innovative Mertonian action (Cloward and Ohlin, 1960). This is the fundamental assumption at the centre of all strain and stress models of deviant behaviour (see Chapter 5).

Like the many working class lads lacking the autonomy granted by legitimate cultural capital (Lutz, 2008) Daniel joined the army to escape the problems within the fields he grew up in.

Daniel: *"Before I went into the army … the next generation up … was using heroin and there was a few of us who tried it before but I thought to myself that [exhales and shakes head] this is a bit intense this, it's not like a line of coke …. So that's basically why I went off … I thought I've got to do something because I could see how it was going … I could see the other lads … I'd known them all my life and I could see where they were going, it changed them as people."*

Daniel was forced to leave the army after years of service through circumstances outside of his control. He suffered what is classed in military lexicon as a 'game over' shoulder injury; an injury which prevents an individual from being or continuing to be an infantryman. During his time in the forces, Daniel's friends had transitioned from social, weekend cannabis, ecstasy, LSD and cocaine use to a lifestyle defined by heroin abuse, and things quickly spiralled out of control upon his return;

Daniel: "*They were smoking heroin every day and injecting every day… there was a group of six of us … When I came out, naive as I was, I was a bit disheartened, with a big pay check in my hand … I was gutted … once the physical pain had gone I had to deal with the mental*

*scars. I tried for the red caps after that but failed the test … My head was up my arse really. I didn't know what I was doing. I got a couple of jobs but [pause] the drugs took over really and then after that it was [pause] I ain't got time for work. This [being an addict] is a full-time job."*

Kris also sought refuge in the armed forces. He attempted to join the RAF but was arrested for grievous bodily harm after being *"jumped in the toilets of a pub"* two days before the passing out tests. This was the point at which problematic drinking and cocaine use transitioned into heroin addiction;

Kris: "*I ended up back in the hostel, a mate had moved to XXXX and he was using heroin … I just ended up smoking it and it escalated from there … I started injecting just before I got to [rehab] I overdosed twice."*

Daniel describes his time in the army as "*Perfect for me, it really was, it let me get all my anger out to be honest with you"* and that *"they instill a discipline in you, and if you are going to do it, then do it the best you can attitude."* The army, for a short time, provided Daniel, whom I find to be a man's man, with an environment of and field defined by, 'fraternity, initiation, mentoring, honour, valour, duty, [all] beautiful male attributes in a society inwhich masculinity is maligned (Brand, 2015, p.218). As the maladaptive strategies men use to maintain a traditional male role have increasingly come under assault, such environments are few and far between (Brooks, 2010). The drug dealing gangs of El Barrio, during the mid-1980's to early-1990's US crack epidemic, offered similar gender-specific opportunities for young, socially excluded men of limited *legitimate* cultural capital. Their actions occurred in defiance of structural inequality (Bourgois 2006). Where middle class teens prove their toughness and develop capital, particularly social and physical, on the sports field, the dispossessed are often limited to the black market and the streets (Contreras 2013). The armed forces offer an oft used alternative. Drawing parallels between gangs, the armed forces, and paramilitary organisations, Brand (2015) summarises this crisis of masculinity experienced particularly by those at the sharp end of lumpen abuse (see Chapter 5), '[For] fatherless boys, in Pendleton, Pakistan or Birmingham or Compton or Cardiff, any token of belonging is embraced' (p.218). Drug use and other counter-cultural subjectivities are intersectional phenomena, there are multiple gendered and class related layers to Daniel's, Kris's and all the stories explored here.

Callum's story is strikingly similar to Daniel's despite his not being in the forces. The similarity lies in his occupying a field in which he was able to develop his physical and social capital stocks. Involvement in judo, an activity, a lifestyle that kept him out of the trouble. He was part of a community with similar values, a place of honour and respect, a likely 'third place' of the type described by Oldenburg (1999 - see Section 5.1).

Callum *"I was trained by the British champion … I was like eleven or ten or something, right through 'til I was sixteen, I got my black belt."*

Chris: *"That's amazing man. That's like national level training."*

Callum: *"Well I broke my arm, that's why [pause] that's the scar [reveals large scar on forearm] we were going around doing exhibitions you know, like jumping chairs and that. It was the same day as the Hillsborough [disaster] I think. I hadn't had enough sleep and I wasn't concentrating because I timed it all wrong on the last chair, you know the gap in the chair Chris [pause] I dropped my arm before I went into the jump and my body went over and my arm just got caught in the chair … I couldn't do it [judo] for like twelve months, I had to have another operation, … It was another twelve months after that so I lost my momentum. I still used to go to the club and just take the money [subs] and that because I couldn't train proper … That's when I started taking drugs you know."*

Chris: "*Do you think there is any link there?"*

Callum: *"Yeah, I think Chris, with me, I think like, with a lot of people, if you're not training or doing something you get a negative mind you know. I think what you put into your body … affects the way you think, you know what I mean. … if you're training, you feel good about yourself, it becomes your drug and you don't need anything else to substitute that. [If] you're slouching[1] about and you're not doing any kind of physical exercise, you don't feel good about yourself, you tend to abuse your body."*

Here Callum explicitly recognises the value of physical capital. As with Daniel's story, debilitating injury, the loss of physical capital, was one of a few key intersectional variables which steered him towards drugs and crime. Guilt also emerges as a key theme in many of the interviews detailed here as either a precursor or consequence of substance abuse

[1] Slouching - generally, slouching about is to be lazy. In the context of heroin use it can also mean to be under the sedative effects of the drug.

(discussed further in Section 7.4). Callum carries a lot of guilt relating to the 1989 Hillsborough disaster which occurred right around the time he was injured.

Callum: *"As a kid, I was the last person anyone thought would get into drugs … I was a judo black belt coached by the British champion … When Hillsborough happened, I give me mate the ticket to go because I was training that weekend and he never came back and it's only now [in rehab] … I'd never been able to pin it down, I thought I just got with [the wrong] people … But when I thought about it [in rehab], that was actually when things started going wrong for me."*

Duneier (1999) highlights low structural awareness as a frequent 'contradiction' of the emic perspective. It occurs when a participant refers to their condition as a choice 'sometimes blatantly contradicting biographical facts from the same interview or an earlier conversation' (Duneier,1999, p.166). This is something which rarely occurs with PF residents such as Callum, who have *"bought into"*[2] their program (discussed in detail in Sections 8.2-8.5). The language and practices instilled as part of the therapeutic journey are characterised by an awareness of self in relation to structural pressures by mindfulness (see Section 6.2). Through the lens of recovery, Callum recognises the intersection of alienation as a result of injury and guilt with economic pressures and proximity to the black market, highlighting *"when things started going wrong."*

Eric was at an earlier stage in his recovery when interviewed, but was still able to pinpoint his recreational drug use as becoming a problematic habit following a split with the mother of his children. Things began with weekend binges:

Eric: "*Friday, Saturday, Sunday, get on the caries*[3] *and the phett*[4] *and that and then we thought, well let's just have the gear*[5] *to come down with on the Sundays … and then got onto methadone and stopped doing gear but I was on a high [dose] of methadone … I got down on that but every time I got down to 10ml I was crapping myself, I'd do one bag [of heroin], pretend I was on three or four a day and get boosted right back up and then stop using the gear … I was scared to come off it [methadone]."*

[2] Buying into your programme - a term frequently used at PF which refers to taking ownership of one's recovery.
[3] Caries - colloquial slang for the drug ecstasy
[4] Phet - short for amphetamine
[5] Gear - heroin.

Eric's utilising heroin to *"come down with[6]"* is not an uncommon practice (Grella et al, 1997). There are numerous examples in literature detailing the use of one drug to reduce the side effects of another. Foltin and Fischman (1992); Frank and Galea (1996); Kay and Darke (2000), highlight the depressant effects of heroin as an effective way to deal with the over excitability which characterises a crack binge. In this instance it served a function, providing the means to switch off following an intravenous amphetamine binge, "*to come down with on the Sundays."*

Eric: "*Obviously, after a few weeks I started to like it [heroin] more than the upper so I started doing it during [pause] coz it's only ten pound a bag, you know what I mean. So, I started doing it during the week and then it just got a hold of us, I did that for about six month … then, when I stopped working in a factory I did my own window cleaning round… One time it rained for a few days and I couldn't get out and I just sat at home rattling so I went on the methadone, [it] gave us the same knock [effect] if not a better knock than the gear."*

Once the binge behaviour had stopped, a steady supply of methadone provided an easier alternative to heroin. The only problem being the need to "*do*" the odd bag to maintain his supply. Methadone use became an established aspect of Eric's habitus. This story is unusual for two reasons, the first being that he preferred methadone to heroin. Callum explains that the use of methadone was to be avoided at all costs. He had been addicted to heroin for years;

Callum*: "But the drought got so bad in 2009 for the heroin, the Afghan war was at its peak and nothing was getting past [out of Afghanistan and into the UK] … it was just shite basically, what people had [low purity], you were having to buy that. I'd never injected so it was just smoking it … it just wasn't doing nothing for us so I started swapping it for methadone, well buying methadone and then coz it got that bad, people started taking their own methadone [rather than selling it] so I had to get myself a script, I'd always said I'd never get myself on methadone because you hear all the stories."*

*"Methadone stories"* feature in the conversations I've had with many participants. Methadone maintenance programmes represent a common route into rehabilitation for heroin addicts, but such programs are still located within the field of chaos. Kevin explains a decision to *"clean*

[6] To come down with - to use a substance (usually a downer) to mitigate the after effects of another (usually an upper).

*up his act"* came about following a suicide attempt resulting in overdose and his slipping into a coma (discussed in detail in Section 7.4).

Kevin: *"When I got out of hospital it was like that's it, I'm just going to stick to my methadone and tablets [prescribed anti-depressants] … But, coz of [pause] the area, the people you, you know that was all good for about a week, maybe two but because, um, where you go and pick [up] your methadone from, other users are there picking their methadone up."*

Chris: *"Never really thought about it like that."*

Kevin: *"Yeah, you know. So, you know [pause] even though you are trying to stay on your methadone because you're picking up your methadone from the same place as other active users, you just can't stay away from it [the chaos]. It's just, you go to your drug appointments with your key worker, because you are going to a, a waiting room you see all the other users in that waiting room and these are all people that I know so it was just so hard to try and do the right thing with your will power so low, even though your mind is telling that you've got to do the right thing, your body is craving the heroin or the crack or whichever your poison is … so within that 4 months [prior to getting a place at PF] I got right back into a mess again you know and I was lying to my drug worker saying that I was cutting it down and, you know, I was on 150ml of meth and Phoenix wouldn't take you in unless you were on 70ml [or less]."*

Chris: "*Did you get it down?*"

Kevin: *"No. I went in on a hundred and fifty and I was injecting £30 of heroin a day. So, when I ended up in Phoenix and (pause) I was on 50ml of meth and told them I hadn't been using, I was absolutely, I was in bits. You know, as soon as that gear had started wearing off and that methadone was just trying to hold me I was [long pause].*

Chris: *"Did they up the dose?"*

Kevin: *"No. I clucked it out*[7]*. I clucked it out basically so (pause, you know, I saw people's detoxes come and go but I was ill for two months."*

The problems Jenny faced while *"on a script*[8]*"* were of a different nature;

[7] Clucking it out - withdrawing from opiate addiction without adequate medication.
[8] On a script - to be on a methadone maintenance program.

Jenny: "*[We] would walk miles and miles and miles … I would do that just to pick my meth up, do you know what I mean. It would take me like an hour and twenty minutes just to get to my chemist."*

Jenny explains that she actually requested a chemist that was further away because of the monotony of this period of her life.

Jenny: *"The chemist I used to be with, it was just straight out of bed and round the corner to the chemist, it was like we were not doing anything at all during the day and I used to say to XXX [ex-partner], Look, we are not doing anything, we are just constantly in. Those days we had no money and it was just in, in, in. So, in the end I changed our chemist and we went to XXX which was well over an hour's walk and then an hour back. We would be rattling*[9]*, rattling, rattling and I mean bad. But I would walk it, do you know what I mean?"*

The biomedical perspective heralds methadone as a technocratic 'magic bullet' which deals with social, economic and structural issues by almost surgically targeting the brains synapses (Bourgois, 2000). This view ignores the power relations which shape such treatment: the forced monotony of life on a perscription tied to a particular chemist. Using the Foucauldian notion of bio-politics, defined here as; 'the ways in which historically entrenched institutionalised forms of control discipline bodies', Bourgois (2000, p167) highlights many of the problems faced by Kevin, Jenny and, eventually, Callum, as resulting from a system of control which attempts to inculcate moral discipline into the hearts, minds and bodies of deviants who reject sobriety. It is a prime example of the moral undertones of the biopsychosocial model highlighted in Section 4.3. Addicts have described 'ball and chain' relationships with methadone (Johnson & Friedman, 1993 p37) and, in the US nicknamed the substance 'methadeath' (Koester et al, 1999). Kevin is explicit in his highlighting of the difficulties relating to *"doing the right thing"* while surrounded by other addicts. Similarly, Jenny's routine was controlled by the need to receive her daily dose of methadone under the watchful eye of the distributer. She describes a life that was defined by this procedure and made the decision, much to the dismay of her partner, to get out the house and walk miles for each dose.

Chris: *"So what was that about? … Why were you doing it?"*

[9] Rattling - suffering withdrawal (usually opiate).

Jenny: *"I done it for the exercise. XXX [partner, also addicted to heroin] didn't like it because, obviously, he has driven all of his life but, with me, I wanted to put myself in that boat. I could see that things were going wrong and I wanted to do something. Even having to do community service and things like that … I thought, at least it's getting me out the house."*

The act of walking each day perhaps represents a tacit investment in physical capital. Jenny was effectively substituting physical activity as an adjunct to a methadone maintenance which replaces addiction to a taboo drug with dependence to a less pleasurable, but more toxic (Bougoise, 2000), supposed medicine with no attempt at 'recovery management' of the type advocated by White (2008) and revisited in Section 9.8.

Callum echoes the ethos of Sutter's (1966) *'Righteous Dopefiend'* in both his reluctance to lose autonomy to methadone maintenance and his lengthy period of functional addiction which included multiple holidays abroad;

Callum: *"I used to go to Greece and that. I'd take it [heroin] with me … at the time I wasn't on methadone so I'd take the gear with me do you know what I mean. A few times I've come back early you know, when I run out. So, I've had to cut my holiday short, paying for an extra flight and all that."*

It should be noted here that under the biomedical perspective methadone is the most prevalent substance used to exert control over opiate addicts but not the only one. For Kris *"nothing was worse than detox off Subutex",* a drug which, despite being heralded as a success by the Big Pharma (see Section 4.3), is highly addictive and abused by IDU's the world over (Comer et al, 2009).

Staying off methadone allowed Callum to retain his autonomy. Eric's finding methadone maintenance preferable to heroin use is at odds with these negative experiences. The second unusual quality to Eric's story is that his ecstasy and amphetamine use was intravenous and therefore, according to the European Monitoring Centre for Drugs and Drug Addiction (2016), defined as problematic by proxy. Ecstasy is frequently used in conjunction with other substances (Daumann and Gouzoulis-Mayfrank, 2006). Such 'poly drug use' was widespread during the UK rave era of the late 80's to early 90's and again towards the end of the 00's (Power, 2013). What is unusual here is Eric's method of ingestion. Ecstasy tablets are almost universally taken orally (Thomas, 2012). An amphetamine accompaniment would usually be

snorted, bombed[10], or dabbed; "*a dig and a lick*[11]" (Daumann and Gouzoulis-Mayfrank, 2006). Broadly speaking, the 6% peak of rave era ecstasy use among 20-24yr olds in 2000 (British Crime Survey, 2000) constituted non-problematic drug taking: It was use rather than abuse (Power, 2013). We can argue that Eric was abusing both substances because of the way he was taking them. He is the only drug user I have ever come across, in this research or during my time working in recovery, who started intravenously. He explains;

Eric: *"Yeah we used to inject the caries and the phet and then I just went straight onto the gear and injected that straight away."*

I wanted to be sure that I was not misunderstanding Eric's point here. I believed the term "caries" to be Northern Yorkshire slang for Ecstasy. I could conceive of intravenous MDMA (the main active ingredient in ecstasy) use which, although incredibly rare I had read about (Jansen, 1999). I thought it unlikely that he was referring to ecstasy tablets;

Chris: ***"****So that was MDMA crystals was it, that you were injecting?****"***

Eric: "*No. Pills. Just grate them up, put them in water and smash them in the pin"*

In 1979, initiation of heroin use in the UK was half and half smoking/injecting. Since 1988, 94% of first time users were chasing (Strang et al 1992). Craig, Sean, Daniel, Kris, Christine and Jenny certainly initiated use in this fashion. For all those who transitioned to injecting, the move was financially motivated following a period of addiction. Christine smoked heroine for 15 years prior to injecting. I asked if there was a taboo around injecting and she confirmed that this was the case but that;

Christine: *"it [injecting] definitely gives more bang for your buck.****"***

By this point in her drug taking career, like Daniel, her social circle, including her brother, was predominantly made up of injectors. Injecting had become, in this context, normalized. This overrode the wider societal taboo of the injecting junkie. It is important to note that, aside from the structural economic driver to *"more bang for your buck*", geography also plays an important role here. The immediate onset of Eric's injecting should be understood in the context of his growing up in the UK's injecting capital. Middlesbrough has the UK's highest

[10] Bomb[ed] - to take a drug (usually a stimulant) by wrapping a dose in a cigarette paper and swallowing it.
[11] A dig and a lick - to lick your finger and "dab" it into a bag or wrap containing a drug in order to lick the drug.

intravenous drug using population which is estimated to be 1/40 of adults. This is three times the national average (Centre for Social Justice, 2013) 'The clustering together of the most serious problems of drugs and crime in neighbourhoods already experiencing multiple social and economic difficulties, is an empirical fact' (Seddon, 2006, p680). The where and when of David's, Christine's, Daniel's, and everyone else's drug use intersects with economic context and, particularly with heroin, a fear of withdrawal; *"dope sickness*[12]*"*. This fear can often override any perceived danger associated with use (Bourgois, 2009). All societal reactions to drug abuse, from misguided punitive judicial crackdowns through to well-meaning outreach and harm-reduction Programmes, should be understood as operating within these complicated intersectional contexts (see Bourgois, 2009). Cultures contain and constrain how drugs are used; they also represent the rules under which legislation must operate.

Sean's slow progression through drug use, into habitual drug abuse is more representative of the stories highlighted in this thesis.

Sean: *"You know, cannabis, drink, that party life had taken over ... from going to college and studying. I started fading out [pause] not turning up to college, now it was only three days out of the five but I just couldn't [pause] couldn't be bothered to get up. I started drinking on the bus ... this started becoming normal."*

For David, drink had taken over when;

David: "*I was getting to the point of [pause] being past caring for myself, past caring for my hygiene, past caring about my flat."*

Through the lens of recovery and the structural awareness which characterises it, Katie reflects that her slip into chaos represented a continuation of her mother's lifestyle;

Katie*: "I was more like my mum than I thought ... like making the [same] choices of partners, sticking in domestic violent relationships, the drugs, not having my kids with me."*

Both John and Mathew's cocaine use transitioned from recreational to problematic when use switched from weekend binges to secretive midweek use;

John: "*My drug addiction then turned into a daily thing … getting the drug at eight o'clock in the morning. I'd go to work. I would work twelve hour days and would continuously keep*

[12] Dope sickness - opiate withdrawal.

*the drug going until one o'clock the next morning. The only time I wasn't on coke was when I … managed to fall asleep."*

Mathew: *"I knew in my head that I didn't want to take it … I just ended up going back to it. So, like, I'd take it one night but when I took it, it would be like a binge … I'd be there until I couldn't get no more … The next day I'd be feeling sorry for myself, thinking why did I do that again."*

For both Sasha and Julia, the chaos associated with their alcoholism occurred at home and was marked by secretive behaviour. The same applies to Mathew's cocaine use;

Mathew: *I would get like half a gram of it and she would be gone for, for like two, two and a half hours and I would just do that half gram and .... she never knew."*

Julia explained the strain that such secretive behaviour around drink placed upon her relationship with her family;

*"Prior to this, I used to go out all the time [but then] anywhere we went, I always wanted to get back for that drink. So, it would be like an hour, maybe two tops and I would be going [home] and he [husband] would be like, oh let's go for a walk, let's go for a coffee and I was like no. He knew.*

Sasha was manipulative with her overlapping issues surrounding food and drink;

Sasha: *"I could be quite devious around food and drink ... they [family] would finish their drinking in the early evening. I would be the one who tended to continue it ... this was becoming more evident as time went by. Also, because of my eating, sometimes I could get drunk very quickly … I wasn't eating anything. I would say that's really [pause] when my drinking career started, at age thirteen."*

Something that sets Sasha, Julia, Mathew and John's stories apart from the others told here is their continued engagement in legitimate employment. They were functioning addicts for long periods of time. Not to be confused with the functions ascribed to certain drugs detailed earlier (Section 7.1), here we see addicts who, prior to *"the wheels falling off"* were able to function; to remain employed, often working long hours. Indeed, Sasha, making good use of the cultural capital afforded her by a relatively stable and moneyed upbringing, progressed through further and higher education to become an Accident and emergency nurse and

consultant. She describes *"using"* drink during this period and also makes reference to developing dependence;

Sasha: *"I drank most nights, not completely to oblivion but I felt that I always needed a drink in order to settle me down for the night, in order to get to sleep. That was my relief from an early age really ... I became a little dependent upon [it] ... I got qualified as a nurse and moved to XXXX where I became an intensive care nurse ... So, I was a first grade nurse and I would say probably again, my drinking and food problems continued and often I would finish a shift and need a drink to wind down again, even though I knew I had a problem with alcohol ... but it was acceptable, kind of, a lot of people did that. So, I just thought they do it, I do it, no big deal"*

John's description is not entirely different from this. Substance abuse, no matter how destructive, being used to get through the day, a short term plan at best which, when left unchecked spirals into chaos. Julia describes this stage of her addiction;

Julia: *"When you turn to it [alcohol] that bad, you've got to have it, it's a necessity."*

Chris: *"Was there, was there a period of like, functional addiction there then"?*

Julia: *"Used to do forty hour weeks [before] I came in here ... could still do it."*

Chris: *"Were you waking up in the morning and drinking prior to going to work?"*

Julia: *Yeah ... I managed an insurance company so I had quite a high job ... it wasn't like you could stop it. So, I was quite on the go and I will be honest, I don't actually know how I actually did it."*

The term intersectionality was introduced in Chapter 5 and has been used throughout this section. It has, across the differing contexts of the participant's stories, been applied to unpick intertwined layers of identity of which addiction is only one. For Julia, Sasha, John and Mathew, employment represents one of these layers. It sets their stories apart from the others detailed here. This is discussed further in Sections 7.3 and 7.4 as a defining aspect of their *"hitting rock bottom*[13]*"*. Daniel's layers were particular to his story. He was an abuse victim and an injured soldier who, despite attempts to escape, found himself stuck making the same mistakes as his peers. Addiction has been highlighted as a symptom of low self-worth, of

[13] Hitting rock bottom - a term used in rehabilitation circles to describe the lowest stage in an addiction career.

loss, abuse and chaos, all of which serve as routes through which SUDs develop. Callum's heroin use was just one aspect of the chaos he lived in after giving up judo, and Kris's substance abuse and street fighting belied his underlying mental health issues. Methadone stories have been told and converged with Bourgois's (2000) work to highlight a form of bio power which reduces individual autonomy and ironically, increases criminogenic pressure.

## 7.3: Everyday Crime, Gendered Crime, Organised Crime, Violence and the "Bad Man".

Martin: *"I had to do some nasty things just to survive."*

For the majority of participants, the slide into chaotic drug abuse was punctuated by a deepening involvement in crime. Julia and Mathew were very much in the law-abiding minority. This was likely due to greater levels of economic and cultural capital, the sum of which equates to higher recovery capital (see Section 8.2). Essentially, they came from working communities which have reduced criminogenic pressures (Reinarman and Levine, 2004) and have greater defenses against issues surrounding drug abuse (Contreras, 2013).

Following multiple rehab attempts, Sasha's chaotic drinking resulted in the losing of her job. She had up until this point, like Julia and Mathew been a functioning 'non-deviant' member of society. To apply Merton's (1938) concept; she had been a ritualist (see Chapter 5). The term *"hitting rock bottom"* is synonymous with rehabilitation. It took a long time for Sasha to hit rock bottom but her downward trajectory certainly accelerated with losing her job.

Sasha: *"So my drinking got worse really, to the point where I was doing fouteen hour shifts … and on my days off my drinking was becoming earlier and earlier to the point … where I might even need a drink before I could get out of bed at nine in the morning … I was doing that on my days off but white knuckling it when I was at work, feeling terrible. Um and counting the hours down until finishing, straight out of the door lighting a fag and then driving home to have a drink … I [worked] a weekend … it was really busy, I had the Monday off and was due back in on the Tuesday. On the Monday I started drinking fairly early but then got a phone call from work asking me if I could cover a night shift that night and I said well I have had a drink I am not sure I can. We talked about it, myself and a colleague um who was at work, and I said well if I go to bed now, I am sure I will be able to*

*come in at around 10 o'clock or something. Thinking in my head that I would but at this point, obviously. I thought that I would have another quick drink just to send me off. I took a herbal sleeping tablet, went to bed, woke up feeling not quite right but thinking that I would be okay, by the time I got into work that evening fresh air had hit me and it was clear that I was not okay. So, I was really quite intoxicated ... I was stopped in the foyer of the hospital … I was sent home … an anonymous letter had gone in to my governing body to say that I wasn't fit for purpose … I was suspended immediately."*

Sasha did not return to work following her suspension. Four days later she was in the first of four rehabilitation programmes (PF being the fourth).

Sasha: *So, for a lot of time, the last three to four years, my drinking was total chaos, total chaos. Drink driving, a lot of things, court appearances … just crazy erratic behaviour … I was becoming quite aggressive with my family… my dad would call the police … because either he was going to kill me or I was going to kill him because they were stopping me from going out and getting my drink"*

During this conversation, we both laughed at diminutive Sasha's bold statement that during this period, "*the only adrenaline I had was fighting police men when they came [both laugh] I mean it took eight policemen to pin me down one time."* Sasha's sharp wit and rebellious nature often made me laugh. You have to have a sense of humour in the recovery field and the thought of eight policemen trying to control her or her botched attempt at escaping her room to get drunk by making a ladder out of belts was funny. Luckily the garden furniture broke her fall; *"I went right through it."*

Addiction is encountered at all social levels and is often associated with criminality (Bancroft, 2009) but, as discussed in the previous section (7.2), the most serious drug problems are visited upon those neighbourhoods already suffering from multiple socio-economic difficulties. The same applies to crime (Bourgois, 2003; Contreras, 2013) Sasha's life trajectory, up until this point, had been non-criminal. She was a highly educated and specialised nurse, published author and tutor in higher education. She was deeply entrenched within institutions of informal social control. Using a theoretical lens based upon social control theory (Durkheim 1951; Hirschi 1969; Kornhauser 1978), Sampson & Laub (1990) argue that the dominant institutions in a person's life tend to be: family, school, and peer groups (in childhood); higher education and/or vocational training, work, and marriage (young adulthood); work, marriage, parenthood, and investment in the community (later

adulthood). The existence and quality and strength of social ties to these institutions equates to social capital (Coleman, 1988; Sampson and Laub, 1990). Sasha's crimes were what Karstedt and Farrall (2006, p1012) define as 'crimes of the everyday … activities [that] are not unusual, uncommon or, in some other way, events of an outstanding nature. They form part of many people's experiences and, as such, are often treated by them and others as 'mundane' and 'just part of life', "typical" or 'par for the course'. It seems likely that her social capital played a limiting factor in her criminal behaviour and the apparent lack of such behaviour for both Julia and Mathew.

The salient institutional bonds in Craig, Martin's and Callum's life were different.

Craig: "*When my mum got cancer … from then on really, it just went downhill, I became the black sheep, you know, the runaway child … I got into the wrong crowd, in and out of jail for burglary, deception and fraud, ended up doing a two year sentence for intent to supply a class A".*

Craig entered the violent world of organised crime at a young age and was swept up into the 'revolving door' of the prison system which, when exploring increases in repeat offending and drawing out similarities with the US system, Padfield and Maruna (2006) highlight as costly, discriminatory, and ineffective at reducing crime. Martin also describes a drug career that started early with a rapid transition into a violent chaos and lengthy prison terms.

Martin: "*I've been taking drugs since, I don't know, since I was like nine or something. Started selling them when I was like thirteen. Err, just got out of hand really, one drug led to another which led to another and I ended up on crack and heroin when I was 16. Loads of diazepam and everything just spiraled out of control. Like I say, I was selling drugs and we robbed someone, me and my mate and my mate got murdered, he got beaten to death right in front of me ... it didn't affect me that much 'coz, obviously, I was drugged up."*

As with Sean and Daniel, Callum began with the relatively normalised soft and social drugs cannabis and acid. He also transitioned onto harder drugs. By the age of twenty he was addicted to heroin and in prison;

Callum: *"[I] started going to jail when I was twenty. Spent half of my life in prison... I think I spent like fifteen years all together … A lot of it was, d'ya know, going out and doing lorries, um, at [motorway] stations and that. So, we would go and use cars for that. So, we, we'd do burglaries for the cars, for a fast car to use and we would take a van up to a service station*

*or at the side of the motorway, where ever there was wagons and slash the side or open the back and take whatever was in it. It didn't matter if it's matches or sex toys or anything, you know, whatever you're getting in bulk you'll be able to get rid of [sell], you know."*

Again, Callum's choice of substance, and the frequency and level of his usage represents just one layer of the chaos he had fallen into. In short, substance has an intersectional relationship with other structural and micro level variables. In the same manner that child abuse played such a significant role in the spiral into chaos experienced by Sean, Julia, Katie and Daniel, and economics and geography played a role in Eric's intravenous drug use, organised crime and violence is equally important in Callum's situation. Indeed, he was the only member of his immediate criminal peers who used heroin;

Callum: *"They knew all about it, they didn't like me taking it though. I used to just, I didn't [pause] I've never snorted cocaine, so they'd go at it over a weekend, whatever, go and do cocaine and [I] would become withdrawn, you know like you don't want to go out when you are on heroin, when you do, you end up going home and smoking the gear ... I sort of led a different lifestyle to them, you know."*

The point being made here is that if heroin, the king of the taboo drugs that has, throughout history, been associated with criminal behavior and depravity, was the root cause of Callum's chaotic lifestyle then his peers, those he *"did lorries over"* with, would also be using it. Despite current government aims, laid out in a recent Prime Minister's speech, to 'take more action on drugs … [and make] sure that prisons are demanding places of positivity and reform – so that we can maximise the chances of people going straight when they come out' (Cameron, 2016)[14], one of the great ironies of imprisonment remains that prison is not an environment conducive to rehabilitation. Rather, it is a holding pen in which drug habits are developed (Boys et al, 2003), violence is escalated (Marx, 1981) and criminality honed (Welch, 2004, Contreras, 2013). Again, the intersectional nature of Callum's situation needs to be understood here. His criminal behavior and his drug use was likely amplified by his time spent in prison. Both he and Martin explain how easy it is to obtain drugs "*on the inside"*. Ironically, for Martin even when on a hospital wing specifically for people who were detoxing, *"drugs were coming in constantly"* and were available during daily gym visits.

[14] We have a new witch at the helm now. Current Prime Minister, then Home Secretary, Theresa May claimed that 'the key for members of the public is that they want criminals to be punished' and that 'prison works' (Travis, 2010).

Martin: *"People coming in parcelled up[15], so you're going down to the gym and you are seeing people with heroin, Subutex tablets like valium and that [exhales]. Obviously jail, it's like jail innit? You want to get off your nut. You're not there to get better, you're there because you got caught and you're doing time. In jail it's, you do things like to help yourself, to be more crafty, you know what I mean? So, if you go to the gym with people that are bringing in parcels, then you take it off 'em, to use drugs, it's all drug motivated".*

Callum: *"It was like the wild west. People had like kilos of weed on their window sills because there was just that much and the screws had just given up ... there were people, people with bigger habits in jail than they had when they was outside … People were getting them (drugs) on strap[16], like not paying for them, and with that people obviously get themselves a habit. Then they need a lot more, they will get it without even paying for it and that builds up, and then they can't afford to pay for it and they will have to go on protection or they stay on the wing but if someone knows they are going to go off, they obviously, it's not about the money, it's about the pride, people get (pause) because it's like, if you show weakness in prison then people will just jump all over it, you'll just get exploited"*

Harri (2014, p64) quotes one of his interviewees describing such value-laden forms of violence; 'You have to be fucked up to survive in this fucked up paradigm … you got to be violent to not have violence done to you'. The vast majority of drug related violence functions to increase social capital in street and jail settings, fields of chaos; to establish, protect and defend drug territory in an illegal market. Goldstein (1986) found this to be the case for over two thirds of killings in New York which were recorded as being related to drugs.

Kevin explains: *"Dealing the drugs and stuff like that … you had to be top dog you know, you had to be ruthless and coming in with the ruthlessness, it means you become cold … you have no feelings, you have no remorse … you've got to do what you've got to do to keep on top"*

Martin defines this mindset when explaining how witnessing his friend being beaten to death at the age of 16 cast him in the mold of *"the badman"*.

Martin: "*I thought I was just this [laughs], to be honest, I thought I was some hard drug taking nutcase, it's what I thought, because I had to be like that, if I wasn't like that then I would have probably ended up dead. I had to do some nasty things just to survive".*

[15] Parcelled up - to smuggle contraband into prison in the anus.
[16] On strap - to purchase drugs on credit.

Not to be confused with the everyday crimes highlighted in the last section (7.2), symbolic violence is characterised by Scheper-Hughs (2004) as being every day; that is, part of the everyday for those living in, or on the fringes of, a field of power defined by an illegal drug economy which values violence as a form of symbolic and cultural capital (Bourgois, 2004). The stories of the participants are punctuated with interpersonal violence of which they are both the perpetrator and victim. Craig's experience of being tortured following a botched burglary attempt represents a particularly stark example;

Craig: *"I was kind of used as a kick bag really, I was spiked with LSD, I had two toes broken, all my hair shaved off, eyebrows shaved off, I was wrapped in bin liners and cellophane around a chair and force fed beer and cigarettes and it was that bad ... I had like half an Adidas print on my back where I was continuously kicked ... It was fucking scary"*

What this scenario represents is Craig having an example made of him for his perceived blame for a robbery gone wrong.

Craig: *"[The] burglary went wrong, the number-plate got taken, a group of XXXX got arrested because it was their van … but because I did the burglary [pause] there were two of us that did the burglary, one went in the van and one of us ran away … they ended up nabbing me … they didn't say to me like oh we are going to kidnap you, they just come and picked me up and said oh yeah we are going to take you out and took me to the house … and you know, it was his, it was the guy who owned the van, it was his wife that broke my toes 'cause they took my shoes and socks, I was in my boxers … she wouldn't stop stamping in my feet … they all had a go on me."*

Contreras (2013), Bourgois (2002), and Harri (2014) highlight the dog eat dog nature of such forms of underground capitalism. Shortly after this ordeal Craig *"kept his mouth shut"* and *"copped the blame"* for the seizure of an ounce of heroin with street value of around £1,200 (UNDOC 2014).

Craig: *I had the whole parcel in my jeans. They had nothing on them, the police followed us back to XXX … we went to a friend's house, chopped down the ounce to 140 wraps, bagged them up and … he [one of the kidnappers] said to me, if you don't feel right about this we will cut if up [divide amongst each other]… we didn't know about the police or anything so I was like, don't worry it's alright, straight in the jeans, we got in the car and crash, bang,*

*wallop, the car got boxed in the windows got put through, it was a right mess and I had the parcel so [pause] obviously [pause].*

I regret not asking Craig whether he would have taken the blame had he not suffered violence at the hands of his co-defendant. Craig's rehabilitation was a success and the last time I saw him he was on the verge of moving cities to be with his new girlfriend. I did however talk to Callum about whether it was possible to *"serve time"*[17] without being part of this culture; to *"get your head down and keep your nose clean"*[18]. He alluded to the fact that if you already have contacts in the black market and you know people when you enter prison; "*You end up sticking with them … because if you're on your own you end up getting targeted"*. It is easy to envisage how a context in which violence and pride are so intrinsically linked with cultural capital has a paradox at its heart. To protect oneself from violence one must commit violence, but doing so perpetuates a cycle which leads back to prison: violence begets violence, a self-fulfilling prophecy. In Section 8.1, Callum, Craig, Martin and Kevin discuss how shedding this *"badman"* mindset represented one of their biggest challenges upon entering rehab.

Katie replicated her mother's chaotic drug use and abusive relationships. She replicated her habitus. Her criminal career peaked alongside the cost of her heroin and methadone habit.

Katie: *I was made to walk the streets … I thought that four hours down the line I would probably be dead because I was using £400 a day so every 40 min to me was like, right let's check if the dealer's in.*

In Katie's situation, her drug use intersects with poverty, child abuse and gender. Her life trajectory lacked the salient familial bonds that characterise a stable upbringing. Like Callum, Craig and Martin, she lacked legitimate cultural capital and turned to black market capitalism. There is agreement across the field of criminology that the gender gap in crime is universal. 'Women are always and everywhere less likely to commit criminal acts' (Steffensmeier and Allen 1996, p459). Men offend at much higher rates across all crimes other than prostitution (Steffensmeier and Allan 1996). Katie's slide into prostitution should be understood against this backdrop in the same manner that the stories of Callum, and Craig's are against a backdrop of violence and organised crime, and Eric's was against

[17] Serve time - to spend time in prison.
[18] Getting your head down and keeping your nose clean - to stay out of trouble.

geography and deprivation. The objectification of women as the givers of sex and the perpetrators of crime occurs while men as takers; punters, profiteers, traffickers or pimps are persecuted to a far lesser degree (Erbe, 1984). In this gendered context, sex is a commodity. As a street prostitute with her partners and her own addiction to provide for, Katie *"worked the streets."*

At the height of his cocaine abuse, John's involvement in crime also peaked.

John: *"I was stupid enough to get involved in growing drugs [weed], I made a fortune, an absolute fortune, but with all the money and a controlled drug addiction it could only result in a bad thing for me".*

The link between drugs and crime discussed in this section has, since the early 1980's, been focused upon as one of the defining features of the UK drug problem (Parker and Newcombe 1987; Dorn et al. 1994; Bennett 1998; 2000; Seddon 2000; Holloway et al. 2004). As such, it has become a central concern of contemporary British drugs research and policy. Understanding the drug crime link requires the type of structural contextualisation discussed in Chapter 6, defined as an application of the sociological imagination and highlighted here in the work of Bourgois (2003); Bourgois & Schonberg (2009), and Conteras (2013). The term social exclusion tends not to feature in these works as it is primarily a European and British term. Defined here as the processes of exclusion from participation in everyday social activities (Levitas, 2000), social exclusion should be recognised as a multi-dimensional process which typically, but not always, involves poverty (Saunders, 2003). Put another way: social exclusion is intersectional. It is an issue of cultural capital; a drug robber such as Martin or prostitute such as Katie may experience periods of relative affluence, but it is a social exclusion due to a lack of cultural capital which prevents them from engaging in everyday activities such as legitimate work. Bourgois (2003) and Contreras (2013) explain this via structural shifts in the jobs market, primarily a shift from manufacturing to a service economy in which the skill set required to be a successful *"badman"* is not only of little value, it is the polar opposite of the polite, humble service worker's subservience. Rather than narrow mindedly concluding that, due to an almost carnal allure of the criminal act, street criminals would not take legal jobs if available (see Katz, 1988), a proper intersectional understanding of the type outlined here requires a less pathological approach. Recovery from addiction requires recognising the points at which one's life trajectory deviated and bonds with informal institutions of control were severed. Many TC residents; Sasha, with her career

in medicine; Julia, managing an insurance company; Mathew's lorry driving; John's gas fitting; Daniel's soldiering; Callum's Judo, have a history of social functioning, of education, vocational skills, and positive community and family ties; a history rich in various forms of capital, if lacking in others. For them, 'recovery involves rehabilitation: re-learning or re-establishing healthy functioning skills and values as well as regaining physical and emotional health' (National Institute on Drug Abuse, 2002 p1).

Tackling issues of deprivation and drug use on a macro policy level requires the same thing; an understanding of the structural forces of alienation at play in the lives of those who have slipped through the net.

## 7.4: "Rock Bottom" - Guilt, Suicide, Realisation and Commitment

> Callum: *"If you're not ready yourself Chris, to come off drugs, I don't think you ever will, you've got to actually be ready yourself."*

The change in mindset and realisation which facilitates an individual's decision to enter rehabilitation is seldom prompted by a 'hot flash spiritual awakening' of the type experienced (and widely documented) by W. Wilson, the founder of AA, whilst undergoing the rather extreme Belladonna 'purging and puking' cure (Wilson, 1957). This is not to say that turning points involving heightened awareness and a cognitive or emotional shift do not occur (see Koski-Jannes, 1998). Rather, they often seem sparked by a series of perspective changing events; what Denzin (1989 p15) describes as 'life epiphanies'. For Kris and Callum, violence sparked such shifts in thinking. Callum explains how he finds the escalating violence of younger *"up and coming"* criminals, to whom he had fallen victim, shocking;

Callum: *"I was growing cannabis … and I was robbed by kids who come through my door with machetes and went through my hand there [gestures to large scar on hand] and nearly took me thumb off but um, I had plastic surgery on it, do you know what I mean, but they are them type of kids about, they've robbed everyone all over Liverpool and are wanted all over Liverpool … I was in hospital, I was in there for about two weeks while they done work on my thumb and my hand and I just thought, I've had enough and I went to my key worker and said I need to go and get me head together and get away from it, they sent me here … Kids these days, they are not just after going up and taking your drugs, they are doing sadistic*

*things … slashing people's faces and trying to peel the skin off your face and slashing your hand to pieces so you can't hold a gun, knifing through your tendons you know … it's chaos, proper chaos, you can't live like that. You can't live that type, once you reach a certain age you, you know, you want to just sit back and allow all the madness because your gonna end up doing life in jail or dead"*

Kris describes the beginning of his life epiphany as "*a bit of a kick up the arse … I lost my place at the hostel, and um, like I say, I was fighting. I was twenty four, twenty five and I went out and ended up being getting hit round the back of the head with a brick and [having] my nose bitten off"*

For Daniel, a combination of having his children taken away by social services and the death of a fellow addict, a close friend, represented his *"hitting rock bottom":*

Daniel: *"My best mate died of an OD and I went to his funeral … His mum just looked at me and said ' Daniel, I don't want to see you like this'. Plus, my family was on at me, they could see that I was really poorly … One of my daughters was adopted because of drugs, [we] neglected her basically, I thought … I don't what to lose the other one, it's now or never.*"

Further injury and a hepatitis diagnosis relating to his chaotic lifestyle led to Kris seeking a place at PF; *"I ended up overdosing. Er, I fractured my foot in three places and then that were it. I went straight down Addaction and said I want to go to rehab."*

Poor physical health was also a key contributing factor in Sasha's decision to enter rehab:

Sasha: *"I couldn't get out of bed. I was bed bound for six months. I couldn't even get to the toilet, I had to have a bed pan …. I arrived at detox a week before I came here, being carried in by my family … I couldn't really get anywhere, I'd not really had a bath for weeks because it was such a performance to get me in and out … everything had really gone by that point … I knew that my organs were packing in, I could feel that happening."*

For Brian and Christine, becoming homeless represented *"rock bottom."*

Christine: "*I was homeless for about nine months. Yeah, that just makes everything ten times worse. I mean sleeping out or sleeping in a hostel, it's like tenfold, everything is worse."*

Brian: *"I split up with my girlfriend, went to a hostel. It… after two months I got kicked out of there for drinking. I ended up on the streets … for about seven to eight months and then I got*

*stabbed with a dirty needle … I was asleep at the time and woke up with a dirty needle stuck in me [gestures to hand]. I was walking through the middle of XXX. I didn't know what I was doing, I passed out and they [ambulance] had to resuscitate me."*

The key emergent theme here is that *"rock bottom"* entailed the near the complete loss of capital stocks which characterises social exclusion. Both Callum and Kris found themselves in hospital having fallen victim of the symbolic violence which characterises the field of chaos. Daniel was alienated from decisions relating to the upbringing of his child, Sasha's physical capital was reduced to the extent that she was bed ridden, Brian was defenseless against attack whilst lacking economic capital to the extent that he was on the streets: a situation highlighted by Christine as magnifying all other intersecting variables.

I asked Katie to talk me through her decision to enter rebab. Upon our first meeting, I was sure I had seen her before. It turns out I had; at least, I had seen her on screen. Katie had been one of the central characters, struggling to get by in a documentary set in a north-eastern town suffering deprivation under austerity measures.

Katie: *"they was doing some research … They asked me if I wanted to tell my story and I said no. Then, three months later, I changed my mind because I wanted my mum to see how she'd left me. I wanted to get a message to my family that I was struggling and I needed rescuing. But then they [documentary makers] said to me a week before I came here, pack your bags we've paid for rehab for you."*

Chris: *"Did anyone else who did the programme get the help that you did?"*

Katie: *"No. I made a change, I left the partner I was with. I got off the heroin, I got on the methadone script, I got into supported housing."*

Definitive statistics on the sex industry do not exist. The myriad structural inequalities which contextualise the intersection of drug abuse and prostitution result in research attempts being plagued by low response rates. Both sex work and drug abuse are covert due to their illegality. They are what Stevens (2007) describes as dark figures of crime. The House of Commons Home Affairs Committee estimates there to be around 72,800 sex workers in England and Wales, a large proportion of whom are thought to be substance abusers. Katie was one of this unknown number. Her *"rock bottom"* was punctuated by getting the message out that she needed help via the documentary I had watched months before. An offer of funding was made that she was able to capitalise upon. At *"rock bottom"*, she was offered a

lifeline. But, like all prospective residents, Katie had to demonstrate a level of commitment in order to be accepted at PF. She had to make changes. For Kevin, the need to appear worthy of funding required his lying about the amount of methadone he took in order to begin his program (see Section 7.2). Individual cases vary depending on funding stream but a certain level of commitment on the part of those wanting to enter the PF programme is the norm.

For Mathew, John and Julia, the impetus to change was family. Julia describes how she did not feel inclined to stop drinking after being advised by her doctor that she only had two years to live. Her epiphany came when she realised; "*It wasn't me. It was the fact that I would have been leaving my son without a mother. That's what really knocked me, it wasn't anything else, it was mainly that."*

Mathew explains how, with a marriage that was on the rocks, he was at risk of losing his children and guilty about the treatment of his wife;

Mathew: *"I was getting out of control, do you know what I mean, I, I, I didn't really, well I suppose I hit "rock bottom" in my own way. Um, you know, my relationship was on the verge of breaking up … I was lying to her all the time about where I was going. I was emotionally manipulating her all the time because I just wanted to get my own way. I was just spiralling out of control."*

Guilt was a defining feature in Kevin's hitting *"rock bottom"*. During an emotional interview, he explained how his actions as the *"ruthless"* and *"cold"* man he described his chaotic self as (see Section 7.3), brought hurt to the ones he loved.

Kevin: *"Yeah, you know, er, bless her soul, my nan, um, I got myself in a right shtook[19] with some big time boys and I stole 25 grand off her … I cleaned her out, her savings, the lot … she took me to court and I was looking at fraud, I was looking at 6 years and, er, for an [pause] unknown to me, er, I went to get sentenced that day at the crown court and, er, she had sent a letter to the judge and this letter [pause] it made me break down, even the hardest, most horrible person that I was, it made me break down and the letter basically said 'I don't want my grandson to go to jail. I want him to get help' you know and the judge [pause], it touched him, you know and that was, that was the start of [pause] my road to either, I've got to sort myself out or kill myself, um, because it was like [the judge said] 'I'm giving you an eighteen month suspended sentence. If I ever see you in front of me again for anything you*

[19] Shtook - trouble.

*are going to do the time' … I just couldn't believe that my nan had so much forgiveness for what I had done to her, you know, and when I went to rehab that was one of the biggest things for me to get over and to get my head round, er, how … could I do that to someone who had looked after me all my life, you know, and for me to just, instantly [pause] to feel no remorse, no feeling, no nothing. To go in her house, take her credit card and just blitz her out and not care, you know. How, how can a human being do that to someone who loves them so much? [long pause].”*

Chris: *"Is she still around, mate?"*

Kevin: *"She died at the beginning of the year."*

Chris: *"Was she able to se…"*

Kevin: "*Yes. What I am now. Yeah, and she was so proud you know and I'm glad, I'm glad where I am now. I wouldn't change it for the world, I really wouldn't."*

John felt overwhelming guilt following a suicide attempt that would have left his children fatherless:

John: *"In total I did 78 codeine tablets, I did seventy eight Tramadol … I think throughout the whole day it was between fifteen and eighteen grams of coke and a good hit of vodka … my last memory of that night was standing up to go and have a look in the mirror thinking it's not done anything, I don't look any different and the next thing I remember was waking up, being shook awake with water being thrown in my face … I don't know what time I passed out … my Mrs found me lying on the floor … I went to bed and passed out again, woke up in the morning and suffered a massive panic attack, I couldn't breathe. I got rushed to hospital … for me the ultimate shame was doing that. My kids wouldn't have had a dad, knowing that my Mrs would find me. I wasn't even leaving a letter … they would never know what took me to where I was."*

For Julia, Mathew and John, the salient institutional bond with the nuclear family was not broken. For John, this bond was the source of much guilt following his suicide attempt. Daniel had already lost one of his children to social services, and the fear of further degradation of his family unit provided impetus to change. It is important to remember that the sum of such institutional bonds equates to recovery capital. The point is being made here that, the support that comes from family, and the responsibility towards them, are important

aspects of recovery capital. For Kevin, the forgiveness of a member of his immediate family, his grandmother, prompted a change in his thinking. Eric highlights a rising awareness that his chaotic drug use was effecting his ability to look after his children as his reason for entering rehabilitation;

Eric: "*I had full custody of them and then, when I hit the gear like, well, instead of them going into care, my mum took over. They are living with my mum still now. I was on the gear … obviously, I shouldn't have my kids with me now. I mean, I won full custody of them in court … I still [picked] them up from school every day. I took them to the park every day and still interacted with them every day. My mum knows where I am now, she didn't believe us when she heard I was going to rehab. She thought it was a blag to stay in her house until my key worker came and picked me up. But she said they are proud of us like. Because, I've lost nothing through my actions, through what I've done. I've still got my mum and dad, I've still got all of my kids, I've lost nothing … I mean the only thing I did out there was see my key worker and get my methadone. I still went to work, still got up at a reasonable time, seeing my kids and everything like that. I never went out robbing no one … that's what's hard about being here … I know I've got to be here like"*

Chris: *"Why have you got to be here"?*

Eric: *"For a better life for me and my kids."*

Like John, Sean's hitting *"rock bottom"* was punctuated by suicide attempts and guilt.

Sean: "*It was like [I'd] trapped myself inside myself. I [wasn't] being a responsible person [long pause] so XXXX [son's name], he is the main focus of my life, he's my boy, you know, [long pause]. Because, I started getting really suicidal. I tried taking my life … two, three times [pause], I was finding life really hard. I wanted to … I had no desire to be anybody myself. I had every desire for my son to be somebody and do well for himself but, as a dad … I was really struggling, just seeing him and how happy he was [long pause] and how sad I was feeling. I thought he deserved better [long pause]. Basically, I didn't want to be there. I thought he was better off without me [pause]. I felt he was better off without me because by the end of it, I wasn't providing for him. I was in my flat alone, drinking and having suicidal thoughts … I had had enough of what I was doing [long pause], it was on my twenty fifth birthday… I tried killing myself again … I slit my wrists and tried slitting my throat … the crisis team got involved and then, I don't know how, from somewhere [laughs], I'd*

*withdrawn off the alcohol for a couple of days and my head started to get a bit clearer and I was, like, look, I've had enough of this now and I was with XXXX [son's name] because I've got ... I was staying at my mum's for a bit during the Christmas period. And, um, I was more clear headed. I was nowhere near fixed but I was more clear headed, I was with XXX at the time and things started changing. I could see an attitude in my mum, with me. You know, she was happy that I was safe. I talked to her a little bit and I was speaking to my key worker from Addaction"*

This final suicide attempt was followed immediately by engagement with the mental health crisis team, a detox from alcohol and a period at home in which bonds were restored with his mother and son. His recovery capital pool increased through reforming and strengthening of a primary institutional (familial) bond and engagement with mental health services. Commitment to detoxing from alcohol and increased engagement with Addaction is ultimately what led to his application for PF being successful. Put simply, an increase in Sean's recovery capital was pivotal in his entering rehab.

John had to show a high level of commitment in order to obtain funding. He made a second attempt on his life shortly after leaving hospital following the first attempt.

John: "*I came out of hospital feeling like a failure so I got back on the drugs again,um, I went an' begged for help, they wouldn't put me in rehab so what they did was put me into NA. NA went well but then the drugs slipped back in again so I was going to NA then coming out and getting high …a simple argument with my partner sent me back out walking around thinking 'what am I gonna do?' Um, I went on a massive bender and I ended up taking lots of coke and a lot of pills to go with it, I ended up back in hospital for two days and this time I came out, um, and I went to Lifeline and (exhales) I just completely lost it then. I didn't lose it in an angry way, I broke down and I just begged them and said you've got to do something, I've got to fix this. If I don't sort this out my kids are not going to have a dad … I took the [family] picture with me and I said look I … I showed them the picture and said look that's mine that's the only thing I've got now and if I don't get to rehab I'll have to walk away and, if I walked away then, I wouldn't be sitting here now because I would have lost the only thing that mattered to me at the time other than [pause], because I didn't know where I was at, I didn't know what I was doing anymore, I was confused all the time. I begged and begged and they said yeah, we're going to put you through … I come in here [PF] for the tour and the next day I got a phone call after the assessment and they agreed I could come. But, due to the*

*fact that the burglary (pause), um, I was due in court so the funders wouldn't release the funding because they didn't know if I was going to go to prison. So, about a month later, I had to keep myself on the straight and narrow. I was still using but, instead of using five, six or seve*n *grams a day, I was only using 1 a day. Still not good, I know, but I kept myself busy. I attended NA groups, um, I never lied to them. I told them I was still using. I attended relapse prevention groups, err, key sessions. I got involved with a bloke who run a business called Choose Life. um, he goes around schools in Wales with recovering addicts and folks that want to get clean, um, (pause) he took me along with him. So, I, I went there twice a week for four weeks to Wales to do talks to all the kids (exhales) and I would never be high when I went but I would always go home and have a gram that night, er, but I did everything I could and, I could feel that it was getting, it was drifting again. I was getting worse, no matter what I did, I was getting worse so I phoned up the funders, I phoned up my Lifeline people, I said, I'm ringing XXXX XXXX from funding, they said you can't really do that, you know that's for us to do and I said look you're not pushing it. I need her to know how much I need this. I need her to hear it for me. I said the only way I'm going to sell myself here is if I do it personally. So, I did, um, she said that she was going to do her best to sort it out, I phoned her up again and said I'm going to phone PF but she said that's our job to do so I said the same again, that I was going to do it. I said I'll take the chance of never getting to go. So, I did, I phoned here (pause) six times over the course of a week every day without fail, er, and just told them, I begged them and I said don't worry about whether I'm going to make it because I guarantee you. I said the whole point that you want people to come here is that they get better. I said let me come, I'll go to court, if I go to prison I promise I'll come back the day I come out. I said I'm going to do (pause), right I will pay the funding for that beginning bit before prison. I'll pay it myself, but, I said it doesn't matter whether I go to prison or not, just don't doubt to me because there is no doubt in my mind. After the six months is up, you will see that something has changed. So, I just fought, like, ridiculously hard."*

Chris: *And did that work?*

John: *"It worked, yeah. Three days later I got a phone call. That was a Friday, asking me to come in on Monday. I got the phone call on the (long pause) twenty first of March, sorry twentieth March, and I came here on twenty third of March and then, er, that's it really. I have not looked back. I miss home, miss home like you wouldn't believe [pause], my children and that. I've learnt, I've learnt more about myself now, I've learnt so much about, like,*

*everything I can do. Everything in this place I grasp with both hands, for the new experience."*

The concept of commitment is central to the ethos of PF. By the senior stage of their program, residents are required to be committed; to have *"bought in"*. Such commitment is usually evidenced by greatly increased responsibility within the house and work (predominantly on a volunteer basis) within the wider community. The centrality of commitment is evidenced by the fact that a person in recovery is twice as likely to, in a community or civic group, work voluntarily than the public at large (Helena Kennedy Centre for International Justice, 2015). This "*buy in*" form of commitment will be discussed again in detail in Section 8.5. It is mentioned here in order to differentiate it from the motivation and readiness type commitment required of Katie, Sean, John and, as we saw in the previous section, Kevin.

During my time spent working at PF and in subsequent discussions with staff, it has always been clear that of paramount importance are 'number of bums on seats'. Essentially, if a prospective resident has funding, PF will take them, a phenomenon described as "money over mission" (Dolnicar, 2008). For better or worse, there is no commitment quota that needs filling to become a resident. There is, however, a minimum number of 'bums on seats' required for PF to not operate at a loss. Soyez et al (2006) argue that commitment of this second motivation and readiness type, commitment that needs demonstrating prior to entering rehabilitation, is a positive predictor of TC service user retention. My own subjective opinion, and that of some PF staff whom I have spoken to, is broadly in line with this. Sasha's multiple rehabilitation attempts are testament to this.

Sasha: *"It had nothing to do with the rehab[s] … [they]were twelve step, different from here … I don't think it was anything to do with how it was run. It was me … the six week [sober] period I'd often hit, I'd become resentful that I couldn't drink and resentful to other people who could, that sort of thing. I would test myself and of course it [drinking] would all escalate immediately."*

Sasha was, to paraphrase Julia, *"not ready 'til she was ready"*. The issue being highlighted here however does not relate to whether motivation and readiness commitment can or should be required to enter rehab. It is that the commitment is being driven by, defined by and having its parameters set by a funding process rather than a recovery ethos. In this ever

increasingly institutionalised world, non-profit organisations are often forced to make decisions based on the need for money over the pursuit of their mission (Dolnicar, 2008). Bums on seats becomes more important than committed service users to service providers, while front line key or drug workers are forced to require of potential residents drastically differing levels of commitment, depending on their geographic location and ever decreasing funding availability.

In Section 7.2, Callum warned against the dangers of methadone maintenance. We saw Kevin having to commit to a methadone maintenance program, which was ineffective, leaving him "*clucking it out"* for an unusually long period of time upon entering PF. Meanwhile, Kris's detox from Subutex was the worst of his life. A more effective way for them to build motivation and develop readiness for change would have been to work on their recovery capital in the manner that Sean was able to. In situations where bonds cannot be made with stable family members, prolonged attendance at NA, AA or both would constitute an increase in recovery capital. Many of the concepts used in such twelve step programmes are transferrable to the TC context. Before having to break the rules and contact his funders directly, John's period spent attending NA and touring schools and talking about his addiction essentially kick-started his recovery process. The same, however, cannot be said for Jenny's daily hike to receive her methadone dose. The changes Katie made in her life certainly equated to an increase in recovery capital. Breaking from an abusive relationship and getting a hostel room provided her with a solid foundation from which to enter rehab, but it is worth highlighting that her lifeline did not come from the state. I argue here that it should have.

At this point it is pertinent to introduce James's story. Interestingly, James was, at the beginning of this research, part way through his second *"programme*[20]*"* at PF. He first entered PF in the 90's with a heroin addiction and, upon completion, gained an outdoors activity qualification and worked in France for a number of years.

James: *"So I did all that and got the activities qualification worked in the south of France, then came back to England. Er, thought I was okay, drinking socially. Then, um, about seven, well I would say about eight years ago, I moved back into my own area in XXX. And, then through old acquaintances and …me family, I got back into non-pro social behaviour, I found myself drinking too much. Er, cocaine, basically partying. Um, I'd kind of got to the*

[20] Programme - a person's rehabilitation at PF is often referred to as their programme.

*point where I knew where I was going to be in two years' time. I wasn't "rock bottom" then, but I knew I would be there in two years' time so I applied for this place straightaway, did my own detox, nipped it all in the bud and I've come in here, basically, um, for the behaviour therapy. The drinking and the cocaine is not going to be an easy issue to deal with but it's my behaviour, I was going back to old behaviour that I didn't like about myself so I applied for here before I could get into serious trouble with it".*

Chris: *"That's a totally different journey to anyone else that I've spoken to. I've only done the five other interviews for this research but I've been here before. It's interesting that you were out there but that you recognise signals and got yourself back here."*

James: *"I had, went to university, got diplomas in psychology, sociology, [pause], started a social work degree. I did it all but I've just hit the bottle with it … and um, in my, where I come from, my family are not the nicest of people … but they are loved ones. I just got back into, to [pause] basically, if you'd like to know, extortion, blackmail … very nasty stuff. Um, and I didn't like it. With the old friends that had moved up the ladder, the crime ladder if you like, they were the gaffers now, [I] didn't like it, applied for here to see what they can do for me now."*

Chris: *"So that's what you meant when you said it was [pause] more about the behaviour than the substance now?"*

James: *"My behaviour was more worrying than the substance. The substance was a massive problem but I was more concerned about what my behaviour [pause], that I had slipped back slowly into my old behaviours. You know, you can imagine can't you, crime, you know, violence, everything. I didn't like it, it didn't sit with me … But that's what I found myself slipping into to fund my university, to help my girlfriend, to fund my flat. The social work degree … the majority of it is on placement …so you can't find work… it comes to the point where, you know [pause], just a phone call and you can sort something out… I've got to keep her sweet, make sure mum's alright, my sister is alright, make sure she's got money."*

In the same manner that Sasha's cultural capital stock served to prevent her criminal activities moving beyond the everyday (see Section 7.3), James's criminal past had a gravitational pull. He had strengthened his bonds with society and left rehabilitation "*on the straight and narrow"* but gradually, after returning to the area he grew up in he became embroiled in

organised crime. It may appear ironic that the primary reason for this was to pay his way through university, to succeed, but he was under criminogenic pressure.

His goal of achieving a university degree may have been legitimate, but a situation arose where it appeared that illegitimate means were the only way to achieve this. I can sympathise. When times are hard people fall back on their cultural capital to get by. For some a phone call to the bank of mum and dad will suffice. For others it will not. As stated in Chapter 4; in reality, the ontological strength of one's potential is based largely upon their economic status. In Section 7.2 Cloward and Ohlin's (1960) argument that structural opportunities dictate the where, how and why of innovative Mertonian action was introduced. James was one of the frustrated few who innovate through the creation of criminal paths to success (Contreras, 2013). From a structural standpoint, it is the existence of such innovative opportunity which is important (Cloward and Ohlin, 1960). Existing structural factors in Craig's adolescence facilitated the opportunity for entering organised crime. The Existence of Callum's social capital ties with the prison black market allowed him safety from other inmates (see Section 7.3). In Bourdieu's metaphorical 'Game of Life' (see Chapter 5) actors play the hand they are dealt. They use the capital cards they have at their disposal.

Sticking with this metaphor, what sets James's story aside from the others listed here is his possession of cards belonging to the recovery capital suit. He played these cards by exercising his reflexive ability to recognise slipping back into *"non-prosocial behaviour"*. James's use of the language and conceptual understanding of recovery allowed articulation of his situation. Falling back upon his recovery capital stocks allowed him to exercise autonomy. Such recovery management represents an important emergent theme from the field of recovery and shall be discussed again at length throughout Chapter 8. Here it will suffice to say, James's time at PF allowed him to develop the reflexive ability to know when he was *"acting out"* and what to do about it. This recovery capital allowed him to bypass some of the hoop jumping and commitment proving, undertaken by the other service users who were not privately funded. He was able to contact the right people and say the right things to get back to PF. He was not subjected to the undermining bio-politics of methadone maintenance or any other comparable forms of belittling control.

Hitting *"rock bottom"* has been explored and highlighted as a form of extreme social exclusion resulting from severely depleted social, economic and, for some, physical capital stocks. Guilt, immediate family and responsibility for children are common motivators for

change in the stories highlighted here. There are however substantial differences in the routes of entry and levels of commitment required to gain funding. There will never be a standardised route into PF due to the chaotic lifestyles of addicts. It is however certainly the case that the type and level of commitment required should not be economically determined. It should focus on recovery capital development.

## 7.5: The Field of Chaos: Conclusion

In this chapter I have explored the life stories of beautiful and complex people who have intimately shared themselves, revealing addiction as a disorder of a habitus forged structurally and not reducible to individual action. I am humbled by their openness. Alienation, violence, poverty, child abuse and the functional use of a variety of substances to manage feelings have been highlighted as well-trodden paths into a field of chaos defined by criminogenic pressure and substance abuse. The intersection of such issues and the frequently paradoxical relationship they have with punitive and exacerbating policing approaches has also been highlighted. The transition from functional substance use into chaos and eventually "rock bottom" is presented as being characterised by the breakdown of capital stocks and institutional bonds. *"Rock bottom",* a key concept within the recovery sphere, has been described by those who have lived it. I have, in my own clumsy way, attempted to document these descriptions to offer the reader a glimpse of the insider's perspective. Although powerful, the written word is however no substitute for lived experience.

In these stories people were ready to change when they were ready. The old assumption that 'rock bottom' should be struck to facilitate readiness apparently rings true. For those who were privately funded, recovery capital in the form of economic support from the direct family is what got them to PF. Those who were not privately funded were required to demonstrate worthiness for funding in a range of different ways, some positive, some negative. The bio-political nature of methadone maintenance has been highlighted. Commitment to a prescription does not constitute the development of recovery capital, whereas engagement with 12 step programmes and the tentative rebuilding of institutional bonds, particularly familial ones, does.

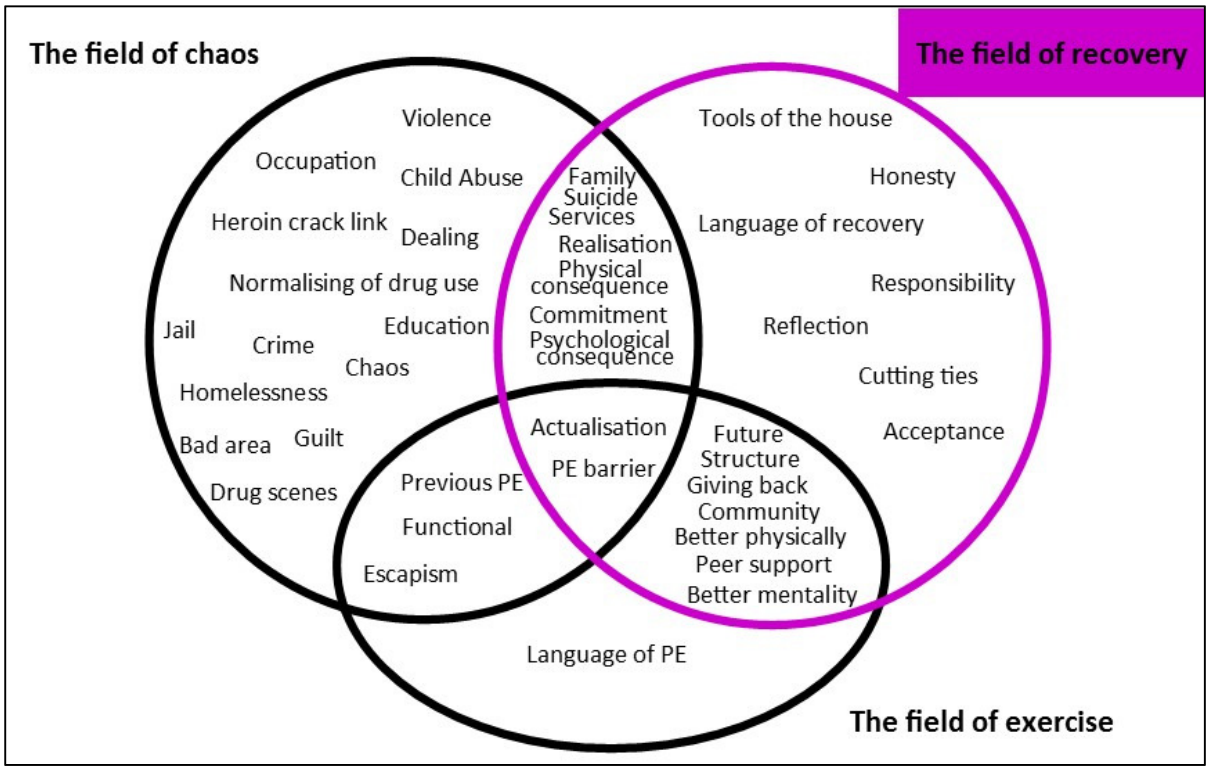
Finally, there has been some use of the language of recovery: interviewees using the discursive practices of the TC to reflect and make sense of their chaotic past. The

development of a language of recovery represents a great leap in the development of recovery capital. This is one of the primary foci of the next chapter.

# Chapter 8: The Field of Recovery: Introduction

In this chapter I explore the field of recovery. For reference purposes, the emergent theme Venn diagram shown at the beginning of the last chapter is reprinted here. This chapter focuses upon themes in the purple field of recovery.

***Figure 7: Interview Themes - The Field of Recovery***




The language of recovery was introduced in the last chapter as a set of concepts used to articulate time spent in addiction in a reflexive manner. Alongside the practices instilled during time spent at PF, the language of recovery represents an important aspect of recovery capital which is focused on in this chapter, particularly in Section 8.4, when exploring the telling of life stories.

Following this introduction, the chapter opens with a walk up the drive of the PF rehabilitation centre. My own observations and experiences punctuated the previous chapter, but the vast majority of the data discussed came from interview transcripts. Observations become more frequent in the ensuing chapters because, rather than being focused on chaotic pasts, the themes emerging from the fields of recovery and exercise often relate to events I

have been part of. The stories told here detail day to day life in a TC that I have previously worked and in which, as part of carrying out this investigation, I continue to spend a significant amount of time. My thoughts on the importance of community and its relationship with recovery capital were touched upon in Section 4.2. The crux of Oldenburg's (1999) work which I introduced there is that the assumption that stress is a natural part of life is false. Rather, it is our mode of life which is the principle cause of our individual and collective woes. Principle of the problems we face is a declining sense of community as our pastimes are reduced to consumerism. As suggested in Section 4.2, this results in reduced levels of social capital, particularly for those with lower economic capital stocks. This conceptualisation is of relevance in this chapter, particularly in Sections 8.2-8.5 which focus upon how a TC works by exploring the notion of the community as method. Here, I have provided the following quote from Bauman to set the tone.

> *Community is the 'kind of world which is not, regrettably, available to us … but which we would dearly love to inhabit and which we hope to repossess'* (2001, p3).

## 8.1: Reflexive Bad Men Walking up the Drive of The Star Wars Café

Kris: "*It were like the one who flew the cuckoo's nest."*

A long curved driveway leads to the steps of Storth Oaks House[21]. The entrance to the drive is marked by huge, grand stone pillars. There are trees, old trees and dense but well maintained foliage on either side. To the right there is grass and flower beds. I can tell that a great deal of time is spent maintaining this space. It has a sense of permanence. As I round the bend I see Storth Oaks. It is big, stone built, it is old and it is grand. To your right is a picnic bench. During the day there are often people sitting on it smoking hand rolled cigarettes and drinking never ending streams of cups of incredibly sweet tea or coffee. There are always new residents at Storth and often new faces on the bench. They always say hello and I like to stop and chat before climbing the steps to the main entrance.

[21] Storth Oaks - the name of PF's main site in Sheffield.

The steps leading to the door are curved: this feels just right, long ago thought was given to the landscaping here. I know this because I used to be a landscape gardener. There are stone walls either side of the steps. They have planters filled with colourful flowers in them. Brian made those. The first thing you see upon entering the building is a small wall mounted black board with *"thought of the day"* written at the top. Beneath it is scrawled *"there is nothing to fear but fear itself"*. I wonder who wrote that.

I enjoy hearing about residents' first impressions of Storth. It is just such a different place. The setting is beautiful, but it is the feel which tells you it is special. A vibrant community resides here and this gives the space energy. As a researcher I am not supposed to have a favourite interview answer to the *"what did you think when you first came here?"* question, but I do. I had many good conversations with Callum, I liked his dry sense of humour and his conversational habit of using my name a lot when speaking to me. He would begin an important point with *"eeeeerm [pause] you see, thing is Chris…."* His answers were always considered and often made me laugh.

Chris: *"Go on then tell me, you touched on it back there, that your first impressions were a bit like 'wow' but what was that first impression? What did you feel when you got here?"*

Callum: *"I just thought it's like being, I don't know, you know like in the Star Wars Café [Both laugh]. Everybody was just so different Chris. Do you know what I mean?"*

Chris: *"[still laughing] I like that. And what was it that was different about it?"*

Callum: "*Um well, you know like, you come in and you go into 'welcome house' and you got to give um, your feelings of a morning, which I'm not used to, not used to telling people how I feel. And I'm feeling god-awful and some people [can] just like do that but [pause] like where I've lived and I've got to put up a front"*

Chris: "*What, you're telling me that you never spoke of your feelings in jail! [Both laugh]."*

Callum: *"No mate! It was kinda like a new way of thinking. And I think you get to know yourself as well, do you know what I mean? That's what I really wanted to do as well, get to know myself and find out why I've been doing this over the years".*

It is the nature of the difference that's important here. The difference, as Callum points out, is the focus upon feelings. The notion of there being no escape from feelings when the drugs are gone is universal across these interviews, but Callum is also highlighting a change in community here. A shift to a field of recovery, far from the field of chaos and a prison system which magnifies rather than tackles the complex issues of those residing within it (see Section 7.3).

Kris describes a similar first experience: *"I thought it was nuts! What was it I said ... I said it were like the one who flew the cuckoo's nest [Both laugh]. It's fucking crackers, Nuts yeah.... Like I say if you'd get a camera it would just ... Everyone would be watching it because it's mad! But it's really good, once you get your head into it."*

Chris: *"Er, so what was hard about it then, you mentioned [earlier] that it got difficult a few months in. How was that?"*

Kris: *"I was overwhelmed because I'd not ... Really [Pause] because I had experienced anger, I could relate to anger, do you know what I mean? I had not really felt anything else … so I was kinda stirred up with all these feelings. I'd get wound up with someone and just feel like bursting into tears … I was snapping at people and things like that and I didn't really know why. Err, but like I said, I had been using since I was fouteen. I was an addict, I had just never really felt it. Yeah, I was just really overwhelmed."*

Fear, anger and the violence that follows were, as outlined in the last chapter, defining aspects of the habitus which governed Kris's actions in the field of chaos. The armour of the *"badman"* (see Section7.3) is however rapidly deconstructed at PF. This process is highlighted by many interviewees as the most challenging aspect of recovery. Martin describes a very similar struggle to Kris.

Martin: *"I've struggled with my emotions and that because I was just cold, nothing bothered me … I didn't have any emotions and then at like the back end of my detox I started just feeling weird one day. Angry, and then upset and they would say 'how you feeling today?' I'd say, 'I don't know, I've not felt these feelings for a long time.' It was getting to grips with my*

*emotions. That was the hardest for me and, and recognising who I was as well coz I've not been me for [pause] twenty years, something like that, so I didn't know who I was".*

Chris: "*Are you saying that it was hard because ... You didn't know who you were for a long period of time?"*

Martin: *"Yeah I couldn't remember who I was, I just thought I was this angry, idiot, lunatic, whatever. That's what I thought, I hated myself, you know. I ... Obviously [pause] I couldn't stop my mate from getting beaten to death in front of me [pause] I, I, was that off me nut, so couldn't stop my girlfriend killing herself and I blamed it on myself, you know ... I hated myself for it. But ... You know now (exhales) I realise that I couldn't stop that either way, you know."*

Chris: *"So, er, now that you're clean and clear headed, and more comfortable in yourself maybe? Is that what you're saying?"*

Martin: *"Yeah."*

Chris: *"Can you remember back to what life was like before addiction?"*

Martin: *"Well, no. Not really because I've always, from a very early age obviously, I've always done one drug or another. So, I suppose [exhales] here [PF], I found myself. You know, I mean, I didn't know who I was."*

The crux of the points made in the last chapter (see Section 7.5) is that people are products of their environment. Learned behaviour of the type described there is the central tenet of the behaviourist psychology which influenced early TC development (PF, 2011). People entering PF will often 'have come from an environment where dishonesty and deceit is common; where social deprivation is largely accepted; where poor education is seen as normal; and where drugs and drug dependence are regarded as a permanent feature of the landscape' (PF, 2011, p6). Callum, Kris and Martin were *"badmen"* from a field of chaos. They all reflect upon PF as a different environment with which they have a reflexive relationship. Callum's pointing out that fitting in required *"a different kinda thinking"* is a good example of this, his account is one that refers to itself while being socially constitutive of the situation to which it

arose (Jary and Jary, 2000 p 512). 'The TC is structured to provide a healing and learning setting in which new behaviours can develop and new skills can be learned' (PF, 2011, p5). Anti-social attitudes and feelings are not productive in this environment. Integration requires the adoption of pro-social attitudes. Callum, Kris and Martin have described this process, and in doing so, described the beginning of a shift in habitus facilitated by facing uncomfortable truths and feelings, peer support and empathy (Bamber, 2010).

The argument being made throughout this chapter and beginning in this section is that TCs represent a therapeutic field in which a person, through exercising reflexivity, reflects upon, and develops or changes their habitus. This is how the 'community as method' works (see Section 2.1). Rather than having therapy "done" to them, residents are themselves part of a therapeutic whole which is greater than the sum of its parts.

## 8.2: The Community as Method: Mindful Pushin' and Pullin' and the Tools of the House

> *'Seeing ourselves as we really are is something inherently difficult to achieve - even more so in this modern world of constant distractions and external distractions … we need a place to tune out from the external world and tune into who we are as individuals'* (Reid, 2002, p13-14).

During my first shift as a support worker at PF I was called into the front room for the end of evening meeting. My understanding was that, ordinarily I would be in the meeting, everyone would. Instead, I was sitting in the back office trying to kick start my dyslexic brain into gear for *"evening meds"*. I could hear a lot of singing and laughing through the closed door. “This place is mental,” I thought to myself. This would be my first time doling out meds and there were some detoxes in the house. This meant that I would be responsible for getting methadone doses right. You either get that right or you don’t. There is no margin for error. I had a huge folder in front of me that would need signing and counter-signing each time meds were given out. There was another folder in the controlled meds cabinet which also needed signing and counter-signing and I had a ridiculous number of keys that opened drawers, which held keys, which opened cabinets in which detox meds were kept. I was feeling anxious. A knock on the door and someone, could be staff or service user, calls that I'm

needed for the end of the meeting. Staring at folders isn't going to help anyway. I'm as ready for evening meds as I'll ever be. I enter the front room. Everyone is there, don't know their names yet but there are friendly faces looking at me. Good energy. *"Dave's picked you to sing a* me tune. *song for his positive outcome,"* I'm told. I knew songs were an important part of evening meetings. I had a vague understanding that Dave was allowed to pick someone to sing as a reward for something good he'd done, his *"positive outcome"*. The only thing I can think of is the *Fresh Prince of Bel-Air* the

Interpersonal interactions form the core of the TC philosophy that the community of residents is itself the method of treatment (De Leon, 2000). Outlined above is an experience written from memory of my taking part in such an interaction, of being part of the community. I did remember all the words. I was witnessing *"the tools of the house"* in action. An understanding of PF requires an understanding of their use. Indeed, the term *"use the tools of the house"* became synonymous with my time at PF. I have no idea the number of times I found myself saying this to residents who came to the front office to complain about the behaviour of peers, or a job allocation they deemed unfair, but it was a lot. Underlying the community as method lies the fundamental assumption 'that individuals obtain maximum therapeutic and educational impact when they engage in and learn to use all of the diverse elements of the community as the tools for self-change' (De Leon 2013, p645). In the above example, Dave had just received a *"push up"*. This means that another member of the community had put in a *"slip"* about him saying that he had done something good. The deed itself could be anything from asking for support when in need; *"pulling support"* to providing someone support or excelling at a job around the house while *"on department"*. The standard reward or *"positive outcome"* for a push up is usually either three cheers, a round of applause, or a song from a community member of choice. *"Pull ups"* deal with negative behaviour. These tools are part of the glue which holds the community together. De Leon (2000) states that a resident who receives a pull up from a peer should learn from the experience while the resident who pulls the peer up is practising their own recovery. David and Jenny discuss being pulled up for what may appear to be trivial behaviours.

David: *"Smoking on department, sleeping, er, like [Pause] sort of things like that which everyone struggles with. Sleeping ... my eyes closed ... like I wouldn't think I was sleeping but people would say I was so I would, like, argue with it [both laugh] … Yeah pull-ups and, like [pause] pull-ups [are] what I don't always deal with right well. I'm like, 'I ain't done it!' But*

*it shows that I have done it so I've got to, like, sit with that, write about that, acknowledge that I've done something wrong which you can't get away with."*

In sitting with, writing about, and acknowledging wrongdoing, David is going through a process of habitus change. He is in a field of recovery which instils a particular set of concepts (the language of recovery), practices of recovery and prompts such reflexivity. In explaining the rules of the house, Jenny describes how she monitors her behaviour in a similarly reflexive fashion.

Jenny: *"I remember [upon arrival] someone scaring me off a bit at first saying if you don't say good morning you are going to get pulled up and there are all these sanctions and that."*

Chris: *"I don't remember the good morning rule. Why do they do that, do you think?"*

Jenny: *"I think that it's 'coz, um, how can you put it, um, it's to do more with like socialisation, do you know what I mean, because … I [just] thought I had better say good morning, good morning, do you know what I mean, I just did it …as much as I'm not a morning person and if I'm really tired and my head's not in a good place I'll still say good morning, you know what I mean, it just becomes natural really. So, if I say good morning to someone and they say alright and yeah then I know they are okay and if you don't say that then obviously, you are not paying them any attention, do you know what I mean?"*

Chris: *"I get you."*

Jenny: *"Like I could come down and just be like arghhh and grumpy or whatever and someone could say good morning and I just blank them or whatever and that but then I suppose you become more aware of rules, structure and tools of the house and things like that … so yeah, it was just like arghhh but then you get to the point where … I knew I was doing well through the programme sort of thing and then now I [can] see myself [if I] slip a bit."*

The *"outcome"* of such pull ups is usually in the form of written work in which the negative behaviour is explored from three different perspectives: View of the disorder - recognition that addiction is a disorder of the whole person, that it affects all areas of functioning and that

individuals must accept some responsibility for the outcome of their actions; View of person - recognising the impact of external historic influences such as unsafe and abusive families and negative socialisation upon current trust issues and self-worth; View of recovery and right living. Right living means to abide by the community rules, the daily practice of which provides guidance on pro-social behaviour which should, eventually, become the norm for residents (De Leon, 2000). Repeated pull ups or extreme behaviour such as using a substance on site or entering into an *"exclusive relationship"* prompts an encounter group (discussed in detail in Section 8.3). An exclusive relationship is one which has exclusive qualities. Sometimes such relationships are sexual and sometimes they are not. What defines them as exclusive is the fact that those in them are removing themselves from the community and, while concentrating each other, are not working on themselves. During my time working at PF I saw a lot of residents enter exclusive relationships and I never saw them end well. Kevin pins down why this is while reflecting upon a peer's exclusive relationship.

Kevin: "*He was concentrating on other people's shit and not his own, you know, and that's what happens in rehab. People get lost between their own shit and other people's shit. You know, and it's [pause] The way I saw it is, that they are concentrating on other people's shit, it's nice to help people but to concentrate on somebody else's bullshit and not look at your own, you're setting yourself up to fail because you are not dealing with your own issues."*

During the time of this interview John was the Senior House Manager (SHM). This is the most senior position a current PF resident can hold in the house and requires a deep understanding of the PF philosophy. He explains the importance of working on yourself rather than focusing on others.

John: "*My one goal is to give the very most I can to myself, my children and my family. That's my goal. It works for the people I love, it's not just aimed at one person. For me to give them what it is I want to give them I've got to give it to myself first. That's something that I've picked up here."*

Whilst in the programme John needs to give the very most to himself, to be able to give to his loved ones. Later he needs to first give himself a level of attention which is not possible whilst in an exclusive relationship. As Julia puts it, he needs to *"work into [his] own head, making time for himself"*. Katie reflects upon being reprimanded for entering into an exclusive relationship.

Katie: *"I took my eye off the ball for three weeks. I weren't bothered about myself, I was just making sure that person was happy. The thing is with me, when I'm vulnerable I look for comfort in something. In the past it's always been a substance. So I was feeling vulnerable with the house and I ended up doing what I did … At first, when I first come in because I've had a hectic lifestyle. Do you know what I mean? Never stuck to any rules, rules to me were to be broken. But now I stick by them as best I can."*

Chris: *"Do you think that that's important?"*

Katie: *"I do, yeah. We all need it in our life. Yeah"*

Chris: *"So what other stuff have you learnt then, when you been here?"*

Katie: *"I've learnt that I need to stop being so hard on myself … I've punished myself for a lot of things that were out of my control. I've learnt that I actually do have a disorder which I always told myself I hadn't I was in control. I've learnt how to trust again, I've learnt how to believe, learnt how to have self-respect for myself and others. So I've learnt quite a lot and I'm still learning."*

Chris: *"How is that done? How did that happen?"*

Katie: *"Groups, written work, key sessions, sometimes I just do work on myself"*

Chris: *"What does that mean?"*

Katie: *"Talk to myself, check myself, yeah"*

Describing working on herself as self-talking and self-checking, Katie provides a solid working definition for reflexivity within PF. In reflecting upon the reasons behind her entering an exclusive relationship she uncovers a tendency to seek comfort externally, in substances and in people. In Section 4.1 reflexivity of this nature is defined as mindfulness. Katie is getting to know herself in precisely the manner advocated by Plato. She is practising self-awareness; monitoring behaviour and giving thought to how to act in future situations. Recognising one's agency in this fashion is one important aspect of the mindfulness described

in Section 4.1. Another is identifying the institutionalised social arrangements (structures) which help determine one's social outcomes. Katie is doing this when recognising her propensity to punish herself for things which are out of her control.

Callum exercises mindfulness in the same manner when he explains how his time at PF has prompted an exploration of the reasons behind his addiction, and that getting to know himself was a primary reason for entering rehabilitation.

Callum: *"When Hillsborough happened I give me mate the tickets to go because I was training that weekend and he never came back and it's only when my key worker said, that it was the start of when things started going a bit wrong"*

Chris: *"Is that something you had thought about before?"*

Callum: *"Yeah, but I've never been able to pin it down. I thought that I just got in with these people and just started rolling off it but when I thought about it, that was actually when things started going wrong for me, do you know what I mean? So [Pause] I think maybe that did play a part. I need to look into it more, like, because when you think back you don't, you wouldn't do that out there, think like well this happened back then and that's what done it, it's only while you're here, that's why I wanted to come, like, to get to know myself, to find out exactly why I've done it. For what reasons I've done it."*

Chris: *"It sounds like you have quite an open mind then?"*

Callum: *"Yes."*

Chris: *"I think that's really important. How have they helped you get to know yourself here then?"*

Callum: *"Um just basically being able to open up more, do you know, and like, talk about different things where like [pause] you can, like I said [in the outside world] you wouldn't give your feelings or tell people how you feel in the morning or anything like that and, is like the keywork sessions that you get where they … they tell you exactly what. You don't realise it at the time in conversation but they, like, will be writing it down and, like, they will say, well*

*this happened then and this happened that year and that happened that year so that's like where you peaked in drugs and this has happened, you know, and it's [pause] I've never ever done that, Chris. So I'm just starting to realise now. You know, there is a lot more thinking around what I've done, do you know what I mean? Because a lot of my acts have been on impulsive behaviour, just acting without thinking and that's what's gotten me into trouble over the years, like. Well there's [pause] I think, well my mate, he went missing in 2007 and they opened a murder enquiry, it's still on the police website. XXX he was a boxer you know a professional boxer and, but he was involved in drugs in a big way. I lived with him and I was with [pause] I took my lad out and he took his kid out on a Sunday and he got a phone call to go somewhere. I was supposed to go with him and, um, he got another phone call to say just come on your own so I went to my sister's and was there having a barbecue and he got off, he dropped his daughter off, his phone got switched off then and then he was last seen in a pub car park in XXX going to a taxi, grabbing a bag out of the taxi then following a Golf with four lads in. They've never found his body, never found his car, they've never found his phone you know what I mean. So they open the murder enquiry and, er, I obviously got arrested for it because I was like one of the last people with him. But they've never, nothing's ever come of it so no one really knows"*

Chris: *"That's heavy, is that something that made you feel bad?"*

Callum: *"Um, I felt bad for his daughter but I think in a world where you just [pause] at the time it's just, with all the drugs and that, I think you [pause] It can happen do you know what I mean, quite easily. So you just [pause] I never, you just get on with it, do you know what I mean? … Looking back, I think you are emotionless anyway, when you're, um, on drugs anyway, they take all your emotions, they take your soul, they take everything you've got basically. Don't they? So, (clears throat) So, I think, dealing with things, just people deal with things when they're on drugs and you don't realise 'til they come off that that was a big thing that happened then, that was a big thing. Um, you don't realise when you're actually, um, taking them because it blocks everything out. It's just, like puts a mist over everything, so you don't deal with it"*

Chris: *"Is it hard regaining your emotions?"*

Callum: *"I'm struggling, I'm thinking have I got any emotions because I have been struggling to, like, get, um, get my emotions back, do you know what I mean? I have started to find them a bit. My mum died in '97, I was in prison. In '97 she died and I was in prison, I ended up going to the funeral in cuffs but I have spent a lot of time in, in blocks, you know, the different jails and like I've had a good few hidings from screws and that what have made me anti authority and I don't know if they've kicked the emotions out of me, you know, you just become numb, numb to like pain and that I have myself personally over the years."*

There is a lot to unpick from this excerpt. Callum talks of three specific instances about which he feels, or implies he feels guilt. The first was his giving his friend his ticket to Hillsborough for the April 15th, 1989 Liverpool vs Nottingham Forest match which was being held at Sheffield Wednesday's Hillsborough stadium. Now known as the worst disaster in British sporting history, 766 fans were injured and 96 died on this day. Callum's friend was one of those who died. Through discussions with a key worker he recognises the importance of this event, something he has been unable to *"pin down"* in the past. He experiences the same *"eye opening"* described by Kris in Section 7.1. The power of constructing a narrative in order to make sense of one's situation is apparent here and focused upon in Section 8.5. Here, it serves to echo the point I made in the methodology chapter (see Section 6.7), that the act of participating in an ethnographic interview can, for those in the field of recovery, have positive benefits. Callum was, prior to buying into his programme within the field of recovery, sticking with a more pathological and self- deprecating explanation of addiction. One that fits with the officially propagated view; that he got in with the wrong people and *"just started rolling off"*. There is an element of mindfulness to Callum's thinking here but it is in this early stage of his recovery, prompted by a staff member. A deeper self-awareness would be more reflexive than this and need less external prompting. The result is the same though; a shift in self-awareness which leads to an increase in self-worth. In recognising the power of a social structure external to his locus of control, in this case a failure of control on the part of South Yorkshire Police (Hillsborough Independent Panel, 1990), Callum is recognising that his behaviour is externally influenced rather than being purely pathological in nature. To quote the PF manual (PF, 2011, p5) there is recognition here that 'some aspects of addiction are behaviours. That new behaviours can be learned and used to replace bad behaviours, but also that some behaviours have their roots in the individual's deep-seated unhappiness with … how life has been'. The last chapter (Chapter 7) was thick with the connecting of structural forces to behavioural outcomes. For the most part I, in the role of

researcher and author, was making these links; this is the job of the ethnographer. In exercising mindfulness Callum is beginning to do this for himself. He is beginning to adopt a less judgmental and more etic: external to the social context (Jary and Jary, 2000), perspective regarding his own past.

When discussing the likely murder of his close friend, Callum highlights the emotional dulling effect of addiction. *"[drugs] they take your emotions, they take your soul"*. He then goes on to discuss how addicts may think they have dealt with traumatic events without actually realising their impact. This numbing effect is one of the functions that drug use has. This was highlighted in Section 7.1; drug use being used to provide 'the sensation of feeling calmer, manic, or numbed' (Hari 2015, p184) in order to survive alienation. Callum was, at the time of this interview, beginning the process of reflecting back and dealing with emotions that had, during his addiction, been numbed, in precisely the manner highlighted by Kris and Martin in the last section (8.1). His beginning to use the tools of the house represents his buying into the programme.

## 8.3: The Groups: Encountering the Sellout and the Hero

John: *"Take it to an encounter group."*

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The concluding point of the last chapter (Section 7.5) was that addiction is a disorder of habitus. TCs address this through a 'self-help process of incremental learning toward a stable change in the behaviour, attitudes and values of *right living*, that are associated with maintaining abstinence' (PF, 2011, p7). Groups facilitate this. Behaviour and habits that are not conducive to "*right living"* are challenged. Learning right living is key to being less reactionary and consequently having better recovery management skills after leaving PF. Simply put, the lessons learned in this setting can be used to change behaviour. Initially, this will be a deliberately constructed, *"acting as if"* response, but TC outcome research highlights that over time, these behaviours are internalised (De Leon 2000) and become instinctive habits.

De Leon (2013, p646) broadly categorises the main groups as encounters, probes and tutorials. Although differing in format and objective 'all have the goal of fostering trust, personal disclosure, intimacy, and peer solidarity to facilitate therapeutic change'. Tutorials

are often either directed toward skills training (e.g. management of the department or use of the tools of the house), or 'clinical areas such as relapse prevention, criminal thinking, and anger management' (p646). Gender, age or health issue (e.g. hepatitis C and intravenous drug use) themed groups are also regular occurrences and activities including dramatisation commonplace (De Leon, 2013).

Sasha reflects upon her experiences in groups:

Sasha: "*I could say that I don't really get a huge amount from the groups per se however I am getting something, I'm able to contribute so I'm giving back. I am able to pick up on a few things and say 'hey don't do that,* Sasha *' because I can be a bit vocal. I am learning just to let everybody else have their say more than I used to do. Um, and that is a big part of my learning curve. Um, and it has been said to me by one of the guys who runs the smart group. When he first met me here he said I was quite know it all. And I was a bit hurt by that, I thought no I wasn't but I probably was, you know. Um, and I probably still am, but that's me."*

Chris: *"Perhaps a little bit of knowledge can change things a little bit. I mean, you worked in nursing for such a long time. You're also quite experienced in rehab as well! [both laugh]. Um I guess that would mean that you might be a tough teach. I am interested in this though because you say that there is definitely still something that you are gaining from the groups?"*

Sasha: *"Participant yes. I'm [learning] to live with myself, both mentally and physically, well … I am learning to live with my patience and tolerance levels which can be a bit poor, Um, I haven't yet blown my stack [laughs]."*

Chris: *"You were saying the past you've only had one pull-up?"*

Sasha: *"Yes."*

Chris: *"Do you think that it is possible that you might be a lot more tolerant than you think?"*

Sasha: *"Possibly. More so today, I'm more, I'm more realistic about it. There is one thing that I do know from [pause] my professional life and my experience of addiction et cetera is that you can't do, you can't change everything. You can't expect your standards to be everybody else's standards and you've got to be tolerant and teach and stop trying to rescue people because that isn't helping me and it's not helping them and I've always done that kind of thing."*

The field of recovery is characterised by opportunities which encourage members to care for and about each other and to be honest with each other in all their dealings. In the last section (8.2) we saw etic reflection upon and reinterpretation of problematic and self-destructive behaviour, typical of the field of chaos. Early in the recovery journey, such reflexivity often requires prompting from staff members or senior house peers. At a later stage in her recovery, Sasha is able to reflect upon her current behaviour, that which takes place within the field of recovery. She has repositioned on her in-group behaviour after receiving honest feedback from a senior peer which, initially, she was hurt by. It is this type of learning which can equate to effective recovery management after completing the PF program. The groups are therapeutic - 'educative activities which 'increase communication and interpersonal skills [through] bring[ing] about examination and confrontation of behaviour and attitudes' (De Leon, 2013, p646).

Of all the groups used in TC settings the encounter is perhaps the most widespread and certainly the most confrontational and referenced (see Broekaert et al, 2004). Defined as 'an uninhibited conversation, an arena for discussing all human feelings, community issues and relationships among people' (Garfield, 1978, p. 8), the encounter is a primary therapeutic tool of the drug-free, hierarchical TC (Nash, 1974; Bratter et al 1985; Kooyman, 1992; Broekaert et al, 2004). As detailed above (Section 8.2) the encounter group is used to tackle disruptive behaviour; that which compromises the recovery of both the individual and the community. John explains;

John: *Encounter groups are designed to, if someone's showing behaviours that are … not to their normal character or if they are out of order, dangerous, threatening or detrimental to their health and your recovery. Take it to an encounter group. There is a big circle of people and that's when the encounter happens, the slip [pull up] gets read out, the person then has to answer everyone, find out where they're at, and everyone tries to help them.*

Encounters take place in communal areas of Storth. All community members attend and they are characterised by extreme uncompromising candour about those being encountered, who often sit in the middle of the room. There are 'no holds or statements … barred from the group effort at truth seeking about problem situations, feelings, and emotions of each member of the group'. The intended outcome of the encounter process is the development of clearer

'views and a greater knowledge of [the participants'] inner and outer world' (Acampora & Stern, 1994, p. 3).

For Jenny, repeated contact with a partner who was still in active addiction led to a lack of focus for which she was encountered.

Jenny: *"I didn't want to use but I didn't what to be here, I wasn't even home sick. I didn't want to be here but when I knew what was going on for me I just, like, [pause] well, I got encountered and [got] four slips [pull-ups] and I were made up to be honest with you because I knew obviously that there was care and concern in the community. … I still find it hard now and I think more because like my ex-partner who is still in addiction, well, not as bad, but he is still using like once a fortnight and I was in denial about that … So, when I first came in, I was determined, determined. I'm thinking yes I still want to be with him, obviously I've still got feeling for him and that, um, but as I've started getting more and more clean and started to like myself and look after myself and I think it's about me and put myself first and I'm starting to push him away a bit more and it's like … I need to sort my shit out, to get myself clean better, you know what I mean? To get my health back, get myself back onto this voluntary work and start giving back, do you know what I mean? And obviously … like making amends to a lot of people, my children about what I've been doing … I've got, like, good support as well … I've just got to let go. I need to start putting this goodbye letter to [partner's name] together and restart my life."*

Jenny's encounter served to highlight her disengagement with the programme. She was, to use the language of recovery; *"selling out"*. The candid fashion in which such topics are tackled in the field of recovery facilitated some deep reflection and a repositioning regarding a long term relationship which had been a prominent feature in her field of chaos. It reminded Jenny "*that there was care and concern in the community";* the community as method. Callum refers to a change of opinion regarding authority which links to his encounter group experiences.

Callum*: "I got kicked out for the first couple [of encounter groups] because, like, they were encountering people for like drinking too many cans of coke and I couldn't keep a straight face, you know what I mean? But it is, its, you just adjust and you realise that people are genuinely caring and generally want to help you and I usually see a badge around someone's*

*neck as authority, you know what I mean? And I don't see past that. I had that problem when I first come in here but now I see beyond that. I see the person and they do want to help you and they are genuinely, like, there because, like, sometimes you don't know what your left hand and your right hand are doing, do you know what I mean? But, that [pause] in here, it's just they are here to genuinely help you and I've been able to drop my guard, you know, but only about that much, you know, [gestures an inch between thumb and figure - both laugh] no, I have dropped it a bit because, like, I've got me key worker and she is genuinely open and she's caring and the rest of the staff are so it's like one of the main things about here, do you know what I mean? So, you don't have to like put on a front … people just take you as you are, do you know what I mean? In here they don't, like, want nothing from you so that's a good thing about being here."*

Jenny attributes her increased reflexivity regarding a problematic codependent relationship to being encountered.

Jenny: *"So, when I first came in I was determined … I still want[ed] to be with him. … I've started getting more and more clean and started to like myself and look after myself and I think it's about me and put[ing] myself first and I'm starting to push him away … I [had] put him down as a visitor and everything but that would not just be putting me at risk it would be putting the community at risk as well just by him coming here. He is still on drugs … he is still going to be coming in looking pinned*[22] *… It's totally changed, it's been as I got a bit more, a bit more about myself, like where I was getting encountered. I had been encountered, like, seven times for, like, falling asleep through things … because my head was just going overtime at night and that's what I mean and I thought no and the more I've learnt about myself and what I know about XXX [boyfriend]. It's just like why do I even bother? why do I even want to speak to him?"*

During my time spent working at PF, it soon became clear that relationships which were formed in the field of chaos and acted out in reference to a subsequently chaotic habitus were, in the open and supportive field of recovery, subjected to the same reflection and re-interpretation as the rest of residents' lives. No stone is left unturned. Indeed, it is often the

[22] Pinned - to have constricted pupils due to recent opiate use.

case that such relationships are so deeply intertwined with chaotic drug use that ending them represents recognising and curtailing a significant risk of relapse.

John raises another theme synonymous with the encounter; the hero personality trait, *"playing the hero"*. Being part of a TC is, by its very nature, a thought provoking, which is to say reflective, experience. One of the many lessons I learnt about myself whilst working there is that I often display the hero personality type - *"on a rescue mission"*. Sometimes it feels good to be the hero and sometimes, it simply serves to make one feel less uncomfortable to come to the aid of someone *"under fire"* in a social situation. These protective practices are, seldom altruistic. Rather, they are often unconsciously carried out to avoid feeling uncomfortable (Goffman, 1978).

John: *"We were in an encounter group … and the whole room jumped on one person. Well, [pause] a couple of weeks ago I would've been on the top garden [cooling down outside] because I would have told every individual, I would've gone round every person in that room and told them [pause] even though what I would've told them isn't exactly what I thought of them. I would have made it up because I saw someone hurting … I don't like to see anybody looking like they just want to break down. It hurts me and to be honest with you, I'm protecting my own feelings in doing it and that's what I'm learning. So, for me, that instant, that's the last one and I had to just sit there, The whole time and the whole time all I was just wanting to do was to shield them and take the blows but I know that, I know that I have to do it, that I've got to figure out a way to stop doing that."*

John is exercising mindfulness in identifying that his desire to rescue within the encounter group setting and as SHM represents an attempt to protect his own feelings. He has developed the ability to notice his own behaviour and tendencies rather than blindly act upon them. He has interpreted his own behaviour and is well into the process of habitus change. In the last section (8.2) the act of *"slipping"* was highlighted as having positive outcomes for both the receiver and writer of the slip. In this instance the encounter group is characterised as having benefits for both the individual being encountered and those in the wider community. Again, this is the community as method, a field tailored towards reflexivity and self-discovery.

## 8.4: The Life Story and The Importance of Experiential Knowledge in the Field of Recovery

Martin: "*How do you know? You've not experienced it'.*

Rather than being a tool of the house or a type of group, the PF life story activity represents an important rite of passage in the resident's journey. It entails the resident presenting their entire life story in a no holds barred fashion. In this section I discuss the telling of life stories along with a near universal theme to emerge from the interviews: that the experiential knowledge of staff members who have been through the programme themselves is invaluable.

Alcoholics Anonymous places great importance on experiential knowledge. The entire sponsor/sponcee dyad is based upon the assumption that someone who has been through it will be better at connecting with someone who is going through it (Irving, J. 2014). Those who have been there have good recovery management skills; they have recovery capital. TCs in general and PF in particular ascribe to many AA/NA tenets including this one. A high proportion of staff members are former residents. There is a universal recognition of this fact and its importance across the interviews. Brian explains;

Brian: *"I think that's a better thing because they can understand where you are coming from. People what don't use substances and have just been trained at college I don't think get the gist of it, it's just book smarts."*

Martin echoes this sentiment and describes a previous treatment scenario in which staff experience was lacking.

Martin: *"Yeah, because, to be honest, I prefer someone to be telling me how it is that's been here to someone that's saying 'Oh no, you shouldn't be feeling like that because I've just read this and I've read that' and I'm like 'how do you know, you've not experienced it'. You know, that's what I think personally 'cos when I was in the last one [rehab] I had some old lady and she was just like [pause] textbook … she was saying 'you shouldn't be feeling like that because what I've just read here says that you don't know what you're on about' [Gestures reading from a book]."*

Chris: *What? She actually had the book!? [Both laugh]*

Martin: *"Yeah she actually had the book out and everything! And I'm like 'What are you doing!' She had the book out in key sessions. And then she would be like 'right da da da da' and I would be like 'You just read that' ... It's not your experience it's what you just read."*

Chris: *"Mate, that's bad medicine."*

Martin: *"Innit! They've [PF staff] been there, [they] know what you're feeling and thinking and have probably been through it. You know, so they are giving you the benefit of their experience, like. That's why I think, also, this is a help yourself community and other peers help each other, staff step in when necessary. For sanctions and whatnot and key work. Because I don't wanna, again, I don't wanna sit with someone telling me 'oh you will be alright Da da da' because they have read it in a textbook. I'd prefer to take advice from another peer, you know, who's been through it before. Sitting where you're sitting, detoxing, five weeks before. But if someone's just reading out of the textbook (exhales, shrugs) then I'm not interested because they don't know the score ... That's my personal opinion … I've listened to my key worker Matthew and stuff he's said, like, how he used to do stuff and I thought 'that's me all over' All the staff, to be honest, when they explain things, I think 'oh, how did they know I was thinking that? How do they know this?' Obviously it's because what they are talking is the truth. Do you know what I mean? They are not here to lie to us. They tell us like we are fucked then we're fucked! (both laugh). D'ya know what I mean? Because they know better than us, they've done this, they are here working for the place with lives, families and kids and that."*

Reflexivity is fostered upon entry to PF at the welcome house stage of recovery. One of the primary functions of the *"welcome house"* stage of recovery (see Section 2.1) is that residents spend time *"buddied up"* and learning the TC principles (PF, 2011). As they enter the primary stages of their recovery, responsibility and participation in the group sessions described in the last section (8.3) increases. The resident becomes a more active member of the community who uses the *"tools of the house"* (see Section 8.2) and works on themselves with a view to reconstructing their identity (Irving, A. 2011). They become reflexive. As Martin describes above, this process is aided throughout by senior house peers and staff members with a wealth of experiential knowledge. As highlighted in Section 8.2, the fact that PF residents are part way through the process of habitus reconstruction makes them thoughtful and reflexive interviewees. The life story activity is a milestone in this process. It also represents how

clearly the TC application of the bio-psychosocial model has resisted the medical gaze (see Section 4.3).

Rime (1995) argues that disclosure of trauma changes the quality of a person's social network, ultimately bringing people closer together, but highlights the social context in which such *therapeutic writing* takes place is a powerful mediator of this process. The PF (2011) approach recognises this. The telling of the life story helps to bind the teller to the community developing bonds, and thus facilitates the formation of support networks. A communal sense of purpose is fostered through recognition that other community members have experienced similar situations and feedback to the teller's story.

It is important to note the impact of the social context in which therapeutic writing is taking place and the role of social support. The community is method, life stories are written within a field of recovery, formed as part of interaction with peers, staff; 'their professional language and conceptions of the recovery process' (Irving, A., 2011; see also Irving, J., 2014). Language, here, is emancipatory. The praxical application of the language of recovery by the teller suggests a morphing of habitus; the beginning of an identity reconstruction through the selection and editing of content, a heightened awareness of events and the re-negotiation of power and control issues (Irving, A. 2011).

The importance of the life story was a universal theme across all interviews. In discussing the challenges he has faced at PF, Daniel displays a reflexive awareness of his own personal growth across the different roles he has held in the house, and the benefits of telling his life story.

Chris: "*Ok, and what about the hard stuff then?"*

Daniel: *"The hardest stuff in here because I got raped when I was a kid, when I was seven by my step dad and abused by him, and learning how to come, because I was such an angry bastard, to be honest with you. Learning to, not control it but, to channel that aggression in a positive way which is why I got the job I got in here. I'm DH [department head] of gardens now and I'm Outcomes Coordinator."*

Chris: *"These are good jobs."*

Daniel: *“They are because they are making me assertive without being aggressive which is what I need. It makes perfect sense and I knew that when I applied for the job. To challenge myself on those particular things.”*

Chris: *“Is this bad experience what you attribute your drug use to?”*

Daniel: *“Yes. All addicts have a reason for their drug use.”*

Chris: *“Is it something you are talking about a lot and working on then?”*

Daniel: *“Well I’ve applied to see a counsellor. I rang up this morning to see a counsellor in XXX. It's something I want to do when I’m in here."*

Chris: *“Did you ever talk about it in the past”?*

Daniel: *“No, I never spoke about it. My partner knew and obviously my family, my mum and dad knew but [pause] it never got spoke about. I just took it out on other people.”*

Chris: *“Did it come out in the life story?”*

Daniel: "*Yeah it did. I got a lot of positive feedback. That’s like when my programme started for me. As soon as I’d done my life story. Everyone is more aware of who you are and why you are here. You can tell people anything while your here in welcome house. You can tell them whatever. I never, I told them the truth. But, I've heard it from when I was in here that they are in for one thing and then with their life stories it's something completely different.”*

In his life story, Daniel shared details of an experience which he seldom spoke of before but *"took it out on other people"*. In discussing this with his peers he gained acceptance and highlights this as *"when my programme started"*. He was, at the time of this interview, exercising reflexivity in noticing the impact of such trauma and taking on jobs within the community which offer opportunities of further development, to be *"assertive without being aggressive"*.

Daniel's final point is that, for many residents, it takes the telling of a life story to actually identify the points and events in life where drugs served functions. These events - which occurred in the field of chaos, were often structural, outside the individual's locus of control and the cause of alienation (see Section 7.1). McIntosh and McKeganey (2002) highlight the re-interpretation of such events and their relationship to the drug-using lifestyle as a core benefit to life story sharing. The point being made here is that this re-interpretation comes from an etic perspective. Reflexivity and the learning and application of the language of recovery develops the mindful ability to notice.

In the last chapter (Section 7.1) Kris referred to this process; his being prompted by PF staff to explore an upbringing which he had, until that point, thought of as *"normal"*. This *"eye opening"* reflective experience reached a crescendo in the telling of his life story.

Kris: *"I always ended up in the same situations. You know, I'd get working, I'd get sorted for a while, two month or something and then I would start going out having a drink on the weekend and then I'd just spiral out of control."*

Chris: *"How was it that they made you delve into all of this then?"*

Kris: *"Er, well, I've got a lot of trust issues, er, I think that's why Rachel and Mel kind of teamed up on me when I was in there, you know what I mean?"*

Chris: *"Tag team [Both laugh]."*

Kris: *"That's what it were, they even said so [both laugh] yeah, it was speaking to my key worker that got me thinking about that kind of stuff. I would start writing it and I would put down that I didn't have a bad childhood and that and then like, Mel would have a look at it and get me talking about it and say, 'well it wasn't that good, was it?' And I would say 'yeah it was alright' and they would get me talking about it."*

Chris: *"So, was it difficult getting what it was actually like down on paper"?*

Kris: *"Yeah, that was hard ... That did my head in really because what I'd do ... I'd write something down ... Get it to how I wanted it and then I would remember something else ...*

*With me, I would have to start again, I couldn't just add it, I had to rewrite it, do you know what I mean? So that took me a while. I didn't want to do it, I tried to get out of it."*

Chris: *"From the outside looking in, it seems one of the hardest things they get you to do."*

Kris: *"Yeah. I mean, I can talk about it fine, it was the getting it down on paper that I really struggled with."*

Chris: *"Why?"*

Kris: *"Because I kept on remembering stuff and then I would have to rewrite it, I was getting stressed when I was writing about it ... I just really struggled with it, once I got it I was okay but I left a load out as well. Mel pulled me to one side after and she said 'why, why did you miss this bit out and that bit out' ... They wanted me to do it again but by then I had left. It was because I got encountered."*

Chris: *"For that reason?"*

Kris: *"No, because, like I said, I was dealing with my emotions and, like, [Pause] I had a go at someone, they encountered me for it and said it would be a good idea for me to redo my life story, that it would help, but my re-entry[23] came so quick, because I didn't get the extra funding, it came so quick that I was down at re-entry."*

Chris: *"Was that a narrow escape or a missed opportunity?"*

Kris: *"Err, I think, I think a missed opportunity really ... But the, er ... It's ... I've done, done my life story, do you know what I mean? [Inhale deeply] I openly tell people what's going on, you know what I mean? I didn't not do anything there, I did whatever they asked me to."*

Chris: *"What was it like actually presenting your story to the house?"*

[23] Re-entry - a transitional phase in the recovery journey which some PF residents do. The term re-entry refers to a supervised halfway house between rehabilitation centre and the wider world.

Kris: *"Man, it wasn't the fact of ... When I was writing it it's [pause] well, then you're waiting outside ... Outside the room … and then I'm kind of sat there thinking ... you just work yourself up into a state."*

Chris: *"I've only ever seen two people do their life story but it was almost like they were preparing to step into the ring or something."*

Kris: *"Yeah, man that's what it feels like, er, it's a bit strange, when you've never done anything like that before. ... I've done stuff around people but it's kind of like when you're in there you don't really, well you know what to expect. People are gonna sit and listen and give you feedback but then I think it's the ... I don't know, it's weird but you gonna say what's happened in your life to a bunch of people that you don't really know, do you know what I mean? Yeah, it was nerve wracking but it did help me in a lot of ways, yeah."*

Chris: "*What was the reaction of the house?"*

Kris: *"Well, I didn't expect much feedback, er, from it but I did get a lot, er, because I, I because I did everything that's in the programme. I always put reports out and encounter people, like I always fed back on people and people didn't always like that so I was kind of on my own. But I wasn't there to make friends, you know. Yeah, it was alright. I got quite a lot of feedback and, on my completion, I got a lot of good feedback as well."*

Chris: *"Ok."*

Kris: *"Yeah, I did mine after, a week after I'd left. So yeah, it was alright. I mean, I wasn't expecting it but I got quite a bit of feedback, yeah [laughs]."*

At the time of interview Daniel was near the completion of his programme and Kris was in the re-entry phase. Both were, by this point, adept at reflecting upon their past. Kris recognises his trust issues and the benefit of being *"tag teamed"* by PF staff. The *"remembering stuff and then … have[ing] to rewrite it"* he highlights as a challenge is precisely the type of re-interpretation of events which McIntosh and McKeganey (2002) highlighted as a core function of the therapeutic writing which characterises the life story activity. The value of this exercise should not be underestimated. It is a primary vehicle for

the production and maintenance of recovery capital. It also strengthens the TC through the development of trust and empathy between teller and audience. The importance of trust, its relation to self-worth and the concept of the wounded healer are focused on in the next section.

## 8.5: Trust, Self-Worth and the Wounded Healer

> Martin: *"Now I know who I am and I like who I am. I'm a nice person, you know. I'm there to help people, support people."*

I teach an undergraduate sociology module which focuses on issues around substance use and abuse. One lecture and a series of seminars focus specifically on the TC model of recovery. I open the lecture with a short video clip from the film Trainspotting detailing Renton's attempt at getting clean via 'the Sick Boy method' which requires; 'One room, which you will not leave; soothing music; tomato soup, ten tins of; mushroom soup, eight tins of (for consumption cold); ice cream, vanilla, one large tub of; magnesia, milk of, one bottle; paracetamol; mouthwash; vitamins; mineral water; lucozade; pornography; one mattress; one bucket for urine; one bucket for faeces; one bucket for vomitus; one television; one bottle of Valium' (Welsh, 1993, p15). The attempt ends in abject failure. "The point is," I tell my students, after having explored in some detail the field of chaos which cultivates addiction, "that getting clean is about more than just being drug free".

By the time of writing this analysis, James had completed his second PF programme, was working as a Prince's Trust volunteer team leader and exercising, using his free gym membership between 3 and 5 times a week[24]. The university gym is in the same building as my office and I often enjoy a coffee with James. During one of these breaks James described to me a *"welcome house group"* he was running at PF. The group is called *"Tommy Disorder"* and entails residents trying to explain the chaotic behaviour of Tommy, a hypothetical new resident at PF from the view of disorder, view of person and view of recovery perspectives outlined in Section 8.2. This is one of the first groups which PF residents attend. Essentially, it prompts the development of reflexivity. Applying empathy to Tommy's situation is very much a step towards being able to view one's own life in a more etic fashion. I asked James

[24] By the end of this thesis James was a qualified gym instructor and working for the newly formed MBC. This is discussed in detail in section Chapter 12.

to run the same group on my students. James has recovery capital. He has the experiential knowledge highlighted as invaluable in the last section (8.5). This makes him a valuable asset to the PF community. He has taken on the role of the wounded healer. The seminar group he runs for my students has become a highlight of the module. The key point to take away from the Tommy disorder activity is essentially the same one I make in the lecture; due to intersecting mental, social and spiritual issues, Tommy lacks self-worth. His successful recovery will require more than just becoming drug free.

The wounded healer "*bought into their programme"*, recognises this and supports community peers while continuing their own personal growth. The primary function of the Tommy Disorder activity is to prompt PF residents to think in this way, to put them on the path towards becoming a wounded healer. As their habitus develops, further opportunities arise to build upon their recovery capital. As a prime example himself, James now has the types of salient institutional bonds which began to break down whilst he was living in the field of chaos (see Section 7.4). A key point made in the last chapter was that recovery capital of this type is a predictor of continued abstinence (see Section 7.5). As a PF group facilitator, Prince's Trust Team leader, Associate Lecturer and regular exerciser, James has capitalised on these opportunities and built firm foundations upon which his recovery journey can continue. The specific role that physical exercise has played in this habitus change will be the focus of the next chapter (Chapter 9). Here, recovery is being highlighted as multi-faceted and integrally linked to self-worth. John explains:

John: *"This place opens doors for everything. They took us on a camping trip, they took us on the farm trip, they let me go circuit training every week free of charge, [Pause] they have yourself and Aaron doing stuff with us in the garden … to me beating a drug addiction was to stop taking drugs and work on a few of my issues and it's done. I never, for one second, thought that people that I don't know would be [this] caring, show [this] much consideration and help for others … [I] Just thought I needed to beat drugs."*

Chris: *"So how, I mean, you might have kind of mentioned this before we put the recorder on, but how did this realisation come about"?*

John: *"Peers. The community, it wasn't just the staff. Staff, um, advise us. They advise me, push me in the right direction, support me massively. In all fairness, she [support worker] is*

*fantastic, really fantastic but [Pause] you [pause] all of a sudden you sit there and there's 30 people that have had a life, a life of complete mayhem and chaos. Um, now I might not be, I might not have experienced what some of those are experiencing but I can guarantee you that one of those 30 people will say something during the day that is going to affect me and that I'm going to reflect on, like I've done that that's a bit of me that, I'm like that. Now, I might not know how to fix that problem but someone in this house might give me some advice to fix that problem. Um, and that's how it goes. It's swings and roundabouts. You see one person struggling, you can sit down and support them, you reflect on how they're struggling and you can give them the best advice you have ever given anyone. Full days later you can be sat there thinking that all of a sudden you have applied that advice that you have given to that peer on yourself and you have dealt with another issue. Some respects, sometimes it can be the best thing in the world to do it but then sometimes it's hard because it opens up your own stuff. But, while I'm here, the way I see it is open up as much as I possibly can and it's less to deal with when I get home because I've got enough to deal with when I get out of here, bridges to mend so I want to, I want to, if there is something that needs opening whether I know about it or not, I want it to come to the surface. And even if it's, it's easy to say now but, even if it's going to bring me down to "rock bottom" and it's a position where I'm struggling massively, I'm relishing taking it on now. It's just (pause) I've just beat something that I see as the hardest. Well, I'm in the process of beating it and it's one of the worst things I've ever had to do. One million times worse than beating drugs."*

The experiential knowledge of staff was highlighted as an integral aspect of the PF model in the last section (8.3). The point being made here is that the community as method model is also built upon the wounded healer paradigm. James is a prime example. This perspective, first outlined by Nouwen (1972) and discussed in detail by Zerubavel et al (2012) hinges on the assumption that, rather than being seen as a dichotomy in which a person is either wounded or healed, the paradigm should be understood as dualistic. It focuses 'not on the degree of woundedness but on the ability to draw on woundedness in the service of healing' (Zerubavel et al, 2012, p482).

In John's case, he has learnt the language and practices of recovery. Through reflexivity he is able to view his own life from an etic perspective. As his habitus grows and develops he is able to better support his peers by helping them employ the same tactics upon their own situations. Support of this kind is a reciprocal process. John explains that, no matter what he

is going through, *"someone in this house might give [him] some advice"*. He then describes providing support; *"you reflect on how they're struggling and you can give them the best advice you have ever given anyone"*. Finally, he talks about how playing the supportive role can be hard because it *"opens up your own stuff"*. Wounded healers are, in these examples, providing curative power for each other. It is important to note that 'being wounded in itself does not produce the potential to heal; rather the healing potential is generated through the process of recovery' (Zerubavel et al, 2012, p482, drawing on Sedgwick, 2001) In the field of recovery, the sharing of such wounds facilitates empathic connection which, as John points out, has the potential to open further wounds but does so in a safe and reflective environment in which the reinterpretation mentioned in Section 8.4 can take place. Nouwen (1972) assumed that even the most shameful of pasts can be used as a guide to others.

Increasing self-worth requires the type of non-judgmental empathy typified by the reaction of peers to the life stories outlined in Section 8.4. Reflexivity is a prerequisite to achieving this outlook about one's own life. Callum and Katie's etic connecting of structural variables to explanations of personal circumstance, highlighted above (8.2), represents the beginning of this process; a positive reinterpretation of life story reduces guilt and shame (Irving, A. 2011). Becoming a wounded healer should be recognised as a later step on the same path. Both Daniel and John have learnt to reinterpret their past as full of valuable experiential knowledge. Instead of becoming embittered and resentful they have become senior role models with in the field of recovery. Martin explains a similar shift in perspective.

Martin: *Now I know who I am and I like who I am. I'm a nice person, you know. I'm there to help people, support people (exhales) I'm back into the gym and that ... I like who I am, I'm just a genuine person. … I'd say it's the last [exhales] four weeks I've been really good because obviously my detox is over. Um, I'm ... Now I'm a P2 so I'm going out supporting people. Um, I can go out on my own as well, and that. It's, and, and, like I say, I like myself now, people like me, I get on, I'm genuine, laughs and jokes pretty much all the time to be honest, there's nothing to moan about, I'm alive at the end of the day. So that's .... You know what I mean?"*

Chris: *"That's good man. And so you mentioned like, supporting other people a bit there, can you see how you were, in your first detox maybe, in other people?"*

Martin: *"Yeah. There is this lad here who is twenty three, which was the age of me when I did my first detox I've given him a bit of advice, stuff like that. And when I did my life story, he took a lot from it, he was like wow, you know, I know to get, to do this programme now because obviously I kept saying to him 'if you don't do this programme right' which he wasn't doing, I said 'You're going to end up back here in eight years' and he didn't really take it in until I did my life story and then he was like wow, like, you know, 'Now I understand where you're coming from'. Since then, started doing his program, he is encountering people, he's doing his outcomes, pul-lups, he's giving people pull-ups, he's, he's doing what he should be doing here, using the structure and that"*

Martin is, in this situation, playing the role of the perfect house peer. He has related to a younger community member through his life story and is, in the role of the wounded healer, offering advice based upon his own experiences. Martin also became this project's first *"gym peer"*. This concept is discussed at length in the next chapter but, for now, suffice to say that, in much the same way that a house peer sets examples for fellow PF residents, the gym peer leads by example in engaging with the exercise provided through this investigation.

The key points being made here are that; this is indeed the case; the field of recovery is the perfect environment to cultivate such habitus development; and that recognising the healing potential in one's past experiences represents an increase in self-worth.

## 8.6: The Field of Recovery - Conclusion

In Chapter 7 I explored stories of alienation, violence, poverty, child abuse and drug addiction; stories from the field of chaos. The field of recovery detailed in this chapter constitutes a very different environment. The environment and the community which occupies it are the primary therapeutic tool here. Staff members with experiential knowledge, community members further along in their programme, the tools of the house and group work all combine to create something greater than the sum of its parts. Community as method is the result.

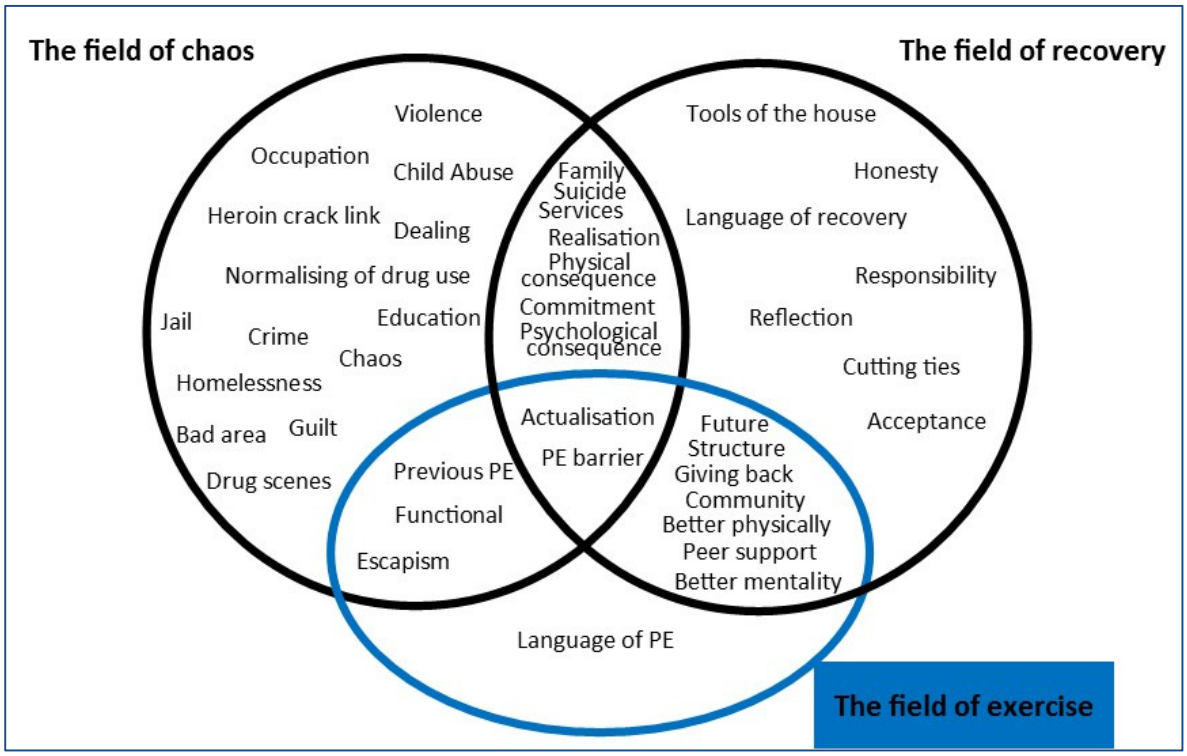
Residents are encouraged to buy into their programme, to take ownership of it. The PF week is tailored towards prompting the same reflexivity that makes them such good interviewees. The ability to look at one's past and present behaviours in such a self-aware and etic manner is a prerequisite for a mindful outlook on life and the habitus development it entails. The importance of the life story activity and the dyadic function of wounded healers has been highlighted. In the TC, the value of the healer's experiential knowledge is recognised and their self-worth is increased while the receiver is shown empathy. Within this community, the language and practices of recovery are learnt, and recovery capital is developed.

Physical exercise has been mentioned briefly but will be the primary focus of the next chapter. How it fits into the environment detailed above and the complementary relationship it has with the TC model will be explored in detail.

# Chapter 9: The Field of Exercise: Introduction

In this chapter I explore the field of exercise. For reference purposes, the emergent theme Venn diagram shown at the beginning of each analysis chapter is reprinted here.

***Figure 8: Interview Themes - The Field of Exercise***




The house peer was introduced in the last chapter (8) as a supportive, senior community member who is often, but not exclusively, a wounded healer. There was also brief mention of the gym peer as a resident who, in a similar fashion is supportive and leads by example, engaging with the exercise options afforded by this research. All the themes in the blue field of exercise are explored in this chapter, but of particular interest are, as with the house peer/gym peer relationship, the themes which overlap the exercise and recovery fields.

Following a description of intervention structure (9.1) and how it has been adapted to fit participant needs, this chapter opens with a section on the baseline fitness of PF residents (9.2) followed by a discussion detailing the challenges of ensuring circuit classes fit the requirements of PF residents (9.3). In section 9.4 I discuss the psychosocial benefits of exercise and the 'fit' between exercise and the PF program. In section 9.5 I weigh the possible benefits of mandatory exercise against voluntary participation and community ownership.

Section 9.6 focuses on the therapeutic yoga sessions held at PF and entails a discussion of the theory behind this activity. In section 9.7 I explore the benefits of prolonged periods of exercise and its relationship with community, focusing on the group of athletes that make up Strong Saturdays. Section 9.8 expands upon the theme of community and explores the role testing oneself in competition might play in recovery. Section 9.9 draws together the wider social outcomes which have emerged from this project. This chapter then concludes with a summary of the participant's perceived exercise benefits (9.10). Again, my own observations and experiences are converged with participant interview data. Where the field of recovery is one I used to work in and remain affiliated with as part and pass of my research, the field of exercise is one I have occupied for half my life. My involvement in strength sports in particular is a key defining aspect of my identity. As such, there are a greater number of my own observations and thoughts in this chapter than those preceding it.

## 9.1 An Organic Intervention: A Lot Changes in Three Years

A lot changes in three years. This investigation has grown and adapted to meet the requirements of service users and evolved to make the most of opportunities to increase the PF exercise repertoire when they have been available. My data ended up being almost entirely qualitative. Pam ended up being the perfect instructor for the circuit classes, whereas one of her predecessors was not (see section 9.3). Once the small amount of funding I had to pay for Pam's time had run out, the responsibility for facilitating and running circuit classes was passed to Sean (see Section 9.8). Twelve consecutive circuits for a gym pass was changed to eight circuits or yoga classes, consecutive or not. Yoga became an intrinsic part of the activities I was able to offer to PF residents (sees Section 9.5). Strong Saturdays came into being and then became very popular among PF residents, particularly those at the re-entry phase of their recovery (see Section 9.6). At the time of writing this, four former PF residents had competed in county level strongman competitions. A professional relationship was formed with local training provider, Envisage, and Sean became the first PF resident to receive gym instructor and personal instructor qualifications and subsequently began working as a gym instructor for Sport Hallam. His story and his Strong Saturdays training became the focus of a successful Sheffield Hallam University marketing campaign (see Appendix 10). This resulted in more committed support from the institution. Essentially, it meant that my

work was on the radar of those holding purse strings. I no longer had to go to them cap in hand. The eight week gym memberships Sport Hallam offered PF residents were changed to 6 months with a preferential price for those staying in Sheffield who wished to continue training. In an attempt to perpetuate the work started as part of this thesis, the charity Mind Body Connect (MBC) was formed (see Chapter 10). These developments are discussed here in conjunction with the stories from within the field of recovery.

## 9.2: Physical Capital: Baseline Fitness and the Importance of Doing Something

> Callum: "*You're slouching around and you're not doing any kind of physical exercise. You don't feel good in yourself so you tend to abuse your body."*

One of the conclusions drawn from the literature reviewed in Chapter 3 was that it is a mistake to assume low levels of fitness among drug abusers because, despite the associated health risks, they often lead very active lives. This is certainly the case with the distances walked by Jenny to pick up her methadone prescription (see Section 7.2), and the periods spent training in prison by Martin, Callum and Craig. Also a keen exerciser, Julia discusses previous exercise habits.

Julia: "*Um, yeah, when I was at secondary school [pause] … I did rounders, I did tennis, I run for Merseyside, Cross country for Merseyside, I did 100m from Merseyside, I did hurdles, I wasn't very good at them but I still did them. Um, what else did I do [pause] Hockey, Captain of hockey, Captain of rounders … when I left school I started, well I carried on a bit but I wouldn't say loads and then about two years later I joined the gym [Pause] did the normal gym workouts, did all the cardio, did Pilates, did yoga. Um, oh, did boxercise for a bit, then I did just bag and pad work and my husband I met. Now, when I met him he owned a gym so obviously, I joined that gym … I've always done something".*

Chris: "*And that continued through your drinking as well?"*

Julia: *"I realised I was putting on weight and I'm a bit obsessive with my weight, not to a point of not eating and weighing myself every two minutes [pause] and Um, I realised I was putting weight on so I joined another gym and I've been in that gym [pause] four years, probably go about five times a week when I am at home".*

Chris: "*Even at the height of your addiction?"*

Julia: *"Yes … I would go out early morning, say about seven so I obviously hadn't have had a lot, well I might have had a little bit to drink but not loads, I could still function, Then go to work and then other times I might just go straight from work and go swimming".*

Chris: *"So sometimes you would get up and go to the gym at seven having already had a drink?"*

Julia: "*Yeah. Probably only one, I wouldn't be, well, if I had of gone home from work and then going to the gym I probably would've been a bit too stupid to train. Um, but I used to go about five times a week … I would go after work sometimes because sometimes the girls … but I had to make sure I didn't go home first because I need, you know, like my drink would be at home so I would take all my gym stuff to work, get changed go to the gym".*

Chris: "*On the days when you were going to the gym after having had a drink in the early morning, I'm curious, would you have been able to get through the work out if you hadn't had a drink first?"*

Julia: "*Yes, probably but it was a need by then, it wasn't that I wanted a drink. It was that I had to have one or I would start having a seizure because I had a seizure and ended up in hospital, that's when they told me about me [pause] they did all my functions and said, you've got about two and a half years".*

Chris: "*I find it really interesting that you were still exercising during that period. Were you pushing it? As someone who has played a lot of sport, I'm presuming you would be aware of whether you were pushing your training or just coasting?"*

Julia: "*No, I certainly wouldn't say I was pushing it, I was doing my normal level, I wasn't pushing it, I would say. But a few years prior to that, yes, I was pushing myself. I mean I must admit to be honest sometimes I would go to the gym and it would get to about an hour, I want to do an hour and a half say and it would get to an hour and I would think that's that, I want to get back home but other times no I could stay there".*

In Section 7.4 Julia's, along with Mathew and Sasha's time spent in the field of chaos, was highlighted as different from many other participants. They were functional addicts for extended periods of time with prolonged engagement in legitimate employment. Through their salient bonds with both family and the workplace they had greater levels of the social and economic capital which, as was explained in section 5.2, equates to recovery capital. John's situation was not entirely dissimilar. Despite a lower economic status and being engaged in cannabis cultivation he also remained legitimately employed throughout much of his cocaine addiction. He also maintained a high level of exercise.

John: **"***My drug addiction, it was, like I say, it was controlled. I was massively, massively into running, err, football, I was a Sunday league lad. Er, then I went from Sunday league up to Saturday league so I played football Saturdays and Sundays and I held down a full-time job. I've had good jobs. I've been a gas engineer for nearly 10 years and I held it down through all of my drug addiction until October last year. I used to have a good friend whose son has got cerebral palsy. He does lots for charity .... I was involved with that, small runs, 10ks, half marathons up to marathons".*

Chris: "*How extensive was your drug use at this time?"*

John: "*At that point it was, it was every weekend from Friday night to Sunday night, now and again through the week, but not every day".*

Chris: "*That's interesting that you were able to keep that level of physical activity going".*

John: "*Yes, well it didn't last though. That's what I learnt. It didn't last because my drug addiction then turned into a daily, a daily thing. Well, a nightly thing and eventually a nightly thing turned into a, getting the drug at 8 o'clock in the morning thing. I'd go to work, I would work twelve hour days and I would continuously keep the drug going until 1 o'clock the next*

*morning. The only time I wasn't on the coke was when I managed, just about when I managed to fall asleep. Er, and as you can imagine, I wasn't sleeping. I barely, I was barely eating even though I tried to keep going, tried to [Pause] because my idea was, sweat it out in the morning and start the next day but it was all done as a basis to improve my drug addiction, if you know what I mean?"*

Chris: "*Go on, can you explain that?"*

John: "*Everything I did was to hide my drug addiction, was to make my drug addiction better. Because for me, cocaine was everything to me. It never judged me, it's never took nothing off me. Never made me feel all that, it helped me shut down every problem that I've ever had. Well, I thought I got rid of the problems but I never, I just stored everything at the back of my head".*

Like Julia, John was also using exercise to try and 'sweat' his way through feeling bad in the morning. It was serving a function related to his addiction. His ability to do well and succeed at the physical challenges he set himself diminished as his drug used grew but he was, in a manner similar to Julia, able to maintain rather than *"push it"*. Mathew describes a similar situation.

Mathew: *"I've always had jobs where, you know … this job it was lorry driving. I was finishing all different times and starting all different times. Didn't have no routine, I couldn't get back into the gym because I had no routine. Do you know like when I, I worked before it was like, right, I'll go to the gym on Monday, Friday and one day at the weekend but there would've been certain times when I would finish work an' couldn't".*

Chris: "*So, was the gym and exercise something that was important to you then?"*

Mathew: "*Er, yeah, it was good for my routine you know like yeah like. But because of my ... You know, because I was finishing work at different times, I was coming home and just like [pause] sometimes I was getting home at seven at night and I'm like "I really can't, I'm done, I've been out Twelve, thirteen hours, I'm out, I'm done". Some days I get home early and I'll be like "I'll just do the garden, then I will go gym". By the time you've done all that, it's like [pause] and then she'd come home and she'd make dinner, do you know what I mean? It just*

*messed it all up. I need, I need routine for myself, you know what I mean. Um, so yeah, for me like, I think that's when I started [pause] you know, I took coke just like, with friends, um, but then I started, I found myself sort of, she'd go to the gym and I'll be like "I'm too tired to go to the gym". I knew in my head that I didn't want to take it, didn't, I didn't want to take it, I just ended up going back to it so like I take it one night but when I took it, it would be like a binge that whole night. I would be there until I couldn't get it no more. Um, and the next day, I'd be feeling sorry for myself, thinking "why did I do that again?" so like I was trying to do, I even started going to the gym like before work. Um, you know, to try and get me motivated but then it just [pause] it's hard. Like, I was going to the gym at like five in the morning before I started work at seven and it was just, it took, I just didn't feel like I was getting good training in, you know what I mean? It's like you're still half asleep and stuff like that so I, I, me personally, I can't train in the morning, I mean, not really. So yeah, it just left me feeling down".*

These stories detail the use of physical capital to manage otherwise chaotic lives. For John it allowed some control over the negative aspects of his addiction. Julia's early morning training sessions allowed her some control over her body composition. For Mathew it provided an anchor point for a work life routine, the disruption of which accompanied his spiral into chaos. The argument is being made here that through the body they were exercising control over their lives. Using the body in this fashion was part of their habitus. The body was discussed in Section 5.2 as closely related to human agency and as such, the production of cultural and economic capital (Shilling, 1991). This physical capital refers to the social formation of bodies through sporting, leisure and other activities which express class location. Julia's rich sport and exercising background afforded her the autonomy, in later life, to manage physicality. The assumption is being made here, that remaining in work whilst in active addiction and exercise is related. Both amount to capital. Salmon's (2001) finding of a positive correlation between exercise and resilience to emotional stress (see Section 2.2) offers some explanation. Physical capital develops through an interrelationship between habitus and social location. Defined as the 'material circumstances which contextualise people's daily lives' (Shilling, 1991 p654), the concept of location is of particular relevance. It should be understood as a key characteristic of the field. Bourdieu (1985) argues that location is determined by varying degrees of distance from material and/or financial want. Julia and Mathew both grew up in situations where their material circumstances allowed them to develop stores of physical capital which remained with them

well into addiction. In this way, physical capital can be converted into economic capital with the body as the medium through which we interact with the world. In using exercise to stay *"on top"* of his addiction John was doing just this. It allowed him to manage his addiction and remain in work.

Judo was a big part of Callum's life until an injury at the age of 16 which coincided with the trauma of losing a close friend at the Hillsborough disaster (see Section 7.2). He was however, like John, Julia and Mathew, able to benefit from previously developed physical capital stocks later in life.

Callum: "*Well, I broke my arm, that's why, that's the scar [shows scar on arm]. We were going around doing exhibitions you know like jumping chairs and that. It was on a Saturday, the same day as Hillsborough, I think. I hadn't had enough sleep and I wasn't concentrating because I timed it wrong and the last chair, you know the gap in the chair Chris, I dropped my arm before I went into the jump and my body went over and my arm just got caught in the chairs".*

Chris: "*That scar looks nasty man. They operated then?"*

Callum: "*Yeah, it had plates in it. I snapped me um radius and my, what is it?"*

Chris: "*I'm not sure man".*

Callum: "*Well, the 2 bones in your arm, it was just like proper gone and I couldn't do it for like twelve months. I had to have them in then because you are still growing they have to take them out, I had to have another operation to get them out. Um, they took them out then it was another twelve month after that so I like lost my momentum. I still used to go to the club and just take the money and that because I couldn't train proper but, um, I just sort of, and that's when I started like taking drugs you know".*

Chris: "*Do you think there's any link there?"*

Callum: "*Yeah, I think Chris, with me, I think though with a lot of people, if you're not training or doing something you get a negative mind, you know. I think what, what you put*

*into your body, I think affects the way you think you, know what I mean? I think if you're, like, training you feel good about yourself, it becomes your drug and you don't need a, need anything else to substitute that. You're slouching around and you're not doing any kind of physical exercise, you don't feel good in yourself so you tend to abuse your body".*

Chris: "*Mate, I totally agree but you're someone who can reflect upon your own life and say that because you had a period of quite intense training, not everyone has had that. I'm beginning to feel that what you've pointed out there is something that not everyone is aware of. Did you ever get into anything physical after that? Was there ever any point in your life where you've been able to do anything that has had a similar effect for you?"*

Callum: *"Um, in jail I used to, I've been jail gym orderly and that. You spent time with the equipment, you know, that's always been a, been a part of it like".*

Chris: "*So, the orderly opens and closes the gym?"*

Callum: "*Yeah, so you have … whether it was you'd go running or you'd do circuits or whatever you do, do weights … I was there for 2 years as a gym orderly. I done powerlifting then. I was, um, I was a lot fitter because I used to, like, deadlift and squat and bench, you know, that type of thing and I had like a quite good squat and an alright bench and a dead lift and I won, I've got certificates that says I won the powerlifting there".*

Chris: "*Mate, that's wicked … Would you ever do judo again?"*

Callum: "*Um, [pause] I probably would. Yeah. I probably, I've never gone back to it, I think the reason I've never gone back to it is that I got mixed up in the drugs and, like, [pause] you have to properly condition yourself if you're involved in any type of sport and if you're in and out of jail and getting mixed up in different kinds of like, like criminality like. I just never seemed to draw myself back to it. I've always liked keeping myself fit like but that sounds contradictive when I've used drugs for that many years but I enjoy, enjoy any type of fitness if I'm [pause] drug free, do you know what I mean?"*

Chris: "*During this period when you were orderly in prison were you able to kick drug use during that period?"*

Callum: *Yeah, I never touched nothing, nothing for about three years all together, I never touched any drugs. I always had it in my head though that [pause] I'd get out and I'd just use, have it one more time. It sounds stupid but that was like, sort of, like the thing you know, that I had in me head, engraved in my head but now [pause] it hasn't even crossed my mind [pause] I have genuinely had enough, it's time to leave that behind and move onto something else.*

Chris: "*Do you think that … you think that exercise is going to play a role in your maintaining abstinence?"*

Callum*: "Yeah, I think it's, like they say, healthy body, healthy mind innit. I think if exercise was brought in to like rehabs and that I think it would play a big part in people's recovery because it changed, it changes your way of thinking as well, doesn't it? It releases endorphins and that and makes you feel good about yourself, it makes you feel healthy and [pause] you know, you, you become a different person, you become a lot more confident and that when you're healthy and fit, don't you".*

During addiction, John and Julia were able to use exercise to maintain a modicum of control. Mathew and John, in particular, were physically fit upon entry to PF. Whilst in prison, exercise helped Callum live drug free for a period of three years. The argument being made here is two pronged. First, that physical capital is of relevance to recovery, and second that it can be converted, not just into the economic and/or cultural capital which Bourdieu (1985) stipulated but also into recovery capital, whether this be as a period of abstinence, the reinforcing or creating of a bond with the workplace or, as Callum puts it, simply "*prevent[ing] you having a negative mind*."

## 9.3: Pam's Circuits: The Right Instructor, the Feedback Loop and the Gym Peer

One of the first lessons I learnt during this experience is that a balance needs to be struck across the different physical abilities of residents. For circuits to be inclusive they need to cater to everyone. Martin, John, Julia and Callum liked to be pushed. They were familiar with

the exercise environment and keen to partake in activities. Sasha also had previous experience with sport and exercise, a stock of physical capital, but was in the process of coming to terms with alcohol induced nerve damage, and associated problems with balance and co-ordination. Her expectations, based on previous exercise experience, often exceeded her ability. Being pushed hard in a circuit class environment was not suitable for her. Neither was it for nervous and first time exercisers. Ensuring that people were not pushing too hard was difficult in the early days of this intervention. James's first time at Strong Saturdays resulted in his spending two days in bed afterwards. This was in the early days of Strong Saturdays and PF staff were not impressed with his subsequent absence from community life! Later, once a balance had been struck, he became an important part of the Strong Saturdays community. His first foray into strength sport however was not pitched at the right level. We both learnt from this process.

The initial circuit classes were run by a pleasant and mild mannered instructor who was popular with the PF residents. After a period of a few months he moved on to work elsewhere. The second instructor had a very different approach. She was, in Sean's words *"a bit militant*". Her approach went down well with some residents and not with others. I had attended one of her classes and thoroughly enjoyed it. So did everyone else; it happened that, on that week, everyone attending was a keen exerciser. I spoke to her afterwards and was under the impression that the classes were moderated based in the individual capabilities of those attending. Unfortunately, it took a few weeks for it to feed back to me that this was not the case. If dealing with institutional bureaucracy is the biggest difficulty I faced carrying out this project (discussed in Section 6.3) then the second was setting up an effective feedback process through which I would be informed if there were any problems with programme delivery in a timely manner, quick enough to make changes before losing the faith of participants. By the time I found out that first time exercisers were being put off by the gung-ho approach to circuit delivery, a trend had been set which was difficult to break.

Kris explains: "*It scared them off. I mean there was a bloke called John … he was about forty seven. Um, he was doing a detox as well … from alcohol and heroin and he went down, and obviously, he's a lot older as well so he was really struggling… she pushed him to the point where he just did not want to go back and there was this bloke called Frank as well, he didn't go back to the class."*

Sean describes how he enjoyed the more *"militant"* classes but could see that they were not for everyone.

Sean: "*Julia [alias]. I loved her. I did. I thought she was great but she was militant."*

Chris: "*That's the feeling I got from the circuit I did."*

Sean: "*Yeah, [Both laugh] she was very militant and about success [pause] I don't really know what I wanted but I wanted to succeed, I wanted to get fitter and I think she was the right person to do that but I can see why other residents may have a problem with her because she was too militant. Yeah man, she was hard, she was forceful but I think as an instructor that's what you need but with a group of people and this [recovery] situation … perhaps she could have slowed down a bit. You know give people a break man like get some more stuff like that."*

Chris: *"That's really valuable for me, that feedback. It took time to get things sorted out. There was a lot of residents communicating with Phoenix, staff communicating with me, me communicating with Sport Sheffield and it took some time sorting teething problems like that out. Did you go to any of the classes after Fred and Julia had finished doing them?"*

Sean: "*Yeah, I did go to a few others … yeah, I got on with her [Pam]. She was sound, she was kind of in the middle."*

Chris: "*Mmm."*

Sean: "*She was very on it, you know, but, what's the word, she give you a bit of encouragement, she was very encouraging but she wasn't militant with it she wasn't strict. She was sound … I'd say she pitched just right."*

The community as method model, discussed throughout the last chapter (8), works through empowering community members to *"own their recovery"*. Gradually, I learnt that participant ownership of the circuit classes was the most effective way or ensure that problems were dealt with. Giving residents autonomy regarding how classes were structured reshaped them into a more bottom up form of community practice, characterised by partnership between

myself in the role of researcher and, in the example outlined in the next paragraph, Martin as participant. Davis et al (2005) refer to this approach as collaborative development. It was employed in the formation of Burling et al's (1992) softball team (see section 3.3.2) where participants filled the roles of coach and support staff (statistician and videographer) as well as player.

Below is an example of this approach. The saying 'you can't please all the people all the time' rings true here. It turned out that Pam's approach was not enjoyed by all PF residents. This was pretty much a gendered issue with a group of male residents deciding that they wanted heavy weights (masculine) rather than what they deemed to be cardio (feminine). Rather than getting frustrated about the wider issue of a ridiculous socially constructed gender divide or intervening and trying to make changes to class structure, I passed the responsibility of communicating grievances directly to Pam onto Martin, a gym peer.

Chris: "*Er, so maybe, rather than me put words into your mouth, if you could just tell me what your experience has been with them so far, bearing in mind that any criticism is a good thing as I need to know how to change it to make it better for future residents."*

Martin: "*Yeah, um [Exhales] well at first, I was like, yeah, you know they're alright, they get you fit, you're using muscles that I've not used, probably never used to be honest. Um … but, personally I'd say because there's punch bags there, and you know yourself that to use punch bags you've got to be very fit. So, I think a bit more of punchbag, well some of the punch bag because she doesn't do it at all. And a bit more like weights and that, you know. Um, I think that would be a really good thing because [Pause] we manage [pause] me and David, who was just in here, we managed to get one week, I think it was [pause] five of us, or maybe six people to go then they went and they were like "all that was rubbish, that was shit, I don't want to go. Since then it's just been me and David."*

Chris: "*There's only been two of you going?"*

Martin: "*Yeah, because they are all like 'what's the point in doing that, no weights, no nothing'."*

Chris: "*Ok. Interesting. This is a tough one. When we first started these programmes, we had two instructors and the feedback that I was getting, particularly for one of them, was that there was too much, too much weights, too much punchbag, people being pushed too hard and it frightened a lot of people off. Quite a few people went and then never returned because of how hard they were pushed.*"

Martin: "*Right. Because they saw people pushing big weights and they're like "I can't do that."*

Chris: "*Yeah, that but also, they were just being pushed too hard, they weren't used to it. It put people off that perhaps haven't exercised for a while but maybe, more importantly, it frightened people off that perhaps never exercised before. So, I've changed that now but it sounds like perhaps it swung too far in the other direction.*"

Martin: "*Yeah, it's just skipping and step ups and them bunny hop things and that, there's really no weights, if you're lucky, you get [exhales]. This is giving a big compliment [pause] maybe ten minutes of a very light weight."*

Chris: "*Okay then, how about this? Let's see if we can make it so that at the beginning of the session Pam asks people how they feel they would like to try, how hard they would like to be pushed?"*

Martin: "*Yeah. For her to take advice of the people that are there 'cos I think, to be honest, if there is a bit more weights, obviously you have to do both but 'cos I've done weights and all that in prison and I know the best way to lose weight is have your heart rate going up and down, up and down constantly, like obviously if you go on the running machine like, start slow then build it up, build it up, build it up then back to slow. So, obviously, there's got to be a bit of exercise in it with regards to like step ups and bits and bobs but the weights, perhaps like to do a bit of exercise first and then finish off with the weights".*

Chris: "*Okay, well how about you feed this back to Pam? She is an old hand at this. I'm sure she will listen to you. Gather a bit of feedback from residents and tell her what people want. Then you can let people know that things have changed, Let's get the community behind this to make it work."*

Martin: "*I'll let them know, yeah, because there's this one lad who, the twenty three year-old I was on about, he's coming this Friday with us, then there is a lad who will be P1*[25] *from next Monday. So, next Friday he's going to be coming with us, that will be at least four of us altogether like."*

Chris: *"And you've been taking David haven't you?"*

Martin: *"Yes. Well, he took me [initially] because I wasn't allowed to go on my own, but I was like, come on David, and I sort of drilled him into it, and I try and get him down the gym as well like. I'm getting him into that as well, but he is a bit lazy [both laugh] he needs a bit of support."*

By the time of writing this I had removed myself from the organisation of circuit classes completely. This was due, in no small part, to the willingness of Pam, who developed such a strong rapport with residents that it became the norm to approach her with queries and requests. Ensuring that she was an established part of the PF timetabled week meant taking her to Storth and introducing her to staff and residents. Empowering Martin to act as a point of contact was beneficial on many levels. As a gym peer he was instrumental in recruiting residents at an earlier stage in their programme and offering them support. This should be understood as a form of wounded healing: A reciprocal curative process (see Section 8.5). Martin was helping David and learning how to connect and empathise in a manner alien to his former *"badman"* self. When Sean eventually took over responsibility for the classes (see Section 8.8 for full discussion) he adopted this model. The lesson I learnt was to give up control and shorten feedback loops in order to make them more effective. Thank you Pam. Thank you Martin. Thank you Sean.

[25] P1 - stands for primary one - the early part of a PF resident's time at the primary stage of recovery (see Section 2.1, *Table 1).*

## 9.4: Body Image, Confidence, the Gym Peer and Exercise Programme Crossover

> John: "*We've got our outcomes star and self-care is on it. Fitness and health is on it, responsibility and motivation is on it … Doing the fitness, the circuits and the stuff [yoga] in the back garden with you … works."*

The last section concluded with the responsibility of circuit class organisation acting in a complementary fashion towards Martin's recovery at PF. He also credits the actual act of exercising with keeping him in PF when times were tough, describing the gym membership acting as a reward, a *"carrot dangling at the end"* and circuit classes constituting timeout from a challenging programme.

Martin: "*It's what's sort of been pushing me through it, you know, the gym thing, doing the circuits and then getting the gym pass. That's kind of kept me here as well, when I've been struggling because I've been thinking it will be alright because at the end of it I will get a gym pass. I will be able to do gym and that's what I like doing. There is a carrot dangling at the end of it like and I mean eight weeks that's two months of your programme already. You can't start going for like the first six weeks. So, if you think about it, that's fourteen weeks of your programme done. By then you're looking healthy, feeling healthy, in a positive place and you think "what's the point in leaving now I've got a free gym pass."*

John describes a similar experience.

John: "*I feel proud of myself when I do it [Exercising], it builds my self-esteem. I wake up in the morning feeling healthy. Don't wake up in the morning feeling weak anymore. I jump out of the bed and do my sit ups in the morning and it's been a long time since I could do that. It's, um, it's a massive stress release, a huge stress relief because like I say, I talk about this place [PF] with a lot of pride but there's times when … I do struggle. For me, getting out on that run yesterday, I needed that run … I needed to escape a bit …We've got our outcomes star and self-care is on it. Fitness and health is on it, responsibility and motivation is on it … Doing the fitness, the circuits and the stuff [yoga] in the back garden with yourself works."*

Through the eyes of an SHM (see Section 8.2) John has reflexive awareness of the relationship between PE and his program. He applies the etic perspective gained in the field of recovery to his exercise experience. The outcomes star was introduced in Section 2.1 (see *figure 1*). It is used to map a resident's development during their program. John is suggesting that participation in exercise helps him climb the physical health; motivation and taking responsibility; self-care and living skills "*ladders"*; increases in recovery capital across multiple measurements. Martinsen, (1990); Brown (2009) and Mamen et al, (2009); highlight recovering addicts as a group for whom the risk of depressive and anxiety disorders is high and the potential for positive psychosocial outcomes relating to exercise the greatest (see Section 2.2). In recognising the different areas which exercise is impacting upon, John is highlighting increases in human capital which, as discussed in Section 5.2, equates to mental toughness and psychological wellbeing. Kris is explicit regarding the psychological impact of his exercise.

Kris: *"I do feel healthier and I enjoy it … I feel a lot more confident in myself, you know what I mean, and I feel a lot healthier. And, er, I can see a bit of a change in my body as well."*

Chris: "*Which is always nice."*

Kris: "*Yeah, yeah like … because I get quite self-conscious … I always think that people are gonna think badly of me, you know what I mean. Now I feel comfortable when I train and that, everybody is nice."*

Chris: *"How about when you were going through the treatment? I know that was as tough time for you."*

Kris: *"It [the treatment] really knocked me out of sync. You'll never know about it unless you've done it … it twists your head. The thing was, I thought people were talking about me and it sent my anxiety through the roof. I kept moving gyms because I would think people were talking about me."*

Chris: *"Was the PE helping during that time?"*

Kris: *"Yeah, it was but the treatment makes you anaemic so I had low energy and then they gave me sleep tablets, which I was addicted to before, so I had to give them back because I*

*was eating them and getting addicted to them so … I was still training but I just really struggled with it, to be honest."*

Chris: *"Was the gym the right place to be during that experience?"*

Kris: *"At that time it was difficult but I knew that it was doing me good because I was better able to deal with the treatment physically … I was still putting myself in these situations but then again the exercise would give me this release so that's why I'd keep going back and, to be honest, the paranoia was happening everywhere but the gym was still the place where I could have a release."*

Improved body image was a universal theme across all interviews. Looking good came up as a *"training goal"* in every interview I carried out. In Kris's example, a positive body image relates to managing the side effects of an aggressive treatment. Despite difficulties he recognised the human and physical capital benefits of exercising and pushed on. He is now cured and a regular Strong Saturdays member. Increased confidence and decreased anxiety were common interview themes. Both were often related to improved body image. These findings support those highlighted in Sections 2.2 and 3.3.4 and found among the general population (Sonstroem & Morgan, 1989; Sonstroem, et al, 1994; Cash, 2002; Anderson, et al, 2010; Appleton, 2012) and the recovery community (Roessler, 2010). The revised recovery capital model provides a useful lens to view these findings. Exercise directly increases physical capital. This includes an improvement in body image which is associated with decreases in anxiety and depression.

## 9.5: The Naughty Step: Mandatory Exercise and Community Ownership

During my time working at PF, I had to remember never to refer to the bench as the naughty step. This was difficult at first because the bench was for all intents and purposes a naughty step. If a resident was out of line then they would get *"benched*[26]*"*. During this time-out there is little for them to do but reflect upon the prevailing behaviour. I fail to see the differences between this and a naughty step, but recognise the importance of not devaluing a tool of the house. I remember arriving at Storth for a shift to find half of the house benched at once. There were around four people squeezed onto the bench itself, a lot of people on chairs from

[26] Benched - to be told to sit upon the bench at PF in order to reflect on an aspect of behaviour.

the dining room and a few sitting on the stairs. As I entered, probably loudly and inappropriately announcing my arrival (I have a knack for being loud and inappropriate), Scott, the current SHM, looked at me with big frightened eyes, shook his head once and resumed staring at the floor. It was all I could do to not burst out laughing. Everybody looked so chastised. Scot, in particular, had his bottom lip sticking out. On the face of such a huge and tough looking (a beautiful and gentle soul really) man, the effect was highly amusing. Clearly the shit had hit the fan in a big way. By the time I stopped working at PF the bench, seen as a throwback to a bygone era when the TC was harsher in its approach, was no more. James describes the earlier, harsher TC of his first program.

James: "*Twenty years ago, there was no sanctions, there was a bench and I think that that was the most important tool in the house for me 'cos any kick-offs, any disruptions, anyone in a bad headspace, anyone wanted to leave went on that bench and 'chill your beans and think'. And now there isn't that… you tell me where you go?*"

Chris: "*I have no idea."*

James: "*Nowhere. Now you get the sanctions and when I was here you had contracts. And, um. Because I was twenty five and cocky, arrogant, very arrogant ... I just [exhales] rebelled against everything. It took me 16 months to get my shit together. Er and the contracts, there was like, you know, you could not mess about. I mean, I spent six weeks in the cellar, white washing it over and over again, no communication, no association, no eating with, no talking to anyone ... Six weeks that. Just one coordinator coming down to me every twenty minutes."*

Chris: "*And that was enforced?"*

James: "*That was enforced, yeah, you don't do it, you're out, you know. It's, it's, it was just a lot stricter. People say harsher but I just say it was a lot stricter. And for me, I don't know, because maybe when I finish this time, er, I might think this, the way they doing it now is miles better but for me, it worked then and why rock the boat?"*

Despite being the only resident with actual experience of stricter rules, James was not alone in his opinion that things could be stricter. This argument was a common emergent theme in this piece. These same interviewees, all of whom engaged with the circuit program and went

on to gain gym memberships, were of the opinion that making circuit classes a mandatory part of the PF working week would be a good idea. I would be lying if I said that this idea was not attractive to me! Daniel and Brian typify this position.

Daniel: "*But part of being here is putting yourself out of your comfort zone. And when it comes to physical fitness some people just switch off. Some people can't do things because of medical reasons and that's fair enough but a lot of people in here, that are just taking the easy option and I'm going to start coming to the Wednesdays now, now from this week onwards."*

Brian: "*Some people are bone idle, can't be arsed to do anything, do you know what I mean? But that's just the way they are. Half of them can't even wash a cup. Honestly, half of them can't even make a slice of toast. But, this is why I think it's doesn't do them good while they are here because staff don't push it to make them do it and it's like, what are they going to be like when they get back out there, do you know what I mean? Some of them don't even know how to use a washer."*

Chris: "*Does this link back to what you were saying about things perhaps being a bit stricter?"*

Brian: "*Yes."*

Chris: "*So, do you think there's anything that can be done to get those people involved in this intervention?"*

Brian: "*Tell them they have got to do it."*

Chris: "*I sometimes wish I could do that [laughs]."*

Brian: "*Yeah, but think about it, it's harmless. What's the problem with going for half an hour? Half an hour out of your life. It wouldn't harm them would it? But I guess staff can't do that because they wouldn't be half of the people here. Because half of them, they are weak here,*

*yeah, but they won't wash plates for other people. Do you know what I mean? And if that were me, I would say, well, you're not having dinner then, simple as."*

To someone like myself, who trains 6-7 days a week and for whom being told to 'suck it up and stop complaining' works, mandatory exercise does seem like a viable option in a rehab setting. During 2014 I took part in what had been, to date, the hardest strongman competition of my career. The final event was a carrying medley. An assortment of kegs, heavy gas canisters, sand bags and a hellish implement called a *"duck walk*[27]*"*all needed carrying a distance of 20 metres. I had been replicating this event in my training but had never completed it in the allotted 75 seconds. On the day I needed the points badly. Paul, my fellow Strong Saturdays coach got right in my face. He slapped me as I stood at the start line and then followed me as I struggled with each implement, spitting a barrage of encouragement and insults. I was one of only two competitors who finished the event. I literally gave it everything I had. Afterwards, I crawled outside on my hands and knees and lay in a foetal position on a patch of grass. This approach works for me. I presume it would work for Brian and James and the keen exercisers listed in the last section. It certainly did the trick for those PF residents who later competed in strongman. For residents who have either not exercised for an extended period or never exercised at all, the idea of mandatory classes is probably frightening but surely, I argue here, no more frightening than the extreme self-reflection that characterises life in a TC. At this stage in my research career the mandatory vs voluntary exercise debate is almost arbitrary though. I am not in a position to influence the PF model to the extent required to instigate mandatory circuit classes. My feeling is though that mandatory classes could potentially provide the extrinsic motivation required to get people exercising before empowering them to take charge of their own exercise journey (intrinsic motivation).

In the absence of the power to command residents into classes, I started asking those who were not attending why that was. Often the types of behaviour, the habitus, required to survive in the field of chaos include the ability to lie and make excuses. My approach and indeed that of the TC has been never to judge; these behaviours are being tackled as part of the reflexive rehabilitation process outlined in the previous chapter (8). It is usually the case that, regardless of the reason given for not attending (I'm still detoxing, my back/leg/arm

[27] Duck walk - a piece of strongman equipment.

hurts, I have paper work to do, etc.), once a resident has actually overcome their fears and goes to a class, they tend to become regular attenders. Ensuring that they get there in the first place required listening to feedback and resulted in setting up yoga classes which a group of particularly hard to engage female residents requested. Initially, this entailed my teaching yoga (badly) from an app on my iPhone and functioned to get people moving and act as a feeder to circuits (see Section 9.6). I was, at this early stage, unaware of the important part therapeutic yoga was to play in the field of exercise but I had learnt that flexibility, facilitating ownership, autonomy and decision making power among residents was a sure way to bolster engagement. Nowhere was this more the case than with Sasha. Sasha's physical condition upon entry to PF (see Section 7.4) was a source of great frustration to her. Her doctor suggested swimming as a form of low impact exercise[28] so, at her request, I started taking her to a local pool once a week. After six weeks of this her balance and coordination had improved to the point where she joined me on a tandem bike for Sheffield Recovery Month bike ride, and circuits had become a viable option.

Sasha: "*I found it [bike ride] exhilarating and I thoroughly enjoyed it and I didn't do that much work."*

Chris: "*You certainly did on the hills!"*

Sasha: "*Yes, I did on the hills and I felt it because I don't often use my muscles and I was going all of the time, except for when my legs came off, but I didn't feel bad when I got off, I thought I would be [mimics being stuck in a bike riding position] like that, you know what I mean. And the next day I thought I'd be terrible but I wasn't.* "

Chris: "*Well, I'm happy to hear that. I was really glad that you said yes to going on the bike ride. I kind of just threw it out there when I remembered that that was where I was supposed to be when we would usually be swimming. With the swimming, again I was really happy with how that's gone because you are a strong swimmer, you have clearly swum a lot in the past."*

[28] Swimming is indeed a fantastic form of low impact exercise for physically frail service users. Since the writing of this analysis, MBC (See Chapter 12) has supported a number of swimming trips for those who stand to benefit the most from this type of activity. Negative body image is however a major issue here. Often, those who would benefit the most from swimming do not wish to attend public facilities. The obvious fix for this would be to have sole access to a pool.

Sasha: "*Yes."*

Chris: "*Um, how did the swimming come about? Did you ask me?"*

Sasha: "*No, [pause] I think, I think that before I came in, I knew that one of the things that I needed to do was swim. I knew that was what I needed and today [staff] said don't worry we will organise that. And it didn't really happen, probably because of me, physically and because there was nobody there to do it but then we got chatting and I had said to you something [pause] because you had come to do the Pilates and nobody was doing it at that point [both laugh] and we talked about, we just got onto my weaknesses and things and I had said about swimming and you said I could facilitate that. Um, and that's how it came about really."*

Chris: "*And we've been five times now?"*

Sasha: "*Yes, five or six times. We went, first of all Abby came along with us and then that was the end of anybody coming from here. It was just you and me that went after that. "*

Chris: "*And there's been some progression there as well, each time we've gone you've gone to do more lengths of an Olympic pool and made sure that half of those lengths are the front crawl?"*

Sasha: "*That's correct."*

Chris: "*Can you talk me through that at all? "*

Sasha: "*I'm happy with the progression I've made there. I mean, I also looked at the time as well. Because, as I told you before, when I swim I don't count lengths because I can't keep up. And I used to always go on how long I've been twenty minutes, half an hour,forty minutes. So, now I'm looking at the time as well and I'm happy with the time. I'm getting quicker.*"

Chris: "*I noticed the last time I went with you that it was eighteen lengths, with seven front crawl in twenty minutes."*

Sasha: "*Yes."*

Chris: "*That's a pretty mean pace by anybody's standards."*

Sasha: "*And we did it in twenty minutes again today. That was twenty lengths."*

Chris: "*Excellent. So, this is a good thing, it seems to be something that is working but it's not curing everything, would that be correct? It's not helping with the dizziness and things?"*

Sasha: "*That's right*."

Chris: "*How do you envisage us building upon this? It's a good foundation that we have, how would you like to take things forward?"*

Sasha: "*I would like to increase the opportunity to swim. I don't know how that could be facilitated. If I could get something in, perhaps once over the weekend."*

Chris: "*So, a session in at the weekend, okay? An increase in volume basically?"*

Sasha: "Y*es, because that would be something in the past that I would've done every day if I could. When I was good and I could do it that is, even when I was still drinking, like not drinking as much, I would do that daily and the gym. I would tend to do the gym before I did my swim. When I was into doing it regularly so, I don't think I will be back to that for a while but (Pause) perhaps doing the circuits, trying to get that in."*

Chris: "*Well, that's something you can do this Friday. It would be good for you to meet Pam. You have any worries about that?"*

Sasha: "*I don't have any worries particularly, I know that to my upper body strength is poor at the minute [pause] Um, before I came in I was getting, I was trying to do, like I've got some dumbbells at home when I was trying to do leg stretches with the dumbbells on my feet. But I was very much like this [wobbles around] all the time. So, I do worry a bit about my*

*coordination, about how I will be. Not overly, I'm not overly anxious about it, just aware that, because I can be quite good and then all of a sudden, I can just go like wallop."*

Chris: "*[laughs] Don't worry, we'll just make sure someone's standing there! [Both laugh]. I will pop along with you for that first one and we will have a good time. I think it's interesting because you, despite being someone that is still using a crutch, you're always really up for these activities, more so than some of the people that I work with. I think it's because you've exercised in the past. What do you think?"*

Sasha: "*Definitely, that's definitely it."*

I particularly enjoyed my weekly swims with Sasha, she was, despite being unsure on her feet out of the water, a very strong swimmer. As my teaching work load increased following the summer of 2015, I passed the responsibility of taking her swimming onto a former student of mine who volunteered at PF. She continued to go once a week and also became a regular at circuit classes. Pam's approach suited her well, all exercises were adapted to suit her ability and her willingness to try new things was truly inspirational. A concluding point of literature review (Section 3.6) was that the explanatory power of substance and PSAE is superseded by levels of participant ownership and enjoyment. That has certainly been the case here. The key to opening the door, to facilitating Sasha's attendance was simple; asking her what she wanted to do. That is the key theme of this section. Setting up a feedback loop allowed for changes to be made to circuit classes which made them more inclusive, running yoga classes on site at PF provided a route into circuits for participants who were initially difficult to engage, and giving activity decision power to Sasha allowed her time to develop the strength and confidence to also attend them. I do believe that mandatory circuit classes could work if they were taught in the friendly and organic fashion that Pam's circuits are. There is literature on the implementation of mandatory PE in some settings (Bitonte and DeSanto, 2014) but none within an SUD context. My second aim for this investigation was to increase the intrinsic motivation of participants to engage in PE by their own volition as Sasha has been shown to in this section (also see Sections 9.6-8). I believe it possible that making PE mandatory, but giving choice regarding activity type to participants in a setting in which attendance to various groups is also mandatory, could work. Doing so would recognise the potential of physical capital in the development of recovery capital. Future research on exercise in recovery should focus upon this.

## 9.6: Yoga, Mindfulness and the Bounce

> Justin: *"It's just like really peaceful like, really peaceful. [You're] at ease with yourself. … [I] almost forget like where I am, you know."*

This is a relatively new experience for me. I thought I knew yoga when I ran a few sessions at PF, using a free app on my phone. I was really wrong. I didn't know yoga at all. In the short time since then, I've been using yoga to address my aches and pains and it has changed the way I move. I've been equally shocked at how hard it is yet paradoxically, how relaxing *savasana*[29] is. This intervention has, just like real life, been an organic process. A chance reuniting with an old colleague from a previous life a few weeks into my enjoyable and well-meaning but ultimately failed attempt at teaching yoga, led to an opportunity to include therapeutic yoga in the exercise repertoire offered to PF residents. This also led to collaboration on two research papers and the forming of MBC (see Section 9.9). Therapeutic yoga classes began at PF at the beginning of the third year of this project. They have been enjoyed by staff and residents and have become a key part of this project. They have also become, alongside the weekly circuit classes, another way for residents to gain the eight required classes in order to qualify for a free gym membership. As I enter the Storth dining room for the weekly yoga class I'm thinking of none of these things. I'm actually thinking of not thinking. I want to lose myself for the next hour and leave this room feeling loose and relaxed. Feeling present, in the now. There is one pose I can't do. I don't want this to be about managing to hit all the poses Jo, the instructor can. She is a training partner of mine and a good friend. I'm aware of our intense competitiveness in exercise, in just about everything! This is not the place for that. Breathing, concentrate on breathing correctly. Slowly deeply and at the right time. Yoga breathing is actually the opposite of the powerlifting breathing. Who would have thought that?

Jo makes the room feel calm. She is good at that. Perched upon edge of a yoga mat. A quiet word for everyone present. Three have been here before. Two haven't but they don't look nervous. The room feels calm. The lesson starts with posture. Even standing up straight is hard if you do it right. Feet planted firmly, trying to rip the yoga mat in half. Quads tensed, pelvis tilted back, glutes switched on, stomach tensed and drawn in, hip flexors and abs used

[29] Savasana - Usually done at the end of a yoga class, savasana is a pose of total relaxation - making it one of the most challenging.

to stop the *"floating rib*[30]*",* to stop exaggerated lumbar curve. *"Imagine your abs as a drawstring closing the gap between your pelvis and ribs,*" Jo says, her gaze falling upon each of us in turn. Her eyes tell you whether you're doing it right or not. Ribs tucked in, shoulders back, chest open, still pulling the mat apart, pelvis still tilted, quads on, glutes on, this is hard, rhythmic breathing. Arms beginning to rise slowly to the sides. This is no mean feat if posture is maintained. I'm shaking, this is tough, it's so hard to get all of this right at the same time. There is nothing else, just standing here, time out from the day thinking of nothing outside my body.

*Savasana* occurs at the end of each session. Everyone has worked hard. By this point I'm ready for it. The music changes, everyone lies down and begins by tensing every muscle in the body at once, this makes me shake. I shake uncontrollably until the command is given *"release".* Release everything, release all tension, eyes shut, drifting, listening to Jo's voice, concentrating on relaxing the entire body piece by piece. Literally from toes to teeth *"let the muscles fall away from the bone".* I have no idea how long this takes. At some point Jo has moved around the room and helped people relax, a hand on the shoulder here, a touch on the forehead there. I've lost all track of time. When I finally open my eyes and sit up I see that Clair has fallen completely asleep. She looks so peaceful that no one wants to disturb her, no one wants to even speak. To do so might break whatever spell of calmness and presence which holds the room.

Abby describes the relaxing aspects of her yoga experience, highlighting similar *"programme escape"* benefits to those experienced by Martin and John whilst exercising (see Section 9.4).

Abby: "*I just can't concentrate at all and it must be me trying to work through stuff and when I go to bed as soon as I sleep a little bit and soon as I wake up I have to get up and …you have to be doing something around here it's just 'cos it's crazy, so you just stress and your mind's just working and working and you have to sit with it so when I went in there [yoga], I was all like, oh god, I don't know if I can do this … but I don't know, she just gets you to relax … it's like I go in with a massive headache … a stress headache".*

Chris: *Mmm.*

[30] Floating ribs - the 11th and 12th ribs - simultaneously dropping the shoulder blades whilst "lifting the floating ribs" from the abdomen is a foundational aspect of many yoga poses.

Abby: *Yeah, and then afterwards I just don't have one.*

As highlighted in Section 9.1, yoga was a later addition to the PE opportunities made available to PF residents. My primary aim with this research was to attain continued funding of the circuit classes. Yoga sessions had been running for considerably less time but were so appreciated by PF residents and staff (see Chapter 10) that, once initial funding had dried up, PF agreed to continue paying for them. I am proud that there are now two weekly PE sessions that all PF residents are able to attend and thankful to those helped this come to fruition. While the yoga session I ran acted as a gateway to circuits, a means to an end, Jo's are an end in themselves. The fact that the health benefits of exercise are not directly related to the amount of energy expended (Milkman and Sunderworth, 2009) rings true here. Neither Abby nor Mary attended circuits or showed interest in gaining gym memberships. The exercise benefits they describe should be attributed to yoga with Jo's use of *savasana* and tension to release alone. In one of the few papers on this topic, Emerson et al (2009) highlight the learning of such ways to calm down and self-regulate as invaluable for those suffering the complex trauma which is often associated with addiction (refer to Chapter 7). Justin and Mary describe their experiences.

Justin: *"It's a bit, 'cos we do meditation here and it kind of puts you in a similar frame of mind when I'm doing meditation … like the session of yoga we did last week and we did repetitions of, um, I can't remember the name of the move but we did loads of those and I was saying to Jo that I got in this kind of meditation frame of mind and that's just brilliant 'cos it's just like really peaceful like, really peaceful, um, at ease with yourself, um, forget like, almost forget like where I am, you know as in a rehab."*

Mary**:** *After you've done the whole session, you're just like 'wow that was amazing'. Physically you feel the difference but also mentally and emotionally you feel a big difference as well … You do feel brilliant after you've done it … Really calm on the inside … Really relaxed physically but it [also] puts your mind-set in a different place as well. It affects everything. Not just stretching your muscles but your mood, your attitude to things. You feel relaxed you feel calm but equally you feel as if you've had a workout … Six months ago, if somebody said to me right 'you're going go to rehab and do this yoga [and] it'll change your life', I'd have been like 'yeah right that's not happening' … Basically, physically I was really, really restricted. I was using a walking stick, um, if I wasn't driving around anywhere I*

*basically thought 'no I can't do that' but since Jo's been coming I've taken part in the yoga I'm not taking any prescribed medication other than, um, a couple of paracetamols maybe once or twice a week … You feel better for it even if you don't take part in the yoga. I think somebody like that, coming [here] and doing yoga makes a really big difference to the atmosphere in the[centre] you know [because] everybody feels good after they've done it".*

Justin and Mary both highlight physical, emotional and psychosocial benefits to their yoga participation. Contrary to western belief, yoga involves more than just postures and stretching (Khanna and Greeson, 2013). The biopsychosocial benefits listed above reflect an Eastern understanding of body and mind as synergistic rather than dichotomous (Reid, 2002). The mind is being accessed through the body. This is why, as adjunctive therapies, yoga and mindfulness programmes are recognised to enhance recovery capital by decreasing stress levels and behavioural urges (Witkiewitz and Marlatt, 2004; Witkiewitz et al, 2005; Dakwar & Levin, 2009; Marcus and Zgierska, 2009). Marlatt and Marques (1977) first noted the therapeutic potential of combining the Hindu practice of yoga with the Buddhist principles of mindfulness and definition of addiction (see Section 5.2). From the Buddhist perspective, addiction represents a *"false refuge"* from the pain and suffering of life (Marlatt, 2003). This suffering is ubiquitous and is experienced in multiple ways as pain, misery, and anxiety. This universality of suffering is a key aspect of life and represents the first "noble truth" of Buddhist philosophy. Jo explains.

Jo: "*[People] just dull [pain] a bit and take the edge off … everybody does that … I think some of it is biological but a lot of it is whether, as children when growing up, we were taught the tools, about how to bounce and about how to feel pain and discomfort and … let it come through us because it's about processing things. You get rid of things by processing rather than by time passing … but you can only process it if you look at it and you feel it and you can only do that if you know how to sit with a horrible feeling in you, for it then to dissipate but for a while your gonna have to sit in it and we all try to take the edge off, to use something external. Some of us have really not learnt those tools and it fucking hurts and we don't just take the edge off, we morphine it, we anaesthetise it and then we do it again and again and again."*

The temporary refuge offered by an external substance becomes addictive in precisely the manner described in Section 7.1. The functional use of a substance to take the edge off suffering can spiral into chaos. Jo's *"teaching of tools"* amounts to imparting capital in the

form of an ability to "*bounce"*. In Chapter 5, the cumulative effect of socioeconomic structures upon life trajectory was discussed. Within this structural context, Elder argues that the same event or transition followed by different adaptations can lead to different trajectories (1985, p. 35). Jo is making a similar argument. Enacting the coping mechanism that is the ability to bounce reduces the risk of a negative life leading to a negative trajectory. Bouncing is a learned behaviour, it is a form of human capital. The point is being made here that this ability to sit with and process unpleasant feelings and bounce back is reflexivity of the highest order. As reflexive agents (see Chapter 8), PF residents have a tacit awareness of this. Through a reflexive moulding of habitus, David knew that when he is pulled up on his behaviour he needs to "*sit with that, write about that, acknowledge that"* (see Section 8.2). The *"different kinda thinking"* that prompted Callum to let down his defences and process the death of a friend (Section 8.1); Martin to "*like who [he is] … a nice person …there to help people, support people"* and process the murder of his friend and the death of his girlfriend (Section 8.5); and Katie to "*learn how to trust again … how to believe … how to have self-respect"* and process the abuse she suffered as a child, evidence the stockpiling of capital (Section 8.2). All are examples of the learning of the language and tools of recovery and the development of the ability to bounce. As highlighted in Section 5.2, this language echoes Buddhist principles of mindfulness. The sociological lexicon of capital, habitus, field and reflexivity provide a lens through which I am able to make sense of and articulate the journeys detailed here but the arguments made in Sections 5.2 and 3.6 stand: First, these ideas are not new, there are many different specialist discourses applicable to frame them; the perspective that a healthy lifestyle can reduce distress or enhance well-being and thus aid recovery from addiction is a common theme across generations and cultures (Milkman and Sunderwirth, 2009). In the West, we have gone full circle stumbling through reductionist conceptualisations of addiction as deviance, a disease or syndrome ending at the biopsychosocial model which sounds good on paper but is still viewed through the medical gaze (see Chapter 4.3). Essentially, we are only just catching up with ideas that have existed for millennia (see Section 5.2). My concluding points in Chapter 3 follow on from this argument: Now is the time to stop procrastinating over fitting our observations into our current paradigmatic understandings and get on with helping people help themselves. In his 1971 televised debate with Chomsky, Foucault was accused of slowing down the betterment of man through picking minute holes in the theories and methods of his counterparts; of being an agent of the system (see Lightbody, 2003). The same criticism was levelled at our current blinkered pursuit of the methodological 'gold standard' of the RCT in Section 3.3.2 and 3.5.1.

Even Khanna and Greeson (2013), strong advocates of yoga and mindfulness treatments within the field of recovery, recommend additional research targeted at identifying specific mechanisms and exploring the pin-point matching of substance to intervention type. The unquantifiable - which is greater than the sum of its parts - is lost when attempts are made to isolate specific variables. That which turns a yoga studio or gym during a Strong Saturdays into a third place (discussed in detail in Section 9.7) where community is fostered, disappears when the white coat is donned and the clip board wielded.

## 9.7: Time Spent Under the Bar: Training Smart with the Strong Saturdays Community

> *"We're always listening to stereos, watching television, talking to friends. We need some place where we can listen to our bodies, watch our dreams, talk to ourselves. The philosophical athlete can find such a place through a mindful approach to sport"* (Reid 2002 p 14).

As its name suggests, Strong Saturdays occurs every Saturday and entails strength training. Specifically, we coach the sports of powerlifting and Strongman. We also have links with Hallam Barbell, and our members frequently spend time there to learn Olympic weightlifting, the third and most technically demanding of the strength sports. We run from 10:00 till 15:00 with advanced athletes training in the morning and then coaching novice to intermediate athletes in the afternoon. People pay to be coached in this environment but it is free to people in recovery. We have a core group of around 10 who attend every weekend sticking to rigid training programs during the week and around 20 members who come and go as they please. We have a space at Sheffield Hallam that is our own and filled with strongman equipment, a lot of which has been handmade by us. Sheffield Hallam University's Centre for Sport and Exercise Science is 'an internationally recognised centre of excellence for Research and Consultancy' (SHU, 2017). As well as the research labs which such work takes place in, the university also has multiple strength and conditioning suites and public gyms. These are top end facilities equipped with high spec 'Team Hallam' equipment. Our space is the opposite end of the spectrum and it is glorious. The dumbells are old lumps of iron rather than branded and rubberised. None of our plates match but there are enough *"bumpers*[31]*"* to allow for huge

[31] Bumpers - weights that are designed to be dropped from height.

weights to be dropped from overhead. There is nothing like locking a heavy lift overhead and then letting the weight drop. There is always a layer of chalk on the floor. Synonymous with weightlifting and strongman, it goes on your hands to help grip and it goes on your t-shirt to provide friction aiding in the lifting of awkward objects. There are also *"tacky[32]"* spots on the floor from *"atlas stone[33]"* lifting. The tacky is applied to hand and forearm. Without it there is no budging a heavy stone but it is a nightmare to clean up. The *"Viking press[34]"*, which we made out of scaffold poles, is leaning against the wall. We have a range of *"logs"*, kegs filled with sand and water, a *"yoke"* and a set of *"farmers walk handles"*. This sort of equipment does not belong in a high end gym. It's welded together and spray painted black. It's brutal. In the outside lock up we have two huge and gnarly tyres that we use for flipping. The largest is 320kg. This stuff would be out of place almost anywhere, but not here. This is our space. To quote former world record bench and strict curl holder CT Fletcher, *"you can smell the iron"*.

Six weeks into attending, Kevin had the following to say about Strong Saturdays;

Chris: *"What did you think the first time you came?"*

Kevin: "*Um, I didn't know what to expect, um, I was a bit reserved. um, but as soon as I got there and saw the lads, you know, yourself, Paul and that, and saw the lads from Phoenix and that, and we started, we started training you know, doing the squats and that. And I thought 'wow, here we go' you know, but by, by the end of it we had a good laugh, a good laugh and a joke, you know. Got taught different techniques, got taught how to do it properly … I was hooked … it was nice to actually start training with people that actually know what they're doing … it was like when we first put the program together. It was like what, only training three days a week and it's then Srong Saturday you're having a laugh, I was training six days a week it was like you were taking all of these training days away from me. Um, but sticking to the programme even though how hard it was for me, err just from Strong Saturdays and the programme, um working with like you and Paul and I see Paul in the gym as well most days when I go training. Um, you know, you have taught me technique, you have taught me breathing. Um, you know [pause] you, you have taught me so much that I could go on all day. Um, the main thing is how to do it right and see you have got your technique and know how to do it, with the breathing and that, it's amazing how quick you, you pick the weights up. Um,*

[32] Tacky - tree sap which, when applied to the palm and for arm, increases grip strength for stone lifting.
[33] Atlas stone - a large concrete sphere synonymous with the sport of strongman.
[34] Viking press - a strongman event/piece of equipment which involves lifting weight overhead.

*(Pause) and (pause) you enjoy more. I really, really enjoy it. I looked forward to going to the gym anyway but now I really look forward to doing it every other day with Strong Saturdays because I'm not ripping the shit out of my muscles, you know. I'm having a good session and then I've got a day to recover and then I moved onto my legs or my chest, or whatever, whatever the programme says. Um, you know, and it's a better way of training. It makes me feel better in myself to actually know that I am doing it properly, um, you know and [pause] I just can't get enough of it at the moment to be quite honest with you."*

Chris: "*Have you got stronger?"*

Kevin: *"Yes, definitely".*

Chris: "*Excellent!"*

Kevin: "*And you know, I do strongman because, even as a kid, you know, with Geoff Capes*[35] *and all that, me and my mum used to sit there and watch it … every event, I used to love it, you know, and actually for me to actually get in there and, and, and do a bit of training around that and finding out a bit more about it was, it was a bit like a dream come true for me you know."*

Chris: *"That's good, man. It's funny how many people, from all walks of life sit down and watch the World's Strongest Man over Christmas as part of their sort of Christmas routine."*

Kevin: *"Yeah, you know, and even as a small kid I would sit there and think, you know, I'd love to do that. I'd love to have a go and actually, you know, twenty odd years further down the line to actually get the chance to you know to start training with yourself and Paul, the people who are actually going into competitions, you know, even like your girlfriend and Shiv, you know, it's so inspiring it's unreal."*

Chris: *"You'll be competing soon mate."*

[35] Geoff Capes - with 1st place finishes in 1983 and 1985, Capes was the first Britain to win the world strongest man.

Kevin: *"Yes mate! you know it's just … something I really enjoy doing and, you know, I would not miss it for the world. I really wouldn't and, you know, when you spoke to me the other week I was actually pulling my hair out because, you know, I couldn't go last Saturday … and then … I had all the WhatsApps coming through of everyone doing the events and I'm like I want some of that!".*

Besides the fact that he is enjoying getting stronger, Kevin makes a lot of interesting points here. The first is that he was actually over training prior to joining the Strong Saturdays community. In Section 6.5 I make the point that routes of entry into rehab in general and PF specifically are seldom the same. The same applies to Strong Saturdays. Some of our members who are in recovery have come from PF, having gained gym memberships following prolonged and often continuing engagement with circuit and yoga classes. Others found out about Strong Saturdays through links we have with the wider recovery community including Narcotics Anonymous and Addaction. I recruited Kevin and Craig from *"re-entry"*. Having completed their TC programmes, they were in supported housing, also run by PF. They had memberships at a local gym and were already exercising in a regular but unstructured manner. When I first presented them with a strength-focused programme, Kevin in particular was not impressed. He had grown used to training up to six times a week. Perhaps surprisingly, less is often more regarding strength development. Successful strength programming requires adequate rest periods. It should be *"periodised"*. Essentially, this means programming rest alongside variation in exercise volume and intensity to limit fatigue and injury whilst maximising performance (Fleck, 1999). In *"not ripping the shit out of [his] muscles … having a good session and then … a day to recover"*, Kevin is learning to exercise the same reflexive mindfulness highlighted as integral to habitus change within the field of recovery (see Section 10.2). In training smart he is maximising his physical capital accumulation. Rather than using this capital to maintain day to day function in the manner that John, Julia and Mathew were whilst in active addiction (see Section 8.2), or to intimidate drug dealers during robberies in the field of chaos like Martin (see Section 7.3), Kevin is on a path of strength development. Through discipline he is gaining autonomy over his body. There is further habitus development occurring here. This section opened with a description of a third place. Kevin is part of that. He has command over a new network through which social, as well as human and physical capital, can be developed and exchanged. In myself, (Northern England's Natural Strongest man at 105kg body weight), Kate (British masters squat record holder), Shiv (National level weightlifter) and Paul (England's Strongest Man),

Kevin has access to the strength expertise of people who have years of experience, who have accumulated *"time under the bar"*. It is through this social capital that he begins to gain self-efficacy in technique.

Also at an early stage in his training, Sean outlines his strength progression.

Sean: *Well, strength it's [long pause] it's made me think that the harder I push myself the better the outcome is going to be, you know. Each kilogram in weight is a kilogram in weight that I couldn't lift the week before and I love it, I love it. It's hard to explain in words. I really enjoy it. I mean I'm happy!*

Chris: *I am happy you're happy! I buzz when I'm coaching Strong Saturdays. I buzz off, for example, last Saturday seeing you put that log overhead. I was well chuffed. That was a big heavy cumbersome thing and you were there [arms held above head] at a sticking point*[36] *for ages.*

Sean: *Yeah man[I] let it all go. I was determined to have it and it went up and that made me happy and that was a highpoint for me (both laugh).*

There is great pleasure to be found in overcoming adversity, in setting a goal and achieving it, in experiencing, if only for a moment, dynamic perfection that has been doggedly sought (Reid, 2002). As with the yoga sessions detailed in Section 11.6, there is synergy between mind and body here. The mind is not willing the body to exercise to look better, to attract members of the opposite sex, nor to improve personal health. Rather, it is working alongside the body to achieve a goal; to lift the weight. The log that Sean was able to lift overhead is synonymous with strongman. It is a piece of equipment that cannot be found in any other sport and it is a very difficult and awkward implement. In Section 3.2 self-efficacy was defined as belief in one's ability to carry out tasks. Essentially, people with high self-efficacy believe they are capable of dealing effectively with the diverse events in their lives (Milkman and Sunderworth 2009). It is an example of the human capital highlighted in Section 5.2. Whilst Kevin hinted towards a growing confidence, Sean is implicit about his. He *"let it all*

[36] Sticking point - the point at which the bar slows down and/or stops during a heavy lift (typically the squat, deadlift, bench or an overhead press). The sticking point is a weak point in a person's range of motion that training is often tailored to address.

*go"* and approached the log with determination following training consisting of small week by week increments in weight. This section opened with Reid (2002) suggesting that a mindful approach to sport can provide athletes with a quiet place to connect with themselves. This is a mind body synergy with both acting together. This is a place, like the field of recovery, in which the self-awareness and self-belief that research suggests may generalise to maintaining sobriety can be developed (see Section 3.5). Letting it go in training is one thing. Doing it in competition is another.

## 9.8: Community and Competition: A Place to Belong and a Place to Dig Deep

Kevin: *"It's the whole kit and caboodle and it's the lads"*

We travel in convoy. Three cars full of Strong Saturdays members either competing in or supporting Wakefield's Strongest Man 2015. The Strong Saturdays team has links with the wider strongman community and this competition, hosted by Titan's Gym, was selected as an ideal first event for Sean, Kevin and Dan. Charlie and myself are coaching for the day. Kate is here filming, Alex from the Sheffield branch of Addaction is going to edit our footage together. It's August, next month is Recovery Month, and the footage gathered today is going to be shown to the wider recovery community. Spirits are high. We are all wearing *"I Love Recovery"* T-shirts in PF purple. The lads have been training towards this moment for the last four months. Paul and I have formulated individualised training programmes. They have each put in three days a week in the gym and spent every Saturday training, for the events using our equipment. Sean has great grip strength. He is likely to do well at the truck pull. He is also very good at atlas stones. Dan is weak overhead. This means he will probably do poorly in the first event but we are prepared for this and expect him to do well in the yoke carry, he is very fast on his feet. Kevin is a solid all-rounder but he was up all night because Louise, his girlfriend, gave birth to his daughter! During her pregnancy, she often popped along on Saturdays to watch him train. The birth went without complication and she knows how important today is to him. He is here with her blessing.

We arrive in good time. Kate sets the camera up for the first event, the overhead medley. I get the lads signed in whilst Charlie makes sure they are hydrated. James and Kris find us a spot to regroup between events. They have our supplies for the day. The following images

(*images 1-4*) depict a successful day with individual and group victories. We function very well as a team ensuring that our athletes were well looked after and primed for each event. Sean places 1st in the atlas stones and joint 4th overall. Kevin places 2nd in the dead lift and overhead and placed joint 4th overall. Dan placed 1st in the Yoke and 10th overall. To date, this is the first of four competitions in which we had athletes from the recovery community.

## Images 1-4

*Image 1: Athletes and coaches - Chris, Dan, Kevin, Sean, Charlie (left-right)*


*Image 2: Kevin's deadlift*


*Image 3: Sean's Atlas stones*


*Image 4: The team - Charlie, Dan, Kevin, Kate, Sean, Chris (Left - right)*

In a group interview over coffee following a Strong Saturdays training session, Sean, Kevin and Anthony had the following to say about competing. Also in recovery, Anthony joined us after seeing us on social media.

Chris: *"What about competition then?"*

Sean: *"I get a buzz, I get a right buzz it really gets the adrenalin pumping it's something to look forward to and something to train for …. I like meeting up with all the other guys [fellow competitors]. I find it really humbling training and competing with stronger guys because you know they've worked hard to get to where they have got to. There's this camaraderie, it's cool …. they're big, friendly giants really. I get a lot out of it … just stepping on to the platform to do the lifts … you've won already, you're pushing yourself. It's about getting out of your comfort zone and growing.*

Chris: *"Is it the challenge, the training and the numbers you need to hit or is it the comp itself and performing in front of people?"*

Sean: *"It's about building yourself, being better than the person that you was yesterday, also I … I just want to show people that I've changed and that I'm stronger than I used to be. Competing really helps with that."*

Chris: *"How about you Kevin?"*

Kevin: *"That comp was amazing. It was a wicked day … the stones are hard for me because I'm a short guy but if had of carried on competing I would have trained around that."*

Chris: *"Is there something you get from a comp that you don't get from training?"*

Kevin: *"Yeah, it's totally different for me in the gym, It's about just training. When you are at a comp it gives you this buzz inside to show other people what you are capable of and what you have been training for … When you do well, you dig deep, you feel really good and when you get beaten there's no animosity. It's like you recognise they have trained hard and it's like fair play, you know. You don't get that in the gym because everyone is doing their own thing. At a comp everyone cheers everyone on and wants everyone to do well … Everyone supports everyone, even the ones that really struggled. I really like that man."*

Anthony: *"There doesn't seem to be any us and them either. You know addicts and non addicts."*

Kevin: *Yeah, we were there in our t-shirts and we stood out because we were Phoenix Futures that day. We were in recovery but no one …. They wasn't looking down their nose or any of that. People were coming up and saying 'good event' and having a chat and they were interested."*

In Section 5.2, the self-awareness which characterises mindfulness was highlighted as a form of human capital built up of skills and abilities. Self-awareness is, in itself, a skill. The point being made was that development of human capital equates to the positive development of habitus. Section 9.5 ended with my referring back to examples of such habitus development occurring within the field of recovery. The discarding of old habits and the developing of new positive ones is the crux of the community as method approach. In the last section (9.6) Sean and Kevin discussed self-efficacy regarding *"the lifts*[37]*"*. Here they are suggesting that an opportunity for further habitus development lies within the challenge of competing. On a personal level, I know this to be true. There are numerous occasions in my life where I'm put outside my comfort zone. Public speaking to an unfamiliar audience is an example. On such occasions, I think back to competition, to my *"opener*[38]*"* at an Olympic lifting meet. All eyes focused on me, one chance to get it right. Reid (2002, p20) defines this as a moment of challenge: an 'intersection of time and spirit when athletes encounter a specific task, know exactly what they must do to succeed and face the reality of actually performing'. Sean is suggesting that he has won in getting to the lifting platform. Incremental self-improvement, like gradual increases in weight, has given him an opportunity to showcase strength that has been worked for. Kevin views competition as a supportive space to *"show other people what you are capable of and what you have been training for"*. For Reid (2002, p19) Kevin and Sean's "*digging deep"* facilitates a connection with a 'constant and unchanging element of the self that represents who they really are'. Familiarity with this inner self, fostered through overcoming adverse circumstances develops mental toughness (see Section 6.2). This is a working example of the reconceptualisation of identity which Biernacki (1986) highlighted as vital to recovery (see Section 2.1). It is entirely in line with the ethos of identity reconstruction at the centre of the community as method approach.

[37] The lifts - the core lifts are the foundation of strength. In Powerlifting the term refers to the squat, deadlift and bench press. In Strongman the overhead press is also considered a core lift.

[38] Opener - in powerlifting and weightlifting three attempts are made to lift the most weight possible in each of the lifts (squat, deadlift and bench press in powerlifting - snatch, and clean and jerk in weightlifting). The first attempt in each lift is the opener. If it is successful the 2nd and 3rd attempts will increase in weight incrementally.

As highlighted in Section 5.2, mental toughness of the type described above mitigates the relationship between depression and high stress situations. It builds upon self-efficacy in the lifts further developing human capital (see Section 9.7). This, like improved body image, confidence and reduced depression and anxiety (see Sections 9.5-6) is a benefit beyond the physical. In the above excerpts, acceptance by the wider strongman community is highlighted by Sean, Anthony and Kevin as another important benefit to being a Strong Saturdays member. In the following conversation, other benefits beyond the physical are discussed.

Chris: "*What does training mean to you?"*

Sean: *"For me it's a release. It's something that I can channel my energy into that's positive."*

Anthony: *"I've always come back to it throughout my life. It's always been the training that's helped me out of my addiction."*

Chris: *"How do you feel about setting PB's*[39] *Anthony? They were some big ones today."*

Anthony: *"Fantastic for me, at my age as well, you know. To do these things and everything [physically] to be working … my body feels complete."*

Kevin: *"Training is like a drug for me, you know. It puts me on this high and, you know … it doesn't bother me if I can't do it [a lift] … I work up to it. Today, I was well shocked with [my good performance] the farmers and the 90 stone. It makes me feel good … It's amazing how healthy I am after 25 years of addiction. It's training and it's having a physical job, that's helped keep my head above water even at the worst of times."*

Chris: *"Is it different training with the Strong Saturdays community compared with any other exercise you've done?"*

Kevin: *"It's not just one thing for me, it's the whole ball game … it's the lads. It's you, Paul, Sean, Anthony, Kris and James, you know, it's the lads and it's a relaxed atmosphere. Everyone is here to train but everyone is here to have fun as well … It's the whole kit and the caboodle and it's the lad's."*

Chris: "*What about you Kris?"*

Kris: *"Here I tend to be able to talk to people a lot easier. It's just being with other people really. I mean I don't go to [AA/NA] meetings [any more] so this is kind of like my group of*

[39] PB - personal bests. A PB is a personal record.

*mates really … there's people in recovery [here] and there's people I class as friends here as well … I come down, I have a laugh with everyone and I get to train."*

Sean: *"It's the same with me, I don't do any meetings or anything like that, this is the place I come into contact with people who have been through what I've been through."*

In Section 6.2 social capital was highlighted as a key component of recovery capital. It is perhaps the single most important outcome of Strong Saturdays membership. As Kevin says, it's *"the whole kit and caboodle - and the lads"*. Kris and Sean both have increased capital in a network of friends they can talk to and have fun with. Both suggest that these are therapeutic friendships akin to attending AA/NA. In this sense enjoyable training should be understood as a form of longer term recovery management. Through relationships forged *"under the bar"* Sean has gained his Security Licence and a job at Sheffield Hallam Sports public gym (see Section 9.8). A key point in this section is that Strong Saturdays is a close knit community. This is as important as the training which occurs there. Sean's fulfilment in employment, Kris's safe place to unwind and Kevin's learning from other more experienced athletes (see Section (9.6) are rooted in a sense of community. Access to the third place this community inhabits and the development of physical and human capital which membership facilitates all build upon the recovery capital gained at PF. In the same way that getting clean is about more than just being drug free, Strong Saturday membership is about more than just getting stronger.

## 9.9: Wider Social Impact Outcomes

This project has been organic and the world has continued to turn, change and develop during the 3.5 years it has taken me to carry it out. Participants, stakeholders and organisations whose aims are congruent with empowerment through exercise have worked alongside me, and joined forces with me and each other with the common goal of empowering alienated populations through exercise. Some of these developments, such as the addition of yoga classes to the PF exercise repertoire (see Sections 9.1 & 9.6), the guest lecture work James has done with me (see Section 8.5) and the formation of Mind Body Connect (MBC - see Section 9.5) have been discussed, while others have not. The purpose of this chapter is to highlight all of these wider social impact outcomes: Those which have occurred alongside and relate to this project, but do not fit neatly under my research aims. I open with an

observation from Sheffield Hallam's *"Research with Marginalised Communities: The Practical Impact"* conference which took place on 4 April 2017 as part of the University's yearly *"Social Justice Week"*.

James spoke alongside me today. Paul, Sean and Josh were there for support. Our focus was participant empowerment in research. I had 15 minutes to outline this thesis, and explain what MBC does. James is an example of an empowered participant who formed his own exercise related goals which culminated in qualifications and working with MBC. Following in Sean's footsteps, he is now running circuit classes for Green's, a local rehabilitation centre. Sean manages our PF programme on Fridays while James delivers his classes on Thursdays. He is getting good at this public speaking lark. Last week, along with Justin and another Strong Saturdays member called Ryan, James delivered two lectures and six seminars on my undergraduate sociology "Drug Use in Context" module. Ryan works for User Voice, a charity set up in 2009 with the aim of improving rehabilitation in prisons through collaboration between offenders and staff. His teaching focused on the use of spice (synthetic cannabinoids) in prison, whilst James and Justin ran a lecture on life in a TC with welcome house and encounter groups in seminars. They made an effective teaching team. This is the second consecutive year that James has taught with me. I get a kick out of watching his delivery skills develop. He speaks of his recovery and work with MBC with pride. The students appreciate this and it went down very well today. I met James, Sean and Justin in the field of recovery. They were developing the skills of clean living. Each now has a remodeled habitus interwoven with and enforced by the practices of recovery. Exercise has played a role in this. Sean and James have converted their physical capital into economic capital. Both are now working in the fitness industry. Justin has just landed a book deal for a semi-autobiographical life story and trains hard, punctuating long sessions at the keyboard with yoga classes. Ryan has recently finished work on a User Voice Publication detailing inmates' views on spice use, and I regularly bump into him on his way to or from the gym. I'm sure that both he and Justin would be successful regardless of exercise habits but this is where we congregate. It’s our third place. James summarised this nicely this afternoon. After I'd outlined MBC he opened his presentation with the story of a recent class he had run. Someone turned up having relapsed. Some attendees were concerned. Others were annoyed at such an infringement on their recovery. James sat everyone down and they talked things through. It was a sunny day so they went for a walk around campus. Opinions were voiced, support offered and ground rules set. Initially, assuming that a circuit class without circuits

signalled a failed session, James was worried about this. But, upon reflection, he explained to a captivated audience, this is actually what MBC is all about. The physical benefits are secondary to the social. We are a safe place. We are a community.

Exercise drew our teaching team together. This is the first wider social outcome detailed above. My students and colleagues know James, Justin and Ryan. Links have been made. They know Sean because he now works at the university gym in which some of them train. Plenty of students come to Strong Saturdays where they meet the whole crew. A few have carried out dissertation research on this experience. These links are the salient intuitional bonds highlighted as lacking in the field of chaos (see Section 7.3). The presence of such bonds *is* recovery capital.

The formation of MBC is perhaps the most important of the outcomes detailed here. As described in Section 9.1, MBC is an extension of the work begun with this research. It is important that the exercise opportunities made available during this thesis do not disappear upon its completion. James and Sean's classes, along with ongoing therapeutic yoga classes, ensure that this is the case. A lot of these classes take place in the gym described in Section 9.7 (Strong Saturdays - third place). MBC has free use of this space. Strong Saturdays continues to run and makes money. Clients who are not in recovery pay to be coached. A percentage of this capital goes to our coaches, a percentage to Sheffield Hallam University and a percentage to MBC. Our mission statement is as follows.

> *MBC empowers and inspires marginalised individuals.*
> *Physical activity is our vehicle of change. We are a community support network. Our members are empowered to take charge of their own personal growth. Our mission is to provide marginalised populations with safe spaces to reconnect mind body and spirit.*
> *The mind body connection plays an important role in our management of self in everyday life. Through our body we discover ourselves. Through knowing ourselves we strengthen or foundations and nurture our spirit to better deal with life's past, present and future challenges. Through the body we ground ourselves.*

To date, we have offered therapeutic yoga and circuit classes to a range of marginalised groups including recovering addicts, survivors of human trafficking and people with eating

disorders. We have three research papers in progress. Building on the work started here, each argues that the revised recovery capital model works for empowering marginalised populations outside the field of addiction. In the next chapter I summarise findings from Chapters 7-9 and highlight precisely how this model works.

## 9.10: Field of Exercise Conclusion: We Play the Game of Life with the Cards in Our Hand

> *'The really "big game" that we prepare for in athletics is in fact the "game of life". The object of the game of life is quite simply, happiness'* (Reid, 2002, p279).

From Sean's enjoyment of being pushed in circuit classes and developing a level of mastery that allowed him to compete as a strength athlete (see Section 9.8), to Sasha enjoying a bike ride, progressing at swimming and building enough physical capital to begin circuit classes (9.5); from the physical benefits of Mary's yoga participation and its calming effects on Abby (see Section 9.6), to Kevin's and James's new found self-efficacy regarding *"the lifts"* (see Section 9.7). From the personal victories of hitting *"PB's"* to the supportive community of Strong Saturdays (see Section 9.7) and Martin's *"giving back"* in the role of gym peer (see Section 9.3). This chapter has been sprinkled with participants' perceived physical, psychological and social benefits of engagement in exercise. I open this concluding section with some Strong Saturdays field notes, and then summarise these findings drawing on the Bourdieusian game of life metaphor introduced in Chapter 5 to discuss long term (post PF) recovery.

Paul is competing in England's Strongest Man. This is a big deal, so between our exercises, we are keeping an eye on the Strong Saturdays WhatsApp group for updates on his progress. At 22 he is one of the strongest people in the country and he is our team mate, he is a Strong Saturdays boy. Sean has run today's warm up. He now has his Level Three Gym Instructor qualification, and last week he ran the entire session as Paul and I were both competing. He optimizes what it is to be the gym peer. In the same way that former residents give back to the TC that is PF he is giving of himself to Strong Saturdays. He now does all the gym inductions for those who qualify for them and has taken responsibility for running the circuit classes from Pam. Everyone is warming up on the log. Sean has got this dialed in. There is a

healthy one-upmanship going on between him and Jordan, one of Hallam's strength and conditioning coaches who has joined our number. Jordan has been an athlete his whole life and Sean is able to give him a good run for his money. He has been training with us for over two years now. He is consistent, he has accumulated a lot of *"time under the bar"*. He moves confidently through his log warm up ensuring that the correct jumps in weight are made and that everyone sticks to the running order. Keith is bouncing around taking pictures. We have a lighter log set up for him. He is the eleven year old son of Anthony's new girlfriend. Anthony has been with us a while. I met him at an addiction research group meeting. He has been in recovery a number of years now and volunteers his time across a range of services. His knees ride out over his toes when he dips to put power into his *"push press"*[40]. I catch Sean's eye and point to this. Sean picks up on it and reminds Anthony to *"screw his feet into the floor"* and *"push his knees out on the dip"*. I couldn't have put it better myself. He's become fluent in the language of the gym.

Every person interviewed, no matter what type of exercise they had engaged with (circuits only, yoga only, gym and Strong Saturdays only or a combination thereof) listed positive outcomes. Everybody describes themselves as fitter and healthier. In the absence of objective measurements of physicality there is still solid evidence that this is the case (for example, the increasing number of lengths Sasha swam every week). In the case of Strong Saturdays athletes, improvements in strength are particularly easy to track due to rigid programming. When Sean first came to us he could not perform a squat. Now he squats twice his own body weight. When Kris first arrived he could not dead lift without rounding his back dangerously. After a period of working on posture he became the first of our PF residents to deadlift 200kg. James had to spend a day in bed after his first Strong Saturday. He now deadlifts twice his body weight, has a personal instructor qualification and works for MBC running circuits for local rehab centres. He still lectures with me once a year (see Section 8.5). Justin has joined the teaching team too. These improvements in physical health (physical capital); respected roles within social networks (social capital) and paid work in higher education (economic capital) all equate to increased stocks of recovery capital.

Each interviewee reported that they intended to continue exercising as a form of recovery management after leaving PF. Indeed, this was the case for many residents who stayed in

[40] Push press - an overhead lift which uses the legs as well as the upper body to propel weight overhead.

Sheffield and continued to attend Jo's yoga classes, chose to pay for their gym membership and/or became part of the Strong Saturdays community. In Section 5.1 physical capital was coined the last card in the game of life. Kevin discusses its ongoing role in his life.

Kevin: "*We are all middle aged people that should have been doing this when we were, you know, nineteen, twenty, twenty-one but because [of] where we were, we didn't bother. You know, so [pause] and you know, everybody that I hang around with, that I know that have come out of Phoenix, train, they go to the gym, you know … My escape is the gym, you know … a healthy body is a healthy mind. In my case, um, it makes me focus. Um, it gives me a goal. Err, it just makes me feel good in myself. It makes me feel that I am better than what I thought I was, um, and I don't think I would have gone on half of these courses if it wasn't for the exercise and the gym because I would have just got stuck in a rut again and I would of, I would have been sitting about, not knowing what to do with myself … I think, without the gym for me [Long pause] I would have fallen back into bad habits".*

Beyond this, Kevin has converted his physical capital into economic capital. As a self-employed builder he supports his young family.

Kevin: *"I'm going to work every day and meeting new people … They've accepted me for who I am and it's nice when the customer says 'good job'. It means so much and it gives me such a lovely feeling … after living in the chaos for so long [pause] it's just a warm, glowing, fuzzy feeling".*

Kevin has autonomy. As outlined in section 5.1, this is a crucial determinant of happiness; of having a *"warm, glowing, fuzzy feeling"*. He also has the salient institutional bonds with the workplace and the family which offer security (see Section 7.3). Anthony describes a similar experience.

Anthony: *"If you can master training then you've cracked it because you take those principles of self-determination and perseverance and planning and you can apply it to the rest of your life … since I started doing everything straight down the line everything has come to me. I got rid of the hepatitis. I came off the methadone. I've got a woman for four years, a strong relationship, I've got a family. I've got a nice pad up, I … I've not got a pot to piss in [all laugh] but I'm fucking made up."*

Sean's salient bonds are also based largely upon his physical capital. As this PhD draws to a close, the circuits and yoga classes continue under the charity MBC. On the MBC books, Sean currently runs one circuit class on a voluntary basis and is paid to coach Sheffield Hallam's rugby team for a once a week strongman session. He also works at a Sport Hallam gym and as a bouncer, through contacts made at Strong Saturdays.

Sean: *"It's amazing. It makes me so good and I'm really enjoying the circuits. I don't get paid for it. I do it off my own back. I do it for free and I love it because … you keep what you've got by giving it away … I just want to help them out now."*

Anthony: *"Giving back is everything because we've … what we've done has damaged our dignity and our self-respect so when you are sat there and you know you've come off drugs that's one thing but you're still fucked for your dignity and your self-respect. But then you help people out and you feel better. There's a reward … It's a pat on the back - when society pats you on your back you say to yourself, actually this is all right I like being a decent fella."*

Sean: *"That's it man."*

The disease model of addiction is flipped upon its head here; 'recovery transmits virally through culture and the recovering addict is the source of infection (Bamber, 2010, p3). Sean's wounded healing is infectious and physical exercise is facilitating the sustained contact with those in recovery and in need of recovery required for transmission to be effective.

In Chapter 7 I explored habits forged in chaotic fields characterised by alienation, violence, poverty, child abuse and addiction. In stark contrast, the recovery field (Chapter 8) of PF was defined by community, the language and practices of recovery, and empathy towards self and others born of reflexivity. These same qualities define the field of exercise detailed in this chapter. It is a place where the body can be used to reconnect with a self buried beneath a chaotic habitus and develop the recovery capital required to reconnect and develop bonds with wider society.

# Chapter 10: Conclusion

> *'Physical fitness is 'a prescription for participating in the fullness of life'* (Milkman and Sunderwirth 2010, p369).

In this final chapter I conclude by relating my findings to the aims outlined in Chapter 1. My desire in carrying out this project was to expand the therapeutic repertoire at PF to include PE. This been achieved in a manner that fits well with the TC model. For the participants whose stories have been detailed here, PE has worked as an adjunctive treatment to the TC program. I can say this with confidence because when I asked them that was the answer they gave me! It is also my firm belief that these findings are transferable to other recovering addicts in other rehab centers. I make this statement from the position of pragmatism towards research outlined in section 6.5. Future research should be shaped to fit the practicalities of the real world and the desires and opinions of service users rather than methodological dogma. This recommendation and others relating to policy is made below (10.4). The chapter is presented using my five research aims as subheadings, followed by a few critical reflections and observations regarding the research process.

## 10.1: Aim 1 - Implement Inclusive Circuit Training Classes for PF Residents and Staff

This aim was met prior to any data being gathered or ethical approval being gained. The later addition of weekly yoga classes (see Section 9.6) represents further expansion of the PE options available to PF residents. Having participated in pilot research (see Section 6.1) and possessing tacit awareness of the potential of exercise, PF were open, receptive and supportive stake holders. They wanted PE to be part of their programme as much as I did. Exercise is now, and will remain for the foreseeable future, part of the weekly structure at Storth. Sean runs circuits on Friday mornings and Jo runs yoga on Wednesdays. Whether being used as a stepping stone to getting a gym membership or, like yoga for Abby and Mary, serving as an end in itself, these classes are inclusive activities in safe settings allowing residents to (re)connect with their bodies.

Staff participation has been very limited but this is likely due to large workloads spread across a small team, rather than unwillingness to engage. Indeed, I ended up writing training programmes for some members of staff to do in their own time. If staff on duty down tools to unwind on a yoga mat, who is left to answer the phone, prepare meds for distribution or chip away at rapidly accumulating piles of paperwork? This is the reality of working in one of the many sectors currently suffering under a Tory government hell-bent on dismantling welfare services. It is my opinion that some form of work-planned PE could be beneficial across many employment settings especially those where barriers between groups such as service users and providers might be broken down by shared experience in a third place setting. I'm certain that the *"really big difference to the atmosphere"* in Storth which Mary accredited to yoga classes (see Section 9.6) would be enhanced if all community members including staff were involved. Two of the three MBC research papers outlined in the last Section 9.9 use a shortened version of the Profile Of Mood States (POMS - originally conceived by McNair et al, 1971) and group interviews to measure the impact of single and consecutive therapeutic yoga class attendance on mood for PF residents and survivors of human trafficking. Replicating this methodology with the inclusion of staff would likely produce interesting findings, but the financial barrier of releasing staff during work hours would be challenging to overcome.

The subject of mandatory circuit classes was raised in Section 9.5. A lot of interviewees argued for mandatory PE within the PF program. As outlined there, I believe there may be room for mandatory PE at PF, but to work it should occur alongside, rather than in place of, flexibility of choice and participant ownership of activity. To have choice and ownership of something mandatory may sound paradoxical but it is actually the bedrock of a community as method approach which fosters self-awareness through structuring the field around positive habitus development. Using Kris as an example, the telling of his life story was mandatory (see Section 8.4). He was *"double teamed"* by staff who prompted reflexivity and the application of the language of recovery. This facilitated identification of the driving forces behind his addiction. Knowledge is power. Carrying out this mandatory task was recognised across all the interviews as emancipatory.

Abiding by the rules, meeting responsibilities *"on department"*, *"giving your feelings"* in morning meetings, "*using the tools of the house"*, *"pulling support"* and accepting it when needed are mandatory. Adopting these practices of recovery and *"buying into the*

*programme"* is habitus development. It raises recovery capital stocks. In this community as method context, senior house members become wounded healers helping junior residents adapt to the environment. As a gym peer responsible for circuit class organisation, Martin did and Sean continues to do the same with exercise. The groups described in Section 8.3 are run by the community for the community and participation is mandatory. I believe that under this model, if a range of inclusive activities are offered, some form of mandatory PE could work. This is certainly something I would be interested in investigating in the future.

## 10.2: Aim 2 -Develop participant ownership of the exercise programme by empowering them to plan individual goals and activities.

Intrinsic motivation is driven by internal rewards. It requires goal setting and self-efficacy: belief in one's abilities. It is an aspect of human capital (see Section 5.2); it is about taking ownership of one's life. PF residents are prompted to exercise such autonomy: to *"buy into their programme".* Achieving an exercise goal, *"setting a pb",* is an embodied experience of the same process. Buying into one's fitness in such a manner develops physical and human capital. The "loudest and proudest" examples of setting PE-related goals and achieving them in this thesis are to be found in Sections 9.7-9 where Sean, Kris, Kevin and the rest of *"the lads"* of Strong Saturdays detail becoming proficient in *"the lifts",* the challenges and rewards of competing and the fulfilment of gaining qualifications. It is, however, important that these examples do not overshadow the numerous other examples of physical and human capital development. Being given control over circuit class organisation provided Martin another avenue of self-discovery. At this point of overlap between the fields of recovery and exercise he uncovered caring and responsible aspects of his nature long hidden beneath a *"badman"* persona forged in the field of chaos. Martin set himself the goal of supporting his peers to exercise and achieved it (see Section 9.3). Sasha set the goal of weekly swimming sessions and her progression gave the self-efficacy to set the goal of attending circuits. She achieved this (see Section 9.5). Despite her initial insecurities about PE in general, Mary became a regular yoga attendee. As she reconnected with her body she set the goal of reducing her use of pain medication and achieved it (see section 9.6). Following in Sean's footsteps, James signed up with MBC, gained his personal training qualification and started offering classes at other Sheffield based rehab centres (see Chapter 10). Doing this was his idea; he set a goal and achieved it.

The common thread across these examples is that they required a foundational level of physical capital. The key to developing this baseline was making enjoyable and inclusive PE available and setting up a feedback loop which ensured a level of ownership.

## 10.3: Aim 3 - Explore any impact of exercise upon recovery via gaining the emic (insiders'/native) perspective of participants and practitioners.

Chapters 9-11 are built upon my interpretation of the emic accounts of participants. Each chapter is woven of detailed snapshots from past and present life worlds, of time spent in the fields of chaos, recovery and exercise. Gidden's (1984) argument that phenomena cannot be understood outside the specific time and setting in which they occur (see Chapter 6) is of relevance here. As suggested in Chapter 6, I have occupied the field of recovery albeit as a member of staff lacking in the experiential knowledge highlighted as important by so many interviewees (see Section 8.4). I have accumulated considerably more time in the field of exercise, a fair portion of which has been outside my comfort zone (see Section 6.6). I cannot honestly say I have ever approached a physical task without belief (sometimes misguided) in my abilities. Likewise, I spent a large portion of my youth dancing on the fringes of the field of chaos without slipping in. The point being made here is summarised nicely by Joseph Conrad ([1899] 2000, p50).

> 'It is impossible to convey the life sensation of any given epoch of one’s existence, - that which makes its truth, its meaning - its subtle and penetrating essence. It is impossible. We live as we dream - alone'.

Ethnographic data relies upon investigator and reader reflexivity and the formation of an intersubjective relationship towards the research process in order to develop meaningful interpretations of individual lifeworlds. My open interviewing technique, awareness of my own positionality (see Section 6.1 and the beginning of Part 2), and participation in classes and training sessions have allowed the development of a deep rapport between myself and the participants, many of whom have become friends. The richness of my interview data is a reflection of this. Without actually walking a mile in their shoes, this analysis is as honest a representation of the truth and meaning behind their experiences as I am able to offer.

Aside from the notable exceptions of Burling (1992) and Landale and Roderick (2014), the participant perspective is missing from research pertaining to possible relationships between PE and recovery. In its place is a body of knowledge made almost entirely of biomedical observation. Moving forward requires a rethink on how research is carried out, rather than mindless repetition of experiments so far removed from reality that they become meaningless. In Section 8.1 I highlight the community as method approach as being greater than the sum of its parts. The same applies to attending a therapeutic yoga class at PF (see Section 9.6) or training with the Strong Saturdays crew in their third place (see Sections 9.7-8). The same applies to life itself. Human experience is not quantifiable. The multifaceted nature of an individual's recovery cannot be gauged with a ruler. Understanding the profound importance of wounded healing for John, Sean, Martin and James (see Section 8.5) requires contextualising it against a habitus once geared toward survival in a field of chaos. Recognising the transformative powers of competing, of hitting the PB, of completing a *savasana* without having to get up and run from the room, of chalking up another length swum, for people so recently at "rock bottom" requires asking them. They, after all, are the experts, not the men in white coats. To discredit their opinions because they do not fit into a paradigmatic pseudo-scientific research process (see Section 2.8) and are at odds with the dominant politicised perspective (see Sections 2.3 and 5.1) would equate to cultural violence of the type highlighted through the work of Bourgois in Section 5.1.

The only practitioner I interviewed was Jo (see Section 9.6). Had staff regularly attended either circuits or yoga, I would have interviewed them too. Jo's insights regarding the potential role of therapeutic yoga to aid recovery were invaluable. Her account, along with my own field notes which flow through the analysis, provide a practitioner's perspective to complement those of the participants.

## 10.4: Aim 4 - Develop a Conceptual Model for Understanding the Role PE Might Play in Empowering Recovering Substance Abusers.

The adapted recovery capital model outlined in Section 5.2 has provided a useful lens through which to make sense of observational and interview data. The replacement of the traditional conceptualisation of physical capital as stock that can be readily converted into

money with Shilling's (1991) notion of an embodied resource has worked well. Using habitus development and recovery capital as a conceptual framework which encompasses economic, social, cultural, human and physical capital works because it entails an understanding across the fields of chaos, recovery and exercise. It has explanatory power and facilitates the empathy which is lacking in more positivist works. Understanding the far reaching positives of time spent in the field of exercise requires understanding that it borders and frequently overlaps with the field of recovery. To understand the transformative power of time spent learning the language and practices of recovery requires awareness of how maladaptive habits are formed in the field of chaos. In short, you need the whole picture and a working set of concepts to fully articulate and appreciate a person's recovery journey[41].

The vast majority of drug use represents experimentation by young adults, a very small number of whom become addicts. Spiraling into addiction was characterised by a drastic reduction in the capital stocks of all interviewees. For those whose habitus was developed within chaotic and often violent fields, drug use was normalised as a coping strategy which was learned from the environment. Coping with alienation and trauma; being able to *"bounce"* (see Section 9.6) is a skill. It is a form of human capital that those lacking in economic and social capital have reduced chances of being taught. For the "children of the children", life is experienced as a series of traps. Kris's alcohol, John's cocaine and Katie's heroin use functioned to offer a modicum of control, an escape route into oblivion or a sense of self efficacy. Use of even the most taboo substances makes sense when contextualised against a backdrop of structural inequality, of poverty, violence, abuse and criminogenic pressure. Alienation as a result of these factors massively increases the chance of casual substance use becoming abuse.

We play the game of life with the cards we are dealt. Daniel found a place to belong in the army but his options were limited when he was forced to leave. Following his first rehab, James made it to university but felt the magnetic pull of criminogenic pressure when times were tough. Drug abuse and other counter-cultural subjectivities are intersectional phenomena. There are multiple gendered and class related layers to every story. The lens of recovery capital highlights them. Some like Callum, Craig, Julia, Mathew and John possessed

[41] The MBC research outlined in the last chapter (11) entails the application of this model of understanding outside of the SUD field. It is my belief that the recovery capital concept shall prove useful in explaining recovery from a range of trauma.

high levels of physical capital in the past and had a sometimes tacit, often explicit, awareness of its recovery value. Hitting “rock bottom” was for these participants, characterised by the loss of this resource along with the severing of salient instructional bonds and a general reduction in autonomy. The conceptual model used here allows identification of the defining aspects of these journeys.

When contextualised against a field of chaos, the primary function of the TC as a place of positive habitus development is highlighted. Even the *"badman"* must *"give [his] feelings in the morning"* (see Section 8.2). The therapeutic value of the tools of the house becomes apparent as their use becomes habit. The *"push up, "pull up"*, the responsibility of working *"on department"*, of *"pulling support"* and completing the *"life story"* fosters reflexivity. It is via this language and these practices of recovery that sense is made of time spent in the chaos and a new identity formed. In the absence of the numbing effect of drugs, trauma can be revisited and processed, emotions felt, often for the first time in years, and healing can occur. The field of recovery is a space tailored towards this end. Explaining this in terms of habitus and the stockpiling of recovery capital makes sense. You get dealt a fresh hand.

Increases in physical capital and psychological wellbeing (human capital stocks) which every participant made reference to (see Chapter 9) are just the tip of the iceberg. Just as getting clean is about more than being substance free (see Section 8.5), exercise is about more than improving fitness. Justin and Abby described therapeutic yoga sessions as offering a place to center oneself, and attributed a general calming of the community to them. To centre oneself is to exercise human capital. To do this through the body requires physical capital. Justin and Abby recognise this, highlighting the meditational qualities of therapeutic yoga as complementary to mindfulness training (see Section 9.6). Both activities centre one in the present. Martin's ownership of circuit class organisation is in keeping with the peer led philosophy of the TC. In supporting community members to exercise he is being empowered through responsibility. In Section 8.4 the dual function of the life story and encounter group were explained. The "encountered" and the "encounterer" benefit from an encounter group. James benefited from repeatedly whitewashing the basement while the community benefited from his labour. The community benefits from Martin's input as a house and gym peer, while he gains self-worth through responsibility. Sean summarises this principle of giving back as *"keeping something by giving it away"* describing the fulfillment he derives from circuit class delivery. Having hit “rock bottom” Sean arrived at PF with little recovery capital. Immersed

in the community as method, he used the tools of the house and the language of recovery to develop his habitus. Through exercise he developed his physical capital and gained more human capital. Through Strong Saturdays he developed his social capital. He now has paid employment in the fitness industry and volunteers for MBC (see Section 9.9). Simply put, he has converted his physical, human and social capital into economic capital. This recovery capital is infectious. In giving of himself, Sean empowers other service users to develop their capital stocks through the medium of exercise.

A potential weakness in this model lies not in the explanatory power of the concepts therein but in the potential for them to be applied without recognition of society's structural realities. In short, to map the accumulation of recovery capital within the field of recovery and/or field of exercise is one thing, to assume that this capital transfers without friction into fields outside the TC and third place exercise environments, fields such as the work place or the family, would however be a mistake. Bourdieu explains this through his theory of social stasis, at the heart of which lies habitus (Dean, 2017).

Social stasis describes why, even during periods of technological, political and potentially emancipatory change, inequality is reproduced (Dean, 2017). The reproduction of elitist educational advantage is an example of this (Bourdieu and Passeron, 1977). The increase of monopolistic power held by an ever smaller number of global corporations is another (Bourdieu, 2005). Social stasis occurs when certain habitus, often those pertaining to the socially and financially marginalised, are deemed less legitimate than that of those who hold power in the field in question. In section 5.1 the illegitimate forms of social capital; command over social networks and cultural capital; style, speech patterns and appearance that informed the habitus of young second generation Dominican immigrants, cut adrift from mainstream society in New York during the 1980-90's crack epidemic (Contreras, 2013) were provided as an example of this. The layer upon layer of socialisation through experience which formed their habitus resulted in embodied ways of acting which, despite sharing wider US values of consumption over non-economic or non-material goals, rendered legitimate fields inaccessible.

It is reproduction of this cultural violence (Section 5.1) which holds significant macro level social change in stasis and renders individual change difficult. This is the key challenge faced by those leaving the safe nurturing environment of the field of recovery and entering or re-entering the fields of work, education and family. Habitus is created and changed at the

intersection of structure and personal experience (Dean, 2017). We can learn much about its malleability from the positive changes documented in this thesis. They occurred in fields designed to that end. I assume that the greater the development of economic, social, cultural, human and physical capital made in recovery, the more resilient the remodeled habitus. There is empirical evidence that this is the case with the same large scale surveys being carried out in the UK (Best et al, 2017) and Australia (Turning Point, 2015). Both found that measurements associated with recovery capital, particularly those pertaining to salient institutional bonds, were strongly associated with successful long-term recovery. Recovery capital is essentially resilience. As outlined in section 9.6, it is the ability to bounce. The point being made here is that to assume that "bounceability " developed by participants in this investigation remains at a constant high when facing the alienating power of societal structures would underestimate the power of those structures.

There is evidence of such long term resilience in this investigation. Lee, Steve and Paul took their recovery capital stocks into the big wide world and found paid work and stable relationships. They all credit PE with playing a part in this long term recovery. The challenges they and people like them have faced and will face following completion of their PF programme, and the role of PE and access to associated social networks might play in their future should be the focus of new research.

## 10.5: Aim 5 - Remain Conducive to PF Beliefs and Practices

The manner in which partaking in exercise has complemented the *"programmes"* of participants has been covered. Initial, extrinsic motivation to exercise, followed by intrinsic exercise goal setting and empowerment follow the community as method template. In this thesis I have essentially taken the PF model and applied it to PE.

Structuring exercise around the practicalities of day to day life at PF required some organisation. Circuits and yoga classes had to fit around a busy timetable. Arranging gym inductions for residents was, until responsibility was passed onto Sean, sometimes difficult. These and other minor practicalities were discussed at length in Section 7.3. Overcoming such practical issues required reflexivity on my part. It is, however, my firm belief that research design should be moulded to fit situational realities. I expected to make minor changes to my approach and it was no great challenge to do so. This is a reflection of the fact

that, from inception, this project was formulated with PF in mind. As a former member of staff, I knew how TC's operated, understood the principles of community as method, was aware of the Outcomes Star and could see the potential of PE.

It is also important to note here that my conceptualisation of addiction is in line with that of PF. In Chapter 5 the biopsychosocial model of addiction which PF ascribes to was contextualised against the backdrops of penal welfarist governance and a paradigmatic research culture stagnated beneath the medical gaze. The argument being made was that the community as method approach recognises addiction as a disorder of the whole person and applies the biopsychosocial model "verbatim", with neither the moralistic bias of governance (see Chapter 5) nor the positivist bias present in the majority of the research detailed in Chapters 3 and 4. In short, when PF say biopsychosocial, there is equality between biological, psychological and social factors without the underlying morality of political rhetoric or the prioritising of biomedical data. I agree with this conceptualisation.

The stories which make up Chapter 9 certainly highlight the need to be empathic and look past the biological. They are of habits forged structurally, often by the intersecting forces of alienation, violence, poverty and child abuse. Here the biology of addiction is preceded by the use of various substances to manage to cope with the psychological impact of social variables. The TC tackles this via the community as method. Including exercise in the PF repertoire was achieved by using the same method of delivery.

## 10:6: Critical Reflections and Personal Observations

The potential for assumptions to be made regarding the resilience of recovery capital has been highlighted as a possible limitation of this investigation (Section 10.5). More research of the type outlined in section 9.9 would help shed light on the role PE communities might have upon mid-long term recovery. Such research is needed desperately. The funding landscape for addiction services changed drastically in 2013 with the national treatment agency being absorbed into Public Health England while budgeting and commissioning responsibilities for services were transferred to local authorities. In a recent report on this matter, Blenheim (2016) documented 38% of community drug services and 58% of residential services

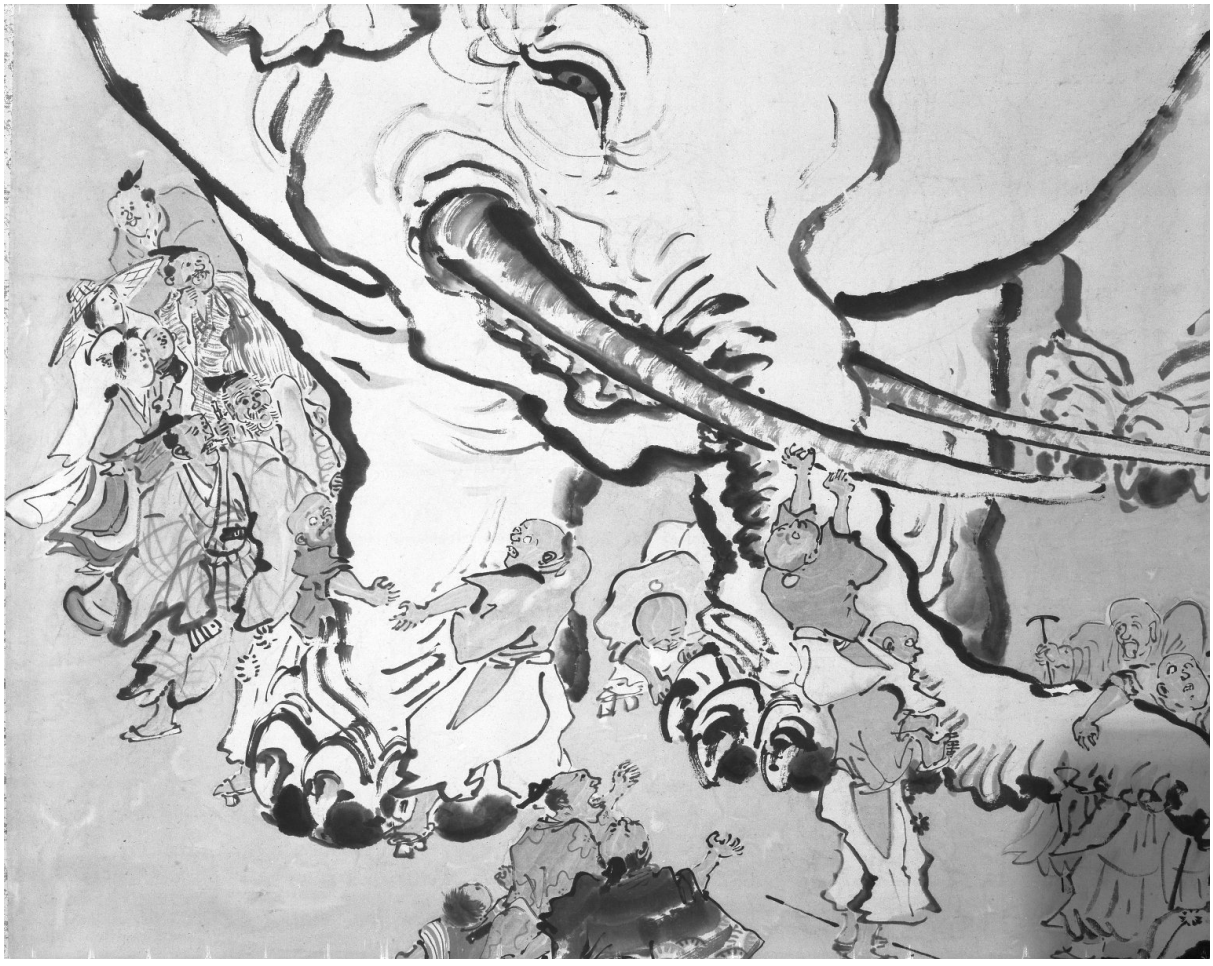
reporting decreases in funding during 2015. This is having a significant impact on services with 44% going through tendering or contract re-negotiation in that year (Blenheim, 2016). The Guardian (2017) found that 11 local authorities in England, including those projected to be cut most and least, have made average cuts of 17% to service provision between 2015-16 and 2016-17.This equates to more than £15m in total. During this same period, the UK became the drug overdose capital of Europe (European Monitoring Centre for Drugs and Drug Addiction, 2017).

My policy recommendations upon the completion of this investigation are simple. Put more money into provision, and empower services and service users to include exercise and activity into their programmes in a manner which suits them. Every piece of research pertaining to the exploration of the relationship between PE/PA and recovery that has been covered in this thesis had positive outcomes of some type. This is not something which needs debating. Now is the time for doing. In the context of the unfortunate realities detailed above, it is however my fear that there will be little provision for PE to be included in rehabilitation at the governmental level. At the local authority level, there is likely to be more of the 'money over mission' phenomenon described in section 7.4. The light at the end of the tunnel relates to a point made in section 9.10; recovery is grass roots and it is infectious. In the Sheffield recovery community alone there are yoga and circuit classes (provided by MBC) as well as annual bike ride and walking activities, recovery through boxing and numerous social events. These programmes and events are promoted by front line services such as Addaction. The point being made is that the recovery community already owns its recovery and, in many instances, PE is part of that. Economic capital in the form of funding, targeted at programmes which are already running would be the best way maximize the effectiveness of programmes which are already working.

On a personal level, it has been a pleasure to carry out this research. I am hugely thankful to those who have been so open about their journeys through life, recovery and exercise. I have enjoyed critically engaging with the existing body of knowledge regarding exercise and addiction. I am a sociologist who believes in Marxist praxis. The sociological imagination should be applied. Theories and concepts should be used to change the world. What's the point otherwise? The lens of recovery capital has allowed me to understand addiction in the real world rather than through a microscope. The story of the blind men and the elephant springs to mind. With one eye closed, staring at the thinly sliced brains of a mouse that has

been forced to exercise through electro torture (see Section 3.4), researchers have a focus so narrow that they fail to see the bigger picture. If people's lives are hard and they can't cope then they feel bad and are more likely to get wasted. Exercise can help them feel better but not if you spoil it by forcing them to do a certain type of exercise at a certain rate because that's what you made the mice do. If you're trying to make people better they should, wherever possible be having fun and sharing the experience with their peers. If you miss all this, then you are just like the blind man describing elephants as cold and hard because his only experience of one was touching a tusk. He missed the bigger picture too.

Looking forward, it is my hope that, with luck and some elbow grease, the work started here will continue and grow through MBC.



*Blind Men Appraising an Elephant by Ohara Donshu, Edo Period (early 19th century), Brooklyn Museum (2017)*

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**Appendix 1: Initial literature review search terms**
* = Truncation symbol to retrieve various endings on a word stem.

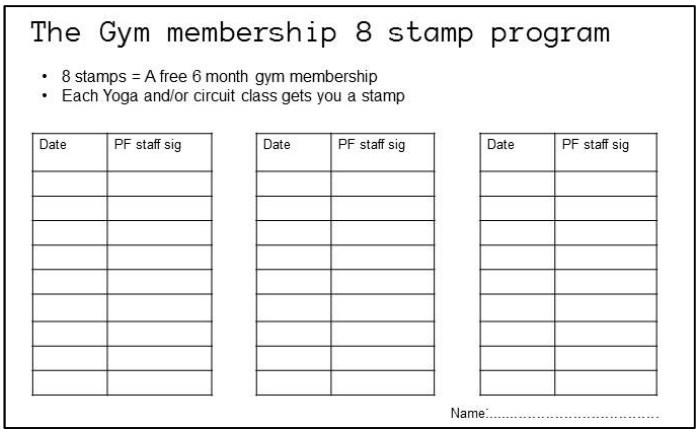
OR = Boolean command word

AND = Boolean command word

Drug* OR Alcohol*OR Amphetamine* OR Cannabis* OR Cocaine* OR Crack* OR Heroine* OR Opiates* AND Exercise* OR Physical activity* OR Physical exercise* OR Sport* OR PSAE

Addict* OR Recovery OR Drug use OR Drug abuse OR SUD AND Exercise* OR Physical activity* OR Physical exercise* OR Sport* OR PSAE OR PE OR PA

**Appendix 2: 8 stamp loyalty card**


The Gym membership 8 stamp program

- 8 stamps = A free 6 month gym membership
- Each Yoga and/or circuit class gets you a stamp

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**Appendix 3: Table abbreviations**

- PSAE = Physical sport and exercise
- YBS = Youth behaviour study
- CSS = Cross sectional Study
- HS = High School sample
- MS = Middle School Sample
- IOTC = Illegal drugs other than cannabis
- Ex group = Experimental group
- Con group = Control group
- Sig = Significant
- GWBS = General Wellbeing Scale
- IDU = Intravenous Drug Use
- MMPI = Minnesota Multiphasic Personality Inventory
- STAI = State-Trait Anxiety Inventory
- TSCS = Tennessee Self-Concept Scale
- EPM = Elevated Plus Maze
- SA = Self Administration
- PA = Physical Activity
- EtOH = Ethanol Alcohol
- C57BL/6J = Specific breed of rat
- DBA/2J = Specific breed of rat
- DID = Drinking In the Dark protocol
- CCP = Conditioned Place Preference

# Appendix 4

Table 3a: PE and substance Use – Observational

| 1st Author<br>Year<br>Country | Central aim/central research question | Research design | Sample characteristics and substance type | Data collection method | Findings |
|---|---|---|---|---|---|
| Rooney et al<br>(1984)<br>USA | What are the effects of athletics upon participants' concern for physical health and community norms | **CSS:** | **Sample:** n=4941 (m,f) HS.<br>**Substance:**<br>Alcohol, Cannabis<br>Amphetamine, Barbiturate, LSD<br>Cocaine, Tobacco(Smoke) | **SRQ:**<br>Measuring sports participation and use of mind altering drugs | Diminished use of tobacco (smoke) associated with increased athletics (3% variance). Participation in all types of sports has very little relationship with the use of mood-altering drugs |
| Aaron et al<br>(1995)<br>USA | Explore the relationship between PA and the initiation of high risk health behaviours among adolescents | **CSS:** YBS<br>Multiple sweeps 1 and 3 yr follow ups. | **Sample:** n=1400 (m,f) HS<br>**Substance:**<br>Tobacco (smoke)<br>Alcohol<br>Cannabis | **SRQ:**<br>Past years PA (hrs/week) and participation. | **Substance use:** Mod+ hi PA females less likely to have started smoking when compared to low PA females. No association of PA and alcohol in females. No association of PA and smoking in males. Hi PA males and males participating in sports were more likely to initiate alcohol use. |
| Rainey et al<br>(1996)<br>USA | Explore patterns of tobacco and alcohol use among sedentary and exercising youth. | **CSS:** YBS | **Sample:** n=7846 (m,f) HS<br>**Substance:**<br>Tobacco(smoke)<br>Tobacco (smokeless)<br>Alcohol | **SRQ:**<br>Frequency of cigarette, alcohol, smokeless tobacco use and participation in PSAE | **Substance use:** Lesser likelihood of smoking in those engaging in more PSAE<br><br>Higher rates of binge drinking in those engaging in more PSAE |
| Pate et al<br>(1996)<br>USA | Explore associations between PA and other health behaviours in US adolescents | **CSS:** YBS | **Sample:** n=11,631HS<br>**Substance:**<br>Tobacco (smoke)<br>Cannabis, Alcohol<br>Cocaine | **SRQ:**<br>Frequency of cannabis, alcohol, tobacco (smoke and smokeless), cocaine use and participation in sport and/or exercise | **Substance use:** High activity was associated with less cigarette and cannabis use.<br>High PA in females was associated with more alcohol consumption.<br>No association of PA and cocaine use. |
| Ewing et al<br>(1998)<br>USA | Do those who participated in high school athletics have a different pattern of cannabis use than comparable non-athletes? | **CSS:** | **Sample:** HS (m,f)<br>**Substance:**<br>Cannabis | **SRQ:**<br>Frequency of cannabis use and PSAE | Male athletes have a higher incidence of cannabis use than non-athletes. female athletes, who actually engage in less cannabis use than their non-athlete counterparts. female athletes are more likely than non-athletes to wait until their post-high school years to try the drug |
| Black et al<br>(1999)<br>Australia | Profile the alcohol consumption patterns of men aged 16 to 34 years who participate in non-elite sport<br>Explore excessive alcohol consumption by this group | **CSS:** | **Sample:** n=1613 (m)<br><br>**Substance**: Alcohol | **SRQ:**<br>Questions pertaining to the drinking patterns and motives for drinking of young men<br>involved in non-elite sport | Men were more likely to drink excessively when socializing with sporting team mates compared to drinking on social occasions with other groups |

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| Garry and Morrissey (2000) USA | Assess the association between team sports participation and risk taking behaviors in middle school athletes | **CSS:** YBS | **Sample:** n=3,698 middle school students.<br>**Substance:**<br>Alcohol, Tobacco (smoke) Tobacco (smokeless) Cocaine | **SRQ:**<br>Cannabis, alcohol, tobacco (smoke and smokeless), cocaine use and PSAE | **Substance use:** Athletes, as compared with non-athletes, reported significantly higher frequencies for current alcohol and tobacco use (smoke and smokeless).<br>Sports participation was also positively associated with cocaine use. |
| Pate et al (2000) USA | To examine the relationship between sports participation and health related behaviours among high school students. | **CSS**:YBS | **Sample:** n=14,221 (m,f) high school students.<br>**Substance:**<br>Alcohol,Tobacco (smoke), Illicit drugs | **SRQ:**<br>Frequency of tobacco (smoke), alcohol, illicit drug use and participation in sport and/or exercise | **Substance use:** Sports participants were less likely to report cigarette and illicit drug use. No effect on alcohol use<br><br>**Physical outcomes:** Sports participants were more likely to engage in frequent vigorous activity. |
| Kirkcaldy et al (2002) Germany | To examine associations between participation in endurance sport, and self-image, physical and psychological health and overall lifestyle.. | **CSS:** | **Sample:** n=1,000 (m,f) High school students.<br>**Substance:**<br>Beer,Tobacco (smoke) Cannabis | **SRQ:**<br>Endurance sports; self-image, physical and psychological health and overall lifestyle | **Substance use:** Lower cigarette and marijuana use in most active; No difference for beer drinking; Lowest addiction score in most active |
| Kulig et al (2003) USA | To determine whether being both vigorously active and/or a team sports participant is associated with substance use and sexual risk behaviours. | **CSS:**YBS<br>Participants were classed as;<br>Active team<br>Active non-team<br>Non-active team<br>Non-active non-team | **Sample:** n=15,349 (m,f) High school students .<br>**Substance:** Alcohol, Tobacco (smoke), Cannabis, Steroids<br>Other drugs | **SRQ:**<br>Frequency of cannabis, alcohol, tobacco, steroids, other drugs use and PSAE levels | **Substance use:** Non-active non-team males were associated with was other drug use.<br>Active team males were less likely to use other drugs than active non-team but did not differ from non-active team or non-active non-team.<br>Active team females were less likely to use cannabis and tobacco (smoke) than active non-team but did not differ from non-active team or non-active non-team. |
| Pastor et al (2000) Spain | Test direct and indirect effects of sports participation on perceived health in Spanish adolescents | **CSS:** | **Sample:** n=1,038 (m,f) HS<br>**Substance:**<br>Alcohol, Tobacco (smoke) | **SRQ:**<br>PSAE outside school athletics, alcohol and tobacco (smoke) use | **Substance use:**<br>Negative association between level of sports team participation and tobacco and alcohol use. |
| Peretti-Watel (2003) | To study the relationship between sporting activity and alcohol, cigarette and cannabis use among adolescents by focusing on Elite Student Athletes(ESA) | **CSS:**<br>1 sweep of ESA n=460<br>2 control sweeps n=2268 | **Sample:** n=2728 (m,f).<br>**Substance:**<br>Alcohol, Tobacco (smoke) Cannabis | **SRQ:**<br>Tobacco (smoke), alcohol, illicit drug (past 30 days), PSAE | **Substance use:** ESA males were more likely to use alcohol and cannabis than ESA females but equally likely to use tobacco. Lower alcohol, cigarette and cannabis use in ESA compared with control samples. ESA participating in team sports were more likely to use alcohol than individual athletes. Sliding sports participation was associated with alcohol use in males and cannabis use in females. More training was negatively associated with smoking and alcohol in females but positively associated with smoking in males. |
| Moore (2005) USA | To examine the association between participation in school and out of school sport/physical activities and substance use. | **CSS:** YBS | **Sample:** n=891 (m,f) MS | **SRQ:**<br>Frequency of cannabis, alcohol, tobacco (smoke), cannabis use and PSAE | **Substance use:** Females- out of school dancers, cheerleaders, gymnasts, and surfers were more likely to drink alcohol as compared to the in-school.<br>Males - school-sponsored swimmers were more likely to use alcohol and drink heavily as compared to out of school |

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| | | | | | swimmers. Out of school swimmers and wrestlers were more likely to smoke cigarettes. School-sponsored football players and swimmers were more likely to use marijuana. Skateboarders were more likely to drink heavily and smoke cigarettes |
| Terry-McElrath et al (2005) USA | Examine the relationship between secondary school substance use and exercise and/or athletic team participation | **CSS:** Adopted from monitor the Future survey | **Sample:** n=653,251 MS+HS **Substance:** Alcohol, Cannabis, Steroid Tobacco (smoke),Tobacco (smokeless) | **SRQ:** Cannabis, alcohol, tobacco (smoke and smokeless), alcohol, cannabis steroid use and PSAE | **Substance use:** Negative association between PE e and levels of alcohol, cannabis, and tobacco (smoke)use. Negative association between team participation and tobacco (smoke) and cannabis use. Positive association with smokeless tobacco and alcohol use in high school students |
| Nelson et al (2006) USA | Examine relationships between PA, sedentary behavior patterns and an array of risk behaviours, including leading causes of adolescent morbidity/mortality | **CSS:** **A**dopted from longitudinal study of adolescent health | **Sample:** n=11,957 (m,f) MS+HS **Substance:** Alcohol, Tobacco (smoke) Cannabis, Illicit drugs | **SRQ:** Likelihood and frequency of tobacco (smoke, alcohol, and illicit drug use and PA. | **Substance use:** Participants defined as highly active were less likely to use alcohol, tobacco (smoke and use illicit drugs other than cannabis than those defined as less active. |
| Ford (2007) USA | Explore which College sports/teams are at greatest risk of substance use. | **CSS:** Adopted from 1999 Harvard School of Public Health College Alcohol Study | **Sample:** n=14,000 (m,f) HS **Substance:** Alcohol Cannabis IOTC | **SRQ:** Frequency of cannabis, alcohol, IOTC and participation in sport/teams | **Substance use:** Male hockey and female soccer athletes were the most likely to report substance use. Male basketball and cross country/track athletes reported lower levels of substance use. |
| Strohle et al (2007) Germany | Explore PA and prevalence and incidence of mental disorders in adolescents and young adults | **Cross-sectional epidemiological study:** | **Sample:** n=2,548 (m,f) Community cohort 14-24. | **Diagnostic assessment:** PA and mental disorders assessed via the DSM-IV Composite International Diagnostic interview with an embedded physical activity module. | **Substance use:** Lower substance abuse in regular and non-regular exercise groups as compared to no exercise. **Psychological outcomes:** Subjects with regular PA had sig lower incidence of comorbid mental disorders. |
| Korhonen et al (2009) Finland | Investigate whether PA level in adolescence predicts use of alcohol and illicit drugs in early adulthood | **Longitudinal survey:** Sweep 1: 16yrs Sweep 2: 17yrs Sweep 3: 18yrs Follow up: 24.4yrs | **Sample:** n1,870 twin pairs (m,f) (4,240 participants) . **Substance:** Alcohol Illicit drugs | **SRQ:** Frequency of alcohol, illegal drug use and PA levels. | **Substance use:** Higher baseline activity predicted a decreased risk of later drug use. Decreased illicit drug use among persistently active. Lower drinking-related problems in persistently active group, particularly women. Among those with low base line activity, persistent in-activity increased risk for drug use |
| Wichstrøm et al | To study whether sport type and level of competition | **Longitudinal survey:** | **Sample:** n=3,251 (m,f) HS **Substance:** | **SRQ:** Alcohol, smoking, cannabis | **Substance use:** At baseline, sports participants used tobacco less frequently than non-participants. Sports participation |

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| (2009)<br>Norway | during adolescence predicts increased smoking of tobacco, alcohol intoxication and cannabis use. | Sweep 1 13-19yrs Follow up 1: 2yrs later Follow up 2: 7yrs later Follow up 3: 13yrs later | Tobacco (smoke), Cannabis Alcohol | use, sport participation and level of competition. | associated with a later reduction in cannabis use. Team sports participants had lower growth in tobacco and cannabis use but increased growth in alcohol use during adolescent and early adult years compared to those participating in endurance and skill sports. Practicing endurance, rather than skill or strength sports predicted reduced growth in alcohol intoxication and tobacco use. |
| Terry-McElrath (2011)<br>USA | Examine the extent to which the trajectory of PSAE covaried with substance use | Longitudinal data from multiple panel studies with additional follow up surveys | **Sample:** n=11741 (m,f) HS Graduating classes 1986-2001<br>**Substance:**<br>Alcohol, Tobacco(smoke) Cannabis, IOTC | **SRQ:**<br>Alcohol, Tobacco(smoke) Cannabis, IOTC use and PSAE | **Substance use:** High initial levels of PSAE relate to lower initial substance use other than alcohol. Later engagement with PSAE relates to decrease of all substances other than alcohol |
| Martinsen et al (2012)<br>Norway | To examine tobacco (smoke and smokeless), alcohol, and performance-enhancing drug use among adolescent elite athletes and controls. | **CSS** | **Sample:** n=677 athletes and n421 age-matched controls (m,f) .<br>**Substance:**<br>Alcohol , Tobacco (smoke), Tobacco (smokeless), Performance enhancing illicit drugs | **SRQ:**<br>Tobacco (smoke and smokeless), alcohol and performance-enhancing drug use. | **Substance use:** Lower tobacco (smoke and smokeless), alcohol, and performance enhancing drug use among elite athletes compared with controls. Higher drinking among female athletes compared to male athletes. |

**Table 3b: PE and Substance Use – Chronic Intervention**

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|---|---|---|---|---|---|
| Murphy et al (1986) USA | Assess the effects of 6 weeks of PE and meditation on alcohol consumption among heavy social drinkers | **RCT:** 6 weeks<br>**Ex group 1:** Running and instruction to run once a week at individual intensity (30min).<br>**Ex group 2:** Supervised meditation<br>**Con group:** No treatment. | **Sample:** n=43 (m) HS students.<br>**Substance:**<br>Alcohol | **SRQ:**<br>Daily alcohol consumption. | **Substance use:** Ex group sig reduced alcohol intake compared with Con group. Only weekday drinking effected.<br>**Physical outcomes:** None reported**.**<br>**Psychological outcomes**: Some participants in reported experiencing a high associated with exercise. |
| Collingwood et al (1991) USA | Explore physical fitness effects on substance abuse risk factors and use patterns. | **Intervention:** 9 weeks<br>**Ex group:** Supervised PE focusing on strength, flexibility and aerobic fitness. | **Sample:** n=74 (m,f) adolescents deemed as at risk of drug abuse.<br>**Substance:**<br>Illicit drugs | **Pre and post**: Measurements GWBS, CSS, 1-mile run, 1-min sit-up, 1-min push-up, percent fat, and flexibility.<br>Self- report substance use.<br>Based on test scores 38 participants were categorised as improvers and 36 as non-improvers. | **Substance use:** Improvers reported less substance use.<br>**Physical outcomes:** Improvers had Sig higher flexibility, strength, and lower body fat.<br>**Psychological outcomes**: Improvers had sig increase in CSS and decrease in anxiety and depression (GWBS) |
| Collingwood et al (2000) USA | Programme evaluation from school and community applications of a physical fitness drug prevention program | **Intervention -** 12 weeks.<br>**Ex group:** Programme consists of exercise (running, Calisthenics, stretching and individual programme and educational modules. | **Sample:** n=329 (m,f) Adolescents<br>**Substance:**<br>Alcohol, Tobacco (smoke), Tobacco (Smokeless), Illicit drugs | PE was compared to peers via a 7 point scale.<br>Substance use assessed via questionnaire | **Substance use:** Sig decrease in tobacco and smokeless tobacco but there was no sig effect on other substances.<br>**Physical outcomes:** Sig increases in physical fitness (cardiovascular endurance strength and flexibility). |
| Correia et al (2005) USA | Examine the relationship between substance use and substance free behaviours | **RCT:** 4 weeks.<br>**Ex group 1:** Substance reduction instruction.<br>**Ex group 2:** Activity Increase (given written instruction to increase PE and creative activity by 50%).<br>**Con group:** No treatment | **Sample:** n=133 Nonclinical sample of young adults.<br>**Substance:**<br>Alcohol<br>Illicit drugs | **Pre and post SRQ:**<br>Alcohol and illicit drug use. | **Substance use:** Ex groups 1+2 reported a sig decrease in their substance use behavior<br>Ex group 2 and con groups use did not differ significantly in follow up data. |
| Werch et al (2005) USA | Test the efficacy of a multi health behaviour intervention integrating PA and alcohol use prevention messages for HS students. | **RCT:** 12 weeks.<br>52 week follow up<br>**Ex group:** Project SPORT (a fitness consultation (including take home activity prescription) and accompanying print materials).<br>**Con group:** Wellness brochure provided by school. | **Sample:** n=604 (m,f) HS<br>**Substance:**<br>Alcohol, Tobacco (smoke), Cannabis | **Pre and post SRQ:**<br>Cannabis, alcohol, tobacco (smoke), cannabis use and PSAE | **Substance use:** At 3 months Ex group were smoking less tobacco and drinking less alcohol than at baseline. At 12 month follow up Ex group smoked less tobacco and were less advanced in cannabis initiation but there was no difference in alcohol use.<br>**Physical outcomes:** At 3 months Ex group participants were exercising more. |

Appendix 5

**Table 4a: PE and Substance Abuse - Observational**

| 1st Author Year Country | Central aim/central research question | Research design | Sample characteristics and substance type | Data collection method | Findings |
|---|---|---|---|---|---|
| Kremer et al (1995) USA | A survey among therapeutic recreation specialists practicing within substance abuse treatment facilities | **Survey** Participants randomly selected from the Therapeutic Recreators for Recovery Network (1991) Mailing List. | **Sample:** n=50 (m,f) practicing therapeutic recreation specialists. **Substance:** Not specified | **SRQ:** Including open ended questions | Revealed a strong belief that PA was a particularly important part of treatment. Walking, games, sports, weight-training, and aerobics were offered most frequently. Concern raised about lack of training for practitioners. |
| Powers et al (1999) USA | Explore the perceived effects of PSAE in a population defined by their injection drug use. | **Open ended questionnaire** | **Sample:** n=45 (m,f) **Substance:** IDU - Primarily heroin and crack | Open ended questions exploring the meaning of PSAE (including fandom) for participants. | Exercise and sport was of significance for more men (78%) than women (31%). 72% of participants were sports fans. Entertainment, relaxation and socializing were listed as positive effects of fandom. |
| Okruhlica et al (2001) Slovakia | Explore the role played by exercise and sport activities in the prevention of illicit drug abuse | **Survey** | **Sample:** n215 (m,f) **Substance:** Heroin | Closed questions aimed at gauging sports and exercise participation. | 75% of addicts took part in regular PE/sport until the age of 15.<br><br>17% started illicit drug abuse prior to the termination of their sporting activities. |
| Read et al (2001) USA | Investigate exercise behaviors and exercise-related attitudes in a sample of adults in treatment for alcohol use disorders | **Survey** | **Sample:** n=105 (m,f) **Substance:** Alcohol | A selection of self-report measures including EBA, SPE number of PE sessions per week. | 40% reported exercising less than once a week. 46% reported exercising 3 times weekly or more. Average exercise duration of 40-49 min. No sig gender, age or education differences in exercise level. 75% were interested in EX programs, for providing tension relief, stress reduction, and positive attitude. PE barriers included high costs, lack of motivation, time, knowledge, confidence and physical disability |
| Abrantes (2011) USA | Investigate the exercise preferences of patients in substance abuse treatment | **Survey** | **Sample:** n=97 (m,f) **Substance:** Alcohol Drugs | Exercise preference and exercise history | 71% of patients were not currently engaged in regular exercise. 95% of patients expressed an interest in engaging in an exercise program specifically designed for substance abuse rehabilitation. 89% of patients reported wanting to initiate an exercise programme within the first 3 months of sobriety. Exercise preference and barriers varied across gender. |
| Neale et al (2012) | Investigate heroin users' views and experiences of physical | Qualitative interviews | **Sample:** n=40 (m,f) **Substance:** | Ethnographic interviews | Participants were very interested in sport and exercise. They engaged in a wide variety of |

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| UK | activity, sport and exercise | 40 initial and 37 follow up interviews | Heroin | | activities. They did little structured sport or exercise during periods of heavy heroin use. They still often walked or cycled while using. Enjoyment was a key feature of being physically active in treatment and in early recovery. Individuals reported diverse health and social gains were reported including reduction of use. |
| Linke et al (2015) USA | Evaluate: Interest in exercise program to supplement current SUD treatment; and exercise program design considerations among veterans with SUDs | **Survey** Small group interviews | **Sample: Survey - 22 Interviews - 17** | Closed question survey Small unstructured group interviews | Veterans with SUDs are interested in exercise, and participants provided perceptive suggestions for modifying an existing evidence-based programme. |
| Stoutenberg et al (2015) USA | Explore the attitudes, beliefs, and preferences of individuals entering residential AUD treatment. | **Survey** | **Sample: n=120 (m,f)** | Exercise attitudes, beliefs, and behaviours. Assessment of substance use and depression | Respondents were in favour of receiving exercise counselling as part of their treatment. Reported benefits included: improved health, feeling good about oneself, and feeling more confident. commonly reported barriers to exercise training included transportation issues, lack of motivation, knowledge, and proper equipment, and cost. |
| Landale & Roderick (2014) UK | Track substance-misusing offenders engaging in a community-based sports programme – Second Chance | Biographical interviews | **Sample: 2 (m)** | Participants were followed over the course of a year and interviewed individually three times, at six-month intervals | Second Chance offered participants a space for the opportunity for change, within which an identity transformation was occurring for some respondents. This transformation, and subsequent desistance, was facilitated through a confluence of meaningful routine activities, informal social controls and personal agency, both within and outside of Second Chance. |
| Beitel et al (2016) USA | Assess PA levels, chronic pain, psychiatric distress, and interest in exercise group participation among adults seeking MMT. | **Survey** | **Sample:** n=303 (m,f) **Substance: Opiates** | Self report PA levels, chronic pain, psychiatric distress, and interest in exercise group participation | 27% met recommended physical activity levels, and 24% reported interest in exercise group participation. Participants with chronic pain had higher levels of psychiatric distress and were less likely to be active but did not differ in their interest in participating in an exercise |

**Table 4 b: PE and Substance Abuse - Chronic Intervention**

| 1st Author Year Country | Central aim/central research question | Research design | Sample characteristics and substance type | Data collection method | Findings |
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| Gary et al (1972) USA | Examine the effect of jogging on physical fitness and self-concept among hospitalised alcoholics. | **RCT:**4 weeks<br>**Ex group:** 5 times per week incremental running programme.<br>**Con group:** Standard recreation and therapy sessions | **Sample:** n=20 (m) hospitalised alcoholics aged 25-56<br><br>**Substance:** Alcohol | **Pre and post**: Scores for Gough Adjective Check List, the Jourard Body Cathexis and Self-Cathexis Scales, and the Schneider Physical Test. | **Substance use:** No impact on drinking episodes.<br>**Physical outcomes:** Sig gains in cardiovascular fitness.<br>**Psychological outcomes**: Sig gains in self-cathexis for Ex group |
| Frankel et al (1974) USA | Evaluate the physical fitness and MMPI scores of (m) alcoholics before and after treatment programme that included a daily physical fitness session. | **Intervention : Before/After**<br>**12 weeks**<br>**Ex group:** 1hr daily fitness session incorporating Warm-up, individual strengthening activities, 20min group run or walk (cardiovascular) | **Sample:** n=214 (m) alcoholics aged 28-56<br><br>**Substance:** Alcohol | **Pre and post**: MMPI scores, resting pulse rate, diastolic blood pressure, body weight and physical fitness test. | **Substance use:** None reported<br>**Physical outcomes:** Participants gained weight, improved physical fitness tests scores while having significantly lower mean resting pulse rates and diastolic blood pressure.<br>**Psychological outcomes**: Participants also displayed reductions in self-reported depression and paranoia (MMPI) |
| Sinyor et al (1982) Canada | Explore the impact of a progressively more vigorous fitness programme for patients at an inpatient alcohol treatment centre. | **RCT: 6 weeks**<br>**Ex group:** 1 hr of progressively more vigorous PE 5 days a week (Stretching, calisthenics, muscle-strengthening running or cross-country skiing).<br>**Con group:** Standard care package. | **Sample:** n=58 (m,f)<br>mean age – 42<br>**Substance:**<br>Alcohol | **Pre and post**: Body fat, heart rate and maximum oxygen uptake. Abstinence rates via self-report (validated by family members and/or colleagues). | **Substance use:** Sig higher rates of abstinence for EX group.<br>**Physical outcomes:** Body fat decreased, basal heart rate decreased, and maximum oxygen uptake increased.<br>**Psychological outcomes**: None reported<br>3 month follow up suggests 32% higher abstinence for EX group |
| Palmer et al (1988) USA | Assess the usefulness of exercise as a treatment intervention with inpatient problem drinkers | **RCT: 4 weeks**<br>**Ex group:** 20-30min Aerobic PE (walking and jogging) 3 times a week.<br>**Con group:** Standard care package. | **Sample:** n=27 (m,f)<br>**Substance:** Alcohol | **Pre and post**:<br>Estimated V02 max, STAI, TSCS. | **Substance use:** None reported<br>**Physical outcomes:** No change in fitness<br>**Psychological outcomes**: EX-group had sig decreased anxiety and depression compared to con group |
| Burling et al (1992) USA | Assess the impact of participation in a community based soft-ball team for homeless veteran substance abusers | **Mixed methods**<br>**Before/After tests+interviews**<br>**12 weeks**<br>**Ex group:** (n34) 2 training, 1 game and 1 team meeting per week.<br>**Con group1:** Standard care package.<br>**Historical con group:** Standard care package 1yr prior to intervention | **Sample:** n=218 (m)<br>**Substance:**<br>Illicit drug<br>Alcohol | Data collected from all participants included demographics, diagnoses, length of stay, conditions of discharge. Interviews undertaken at 3 month follow up | **Substance use:** Sig higher treatment duration, completion and abstinence rates for EX-group at 3-month follow up.<br>**Physical outcomes:** None reported<br>**Psychological outcomes**: Participation appeared to enhance outcomes by providing opportunities for practicing coping skills. |

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| Palmer<br>et al<br>(1995)<br>USA | Investigate the effects of 3 kinds of structured PE on the depressive symptoms of inpatient substance abusers. | **RCT**<br>All groups train 30-40min 3times per week.<br>**Ex group 1:** Step-aerobic programme<br>at 60% max HR (aerobic training).<br>**Ex group 2:** Body-building programme<br>(anaerobic strength<br>training)<br>**Ex group 3:** Circuit training (mixed training) | **Sample:** n=45 (m,f)<br>**Substance:**<br>Alcohol<br>Cocaine<br>Other drugs | **Pre and post**: Measures of depression (CES), resting pulse rate, blood pressure, maximum strength (incline bench press) and estimates of body fat and aerobic fitness. | **Substance use:** None reported<br><br>**Physical outcomes:** No sig fitness gains after 4 weeks.<br><br>**Psychological outcomes**: Sig reduced depression scores in EX group 2. |
| Donaghy<br>(1997)<br>Scotland | Evaluate the short and long term effectiveness of a PE program as an adjunct treatment for problem drinkers | **RCT**<br>**Ex group:** 3 Supervised PE, (aerobic and anaerobic) 3x30min per week followed by 12 weeks home-based PE (aerobic and anaerobic) 3x30min per week.<br>**Con group:** 3 weeks of supervised gentle stretching and breathing exercises, followed by 12 weeks home-based training (both 3x30min per week). | **Sample:** n=165 (m,f)<br>**Substance:**<br>Alcohol | **Pre and post:**<br>**S**elf assessment of alcohol intake and physical activity, PSPP, ZIAD and BDI | **Substance use:** No sig differences in abstinence rates.<br>**Physical outcomes:** Sig improvement in power and fitness at 15 weeks for Ex group. Power and fitness gains maintained at 5 month follow up.<br>**Psychological outcomes**: Sig improvement fitness, body self-perception, and self-esteem after 15 weeks for Ex group.<br>Anxiety and depression equally reduced in both groups |
| Ermalinski<br>et al<br>(1997)<br>USA | Assess the impact of a body-mind component on alcoholic inpatients | **RCT**<br>**Ex group:** Fitness including yoga and incremental jogging + Motivation around responsibility and health (both 5x1.5hr per week).<br>**Con group:** Standard care package | **Sample:** n=90 (m).<br>**Substance:**<br>Alcohol | **Pre and post SRQ:**<br>Alcohol craving, depression, body satisfaction. | **Substance use:** Sig reduced craving.<br>**Physical outcomes:** Participants made partial fitness gains.<br>**Psychological outcomes**: No sig change in depression, body satisfaction. Sig increase of internal locus of control and responsibility for health |
| Brown<br>et al<br>(2008)<br>USA | Explore the use of exercise as an adjunct intervention for alcohol dependent patients in recovery | **Intervention Before/After**<br>**Ex group:** Moderate intensity [treadmill and exercise bike] (20-40min 2-3 times per week), group behavioral training and an incentive system | **Sample:** n=19 (m,f)<br>**Substance:**<br>Alcohol | **Pre and post:** TLFB, Breath analysis, Sub-maximal cardio-respiratory fitness test and body composition measurements. | **Substance use:** Sig higher rate of abstinent days at intervention end<br>and 3-month follow-up.<br>**Physical outcomes:** Sig increased fitness and decreased BMI at end of treatment.<br>**Psychological outcomes**: None reported. |
| Weinstock<br>et al<br>(2008)<br>USA | Investigate the association between completion of exercise related activities and substance use disorder treatment outcome. | Secondary statistical analysis of authors previous **RCT**'s, in which participants are coded as either exercisers or non-exercisers | **Sample:** n=187 (m,f)<br>**Substance:**<br>Alcohol | Self-reported activity | **Substance outcomes:** Exercisers had the longer duration of abstinence as compared to non-exercisers.<br>**Physical outcomes:** None reported<br>**Psychological outcomes:**<br>None reported |

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| Mamen et al (2009) Norway | Assess the physical fitness of a group of substance abusers using direct maximal and blood lactate threshold testing. | **Experiment - One time measurement**<br>**Ex group:** All participants took part in a PE programme as Part of their rehab programme (details not specified). | **Sample:** n=47 (m,f) mean age 31<br>**Substance:**<br>Alcohol<br>Cannabis<br>Other | **One time measurement**<br>Lactate profile cycling test<br>Lactate profile running test<br>Maximal oxygen uptake test | **Substance use:** Primary intoxicant had no effect on fitness.<br>**Physical outcomes:** V02 max score are higher than in other similar (but submaximal) studies. Participants mean V02 just below national average<br>**Psychological outcomes**: None reported |
| Brown et al (2010) USA | Pilot study to examine the feasibility of aerobic exercise as an adjunct to substance abuse treatment. | **Intervention - Before/After**<br>**Ex group:** 1 supervised + 2-3 individual training sessions per week for 20–40 min of moderate aerobic training (55–69% max HR). 1 brief weekly CBT intervention to increase motivation for PA. Incentive component for EX adherence | **Sample:** n=16 (m,f)<br>**Substance:**<br>Alcohol<br>Cannabis<br>Cocaine<br>Opiates<br>Sedatives | **Pre, Post and 3 month follow up:** Cardiovascular testing, BMI, + SRQ | **Substance use:** Sig lower relapse rates in patients who had attended at least 75% of PE sessions.<br>**Physical outcomes:** Sig increased fitness after 12 weeks.<br>**Psychological outcomes**: None reported |
| Mamen et al (2010) Norway | Evaluate the development of aerobic power and performance on a lactate profile test with directly measured VO2max of substance abusers completing a training programme | **Intervention - Before/After**<br>**Ex group:** With the assistance of 'training partners'(trained volunteers from the local municipalities). Incremental running and cycling. | **Sample:** n=33 (m,f) mean age 31.<br>**Substance:**<br>Alcohol<br>Cannabis<br>Other drugs | **Pre and post:**<br>Lactate profile cycling test<br>Lactate profile running test<br>Maximal oxygen uptake test | **Physical outcomes:** Participants experienced a small, but sig improvement in VO2max and lactate profile test. Those with highest gains were those who trained at highest intensity.<br>**Psychological outcomes**: None reported |
| Roessler (2010) Denmark | Asses the effectiveness of an exercise intervention to alter the behaviour and body image of drug abusers | **Pilot study - Mixed methods Before/After +Interview**<br>**Ex group:** Training 2hrs 3xper week; Combination of aerobic PE (e.g., spinning), strengthening PE and team sport activities (e.g., volleyball, badminton) | **Sample:** n=38 (m,f)<br>**Substance:**<br>Alcohol, Cannabis<br>Opiates, Medication<br>Heroin, Cocaine<br>Amphetamine | **Pre and post:** Measurements of drug and alcohol intake + Semi structured interviews | **Substance use:** Reduced alcohol and drug use.<br>**Physical outcomes:** Sig improved fitness at end of treatment.<br>**Psychological outcomes**: Improvements in subjective control, craving, and role of substance.<br>**Interview findings:**<br>increased fitness reduces withdrawal symptoms and improves body perception, vigor, sleep quality, and Self-confidence. |
| Buchowski et al (2011) USA | Examine the effects of moderate aerobic EX on cannabis craving and use un dependent adults under normal living conditions. | **Intervention - Before/After**<br>**Ex group:** 10 daily 30 min treadmill sessions at 60% of maximal aerobic capacity | **Sample:** n12 (m,f)<br>**Substance:**<br>Cannabis | **SRQ:** pre and post<br>Cannabis use | **Substance use:** Decreased cannabis use within the exercise period and at 2 week follow-up as compared to baseline. Decreased craving following exercise. Reduced urge to use alcohol and drugs Increased ability to control drug use. |
| Mamen et al (2011) Norway | To explore possible Changes in mental distress following individualized physical training in patients suffering from chemical dependence | **Intervention - Before/After**<br>150-500 hrs of training with dedicated partners (volunteers) Activities included; Jogging, cycling, cross-country skiing, swimming, | **Sample:** n=33 (m,f)<br>**Substance:**<br>Alcohol<br>Cannabis<br>Other drugs | **Pre and post:**<br>Lactate profile cycling test<br>Lactate profile running test<br>Maximal oxygen uptake test | **Substance use:** No sig change in tests for substance abuse.<br>**Physical outcomes:** Sig improvement in aerobic power and lactate threshold performance. |

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| | | aerobics, mountain hiking, and ball games. | | | **Psychological outcomes**: Sig improvement in all scores of depression, anxiety, social phobia, and general mental distress. Those who had the greatest increase in fitness also had the greatest improvement in psychological outcomes. |
| Marefat et al (2011) Iran | Investigate the effects of yoga exercises on addict's depression and anxiety during rehabilitation period. | **RCT**<br>**Ex group:** Yoga training protocol-3x60min session per week<br>**Con group:** Standard treatment package. | **Sample:** n=24<br>**Substance:**<br>Not disclosed | **Pre and post:**<br>BDI, STAI anxiety and depression scores. | **Psychological outcomes**: Ex group had sig improvement in anxiety and depression scores. |
| Stoutenberg (2012) USA | Assess physical activity level, and perceived benefits and barriers to exercise in a group of methadone maintained smokers | **RCT**<br>PE intensity measured by individualized kilocalorie per kilogram per week expenditure (KKW).<br>Week 1: 6KKW<br>Week 2: 9 KKW<br>Weeks 3-36: 12 KKW | **Sample:** n=305 (m,f)<br>**Substance:**<br>Methadone maintenance | PBE, BoE, Previous PE levels | Participants perceived many benefits of exercise and few barriers. 38% of participants met weekly recommendations for PA. 25% reported no physical activity. Those who met recommended guidelines were significantly more likely to endorse relapse prevention as a benefit of exercise. |
| Brown et al (2014) USA | Explore the impact of aerobic exercise upon alcohol dependence | **RCT**<br>**Ex group:** 12-week moderate-intensity, group aerobic exercise.<br>**Con group:** brief advice to exercise intervention | **Sample: n=48**<br>**Substance:**<br>**Alcohol** | Health questionnaire & physical activity screen; Breathanalysis; Structured Clinical Interview; Time-line-follow-back; Depressive symptoms; Anxiety symptoms; Self-efficacy for alcohol abstinence | Study findings indicate that a moderate intensity, group aerobic exercise intervention is an efficacious adjunct to alcohol treatment. Improving adherence to the intervention may enhance its beneficial effects on alcohol use. |
| Rawson et al (2015) USA | Examine the efficacy of an 8-week exercise intervention on post treatment metham-phetamine use among dependent individuals | **RCT**<br>**Ex group:** Structured 8-week exercise group<br>**Con group:** Health education group | **Sample:** n=125 (m,f)<br>**Substance:**<br>Methamphetamine | Self-reported MA use<br>MA urine drug test<br>Maximal exercise performance test. | Fewer exercise participants returned to MA use. Lower severity users in the exercise group reported using MA significantly fewer days at the three post-discharge time points than lower severity users in the education group |
| Rawson et al (2015) USA | Determine impact of an 8-week PE program on depression and anxiety symptoms among newly abstinent MA dependent individuals | **RCT**<br>Ex group: Structured 8-week exercise group<br>Con group: Health education group | **Sample:** n=125 (m,f)<br>**Substance:**<br>Methamphetamine | Beck Depression Inventory and Beck Anxiety Inventory . | Significant effect of exercise on reducing depression and anxiety. Significant dose interaction effect between session attendance and exercise was found as well on reducing depression and anxiety symptoms |
| Unhjem et al (2016) USA | Explore maximal strength training as physical rehabilitation for patients with SUD | **RCT**<br>**Ex group:** Maximal strength training (85-90 % of 1 repetition maximum (1RM)) 3 times a week for 8 weeks.<br>**Con group:** Conventional clinical | **Sample:** n=24 (m,f)<br>**Substance:**<br>SUDs | Hack squat 1RM<br>Plantar flexion 1RM<br>Hack squat rate of force development and peak force.<br>Neural function (voluntary V-wave) | Increased hack squat 1RM, plantar flexion 1RM, hack squat rate of force development and peak force., improved neural function in EX group |

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| | | activities | | | |
| Wang et al (2016) China | Integrate behavioral and neuroelectric approaches for determining the dose-response relationships between exercise intensity and methamphetamine (MA) craving and between exercise intensity and inhibitory control | **RCT**<br>**Ex group:** Light, moderate, or vigorous intensity<br>**Con group:** Reading control group | **Sample:** n=92 (m,f)<br>**Substance:** Methamphetamine | Craving assessment<br>Inhibitory control assessment | Reduction in self-reported MA craving scores of the moderate and vigorous intensity groups was greater than that of the light intensity and control groups during acute exercise as well as immediately and 50 min following exercise termination. |

**Table 4c: PE and Substance Abuse - Acute Intervention**

| 1st Author Year County | Central aim/central research question | Research design and intervention | Sample characteristics and substance type | Data collection method | Findings |
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| Ussher et al (2004) USA | Explore whether a brief bout of exercise can reduce alcohol urges | **RCT**<br>**Ex group 1:** Single stationary cycling; 10-min at moderate intensity (40‑60% heart rate reserve).<br>**Ex group 2:** Single stationary cycling 10-min at very light intensity (5‑20% heart rate reserve). | **Sample:** n20 (m,f) mean age 40<br>**Substance:** Alcohol | **Pre, during and post**: Alcohol urge and mood measurements. | **Substance use:** Decreased urge to drink alcohol during but not following moderate exercise. |

## Appendix 6

**Table 5: PE and addiction - animal studies**

| 1st Author ;Year; County | Central aim/central research question | Research design | Sample characteristics and substance type | Findings |
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| Smith et al 2012 USA | Examine the effects of long-term access to a running wheel on drug-primed and cue | **RCT**<br>**Ex group:** Access to wheel.<br>**Con group:** No access to wheel. | **Sample:** Rats n=28 (m,f)<br>**Substance:** | EX and Con rats had similar levels of cocaine SA. EX rats responded less than sedentary rats during extinction. |

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| | induced reinstatement of cocaine-seeking behavior in rats | After 6 weeks: IC's implanted. Rats trained to self-administer cocaine for 14 days. Saline was then substituted for cocaine and responding was allowed to extinguish. Then cocaine-primed reinstatement was examined in both groups. Cocaine self-administration was re-established in for a 5-day period Cocaine and associated cues were withheld (2nd period of abstinence). After 5 days of abstinence, cue-induced reinstatement was examined in both groups | Cocaine | In tests of cocaine-primed and cue-induced reinstatement, EX rats responded less than sedentary rats. This effect was apparent in both males and females. |
| Smith et al (2011) USA | Examine the effects of access to a running wheel on the acquisition of cocaine self-administration in experimentally naive rats. | **RCT**<br>**Ex group:** Access to wheel.<br>**Con group:** No access to wheel.<br>After 6weeks,: IC's implanted. Rats put in conditioning chambers for 2 h/day for 15 days. Each session began with a non-contingent priming infusion of cocaine, followed by a free operant period in which each response on the active lever produced an infusion of cocaine on a fixed ratio For days 1–5, responding was reinforced with 0.25 mg/kg/infusion cocaine For days 6–15, responding was reinforced with 0.75 mg/kg/infusion cocaine | **Sample**: Rats n=38 (m)<br>**Substance:** Cocaine | EX rats acquired cocaine SA at a sig slower rate and emitted significantly fewer active lever presses during the 15 days of behavioral testing. |
| Kristen et al (2010) USA | Whether aerobic exercise may block reinstatement of cocaine-seeking and its underlying neurobiology | **RCT**<br>**Ex group:** Access to wheel 2hr per day<br>**Con group:** No access to wheel.<br>10 days of 24-hour access to cocaine or saline under a discrete trial procedure (four infusions/hr). 14-day abstinence period.Cocaine-seeking was assessed following 14th day abstinence using a within-session extinction/cue-induced reinstatement procedure. Neuronal activity was assessed by examining phosphorylated levels of extracellular signal-regulated kinase (pERK) using Western blot analysis | **Sample:** Rats n=21 (m,f)<br>**Substance:** Cocaine | Wheel running reduced cocaine-seeking during both extinction and reinstatement. Cocaine-seeking was positively associated with pERK levels in the prefrontal cortex. Although pERK levels were not different among saline controls, in the cocaine group, pERK levels were sig decreased by PE. |
| Smith et al (2008 USA | Examine the effects of chronic PE on sensitivity to the positive-reinforcing effects of cocaine in the drug self-administration procedure | **RCT**<br>**Ex group:** Access to wheel.<br>**Con group:** No access to wheel.<br>After 6 weeks: Rats trained to self-administer cocaine on a fixed-ratio schedule of reinforcement. Once self-administration was acquired, cocaine was made available on a progressive ratio schedule and breakpoints were obtained for various of cocaine. | **Sample:**<br>Rats n= 17 (f)<br>**Substance:**<br>Cocaine | Sedentary and EX rats did not differ in the time to acquire cocaine SA or responding on the fixed-ratio schedule of reinforcement. On the progressive ratio schedule, breakpoints were significantly lower for PE rats Greater PE output prior to catheter implantation was associated with lower breakpoints at the high dose of cocaine. |
| Brocardo et al 2012 Canada | Analyse how exposure to this teratogen during the period of brain development affects the intracellular redox state in the brain and the development of anxiety- and depressive-like phenotypes. | **RCT**<br>**Ex group:** Ethanol administered across all three-trimester equivalents (i.e., throughout gestation and during the first 10 days of postnatal life).<br>Con group: Not exposed to ethanol<br>Ethanol-exposed and control animals were assigned to either sedentary or running groups at postnatal day (PND) 48. Runners had free access to a running wheel for 12 days. Anxiety- and depressive-like behaviours were assessed. | **Sample:**<br>Rats n=240 (m,f)<br>**Substance:**<br>Alcohol | Perinatal ethanol exposure resulted in depressive and anxiety-like behaviours in adult rats without affecting their locomotor activity. Voluntary wheel running reversed the depressive-like behaviours in ethanol-exposed males, but not females. Lipid peroxidation and protein oxidation were sig increased in the hippocampus and cerebellum of ethanol-exposed rats, and there was a concomitant reduction in the levels of the endogenous antioxidant |

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| | | | | glutathione. Voluntary PE was able to reverse the deficits in glutathione both in ethanol-exposed males and females |
| Miladi-Gorji et al<br>(2012)<br>Iran | Examine the effect of voluntary exercise on the anxiety profile in both morphine dependent rats and rats experiencing withdrawal. | **Experiment - RCT**<br>**Ex group:** Access to wheel<br>**Con group:** No access to wheel.<br>Rats injected with bi-daily doses of morphine over a period of 10 days. Following injections, anxiety-like behaviours were tested in the EPM and the light/dark box. | **Sample**: Rats (m) Number not specified.<br>**Substance:** Morphine | EX morphine-dependent and withdrawn rats exhibited an increase in EPM open arm time and entries and L/D box lit side time as compared with control groups. |
| Thanos et al<br>2010<br>USA | Assess the effects of chronic forced PE during adolescence on preference for cocaine using the CPP in rats. | **RCT**<br>**Ex group:** Treadmill 6 weeks on a progressive time-increased schedule for up to 1 hr per day<br>**Con group**: No treadmill.<br>After 6 weeks rats were tested for cocaine CPP. | **Sample:** Rats n=24 (mf)<br>**Substance:** Cocaine | Chronic exercise attenuated cocaine CPP (m+f). m PE rats failed to show significant cocaine CPP.f PE rats still showed cocaine CPP but it was significantly reduced compared to control |
| Engelmann et al<br>2014 | Explore whether prior exposure to chronic WR alters maladaptive patterns of excessive and escalating methamphetamine. | **RCT**<br>**Ex group:** Access to wheel<br>**Con group:** No access to wheel.<br>After 6 weeks a set of PE rats were injected with 5-bromo-20-deoxyuridine (BrdU) to determine WR-induced changes in proliferation (2-h old) and survival (28-day old) of hippocampal progenitors. Another set of WR rats were withdrawn (WRw) or continued (WRc) to have access to running wheels in their home cages during self-administration days. Following self-administration [6 h/day], rats were tested on the progressive ratio (PR) schedule. Following PR, BrdU was injected to determine levels of proliferating progenitors (2-h old). | **Sample:** Rats n=58 (m)<br>**Substance:** Methamphetamine | PE rats SA sig less during acquisition and escalation sessions, and demonstrated reduced motivation for seeking.<br>Methamphetamine reduced daily running activity of PE rats.<br>PE withdrawn rats SA sig more than controls during acquisition. |
| Thanos et al<br>2013<br>USA | Examine the effects of high and low PE on cocaine responses in rats that had been trained to self-administer. | **RCT**<br>**Ex group 1**: 2 hr/day access to wheel.<br>**Ex group 2:** 1 hr/day access to wheel.<br>**Con group:** No access to wheel.<br>After 6 weeks rats were tested over 2 days for reinstatement of cocaine SA. | **Sample:** Rats n=37 (m)<br>**Substance:** Cocaine | Ex1 rats had sig less active lever presses than Con<br>Ex2 rats hade less lever presses than Con (non sig) |
| Pichard et al<br>2009<br>France | To test voluntary versus imposed PE in nice with high vs low alcohol preference for possible modifications of alcohol consumption during and after voluntary vs forces PE. | **Experiment**<br>**Ex group 1:** C57BL/6J (high alcohol pref) mice - Free access to wheel<br>**Ex group 2:** C57BL/6J (high alcohol pref) mice - Forced PE<br>**Ex group 3:** DBA/2J (low alcohol pref) mice Free access to wheel<br>**Ex group 4:** DBA/2J (low alcohol pref) mice - Forced PE | **Sample:** Mice n=29 (m) C57BL/6J and DBA/2J<br>**Substance:** Alcohol | Moderate PA was associated with a decrease in voluntary alcohol intake. Forced running at a higher speed led to increased intake for C57BL/6J mice. Alcohol intake remained at the same low level whether or not DBA/2J mice were free or forced to run. The only effect of forced running in these alcohol-avoiding mice was a significant desynchronization of circadian motor activity rhythm, which was even more pronounced than that induced in alcohol-preferring C57BL/6J mice |

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| Hammer et al 2010 USA | Explore the relationship between wheel running and ethanol (EtOH) intake | **RCT**<br>**Ex group:** Access to wheel<br>**Con group:** No access to wheel. | **Sample:** Hamsters N=18 (m)<br>**Substance:** Alcohol | Inhibitory effects of wheel running on EtOH intake and vice versa were observed. |
| Leasure et al 2010 USA | Investigate whether voluntary PE prior to binge alcohol exposure could protect against alcohol-induced cell loss. | **RCT**<br>**Ex group:** Access to wheel<br>**Con group:** No access to wheel.<br>Voluntarily PE for 14 days then 4 days of binge alcohol consumption. Brains were harvested immediately after the last dose of alcohol and examined for various histological markers of neuro-degeneration. | **Sample:** Rats n=7 (f) | Rats that exercised prior to binge were sig less behaviourally intoxicated. Rats that exercised prior to alcohol consumption had reduced loss of dentate gyrus granule cells and fewer FluoroJade B positive cells |
| Zlebnik et al 2012 USA | Evaluate the effect of PE on the escalation of cocaine intake during long access conditions. | **Experiment:**<br>Rats acquired wheel running. Behaviour was allowed to stabilize for 3 days. Rats then implanted with an iv catheter and allowed to SA cocaine for 6hr daily for 16 days with access to either an unlocked or a locked running wheel. Subsequently, for ten additional sessions, wheel access conditions during cocaine self-administration sessions were reversed (i.e., locked wheels became unlocked and vice versa). | **Sample:** Rats n=60 (f) adolescent and adult | Adolescents concurrent access to the unlocked wheel decreased responding for cocaine and attenuated escalation of cocaine intake irrespective of whether the locked or unlocked condition came first. Cocaine intake increased when the wheel was locked for the adolescents that had initial access. Concurrent wheel access either before or after the locked wheel did not reduce cocaine intake in adults |
| Hammer et al 2012 USA | EtOH drinking and preference were measured in groups of hamsters. Further, because voluntary PE wheel-running is a rewarding substitute for EtOH in young adult hamsters, the potential for such reward substitution was also assessed. | **Experiment:**<br>Hamsters were subjected to a three-stage regimen of free-choice EtOH (20% v/v) or water and unlocked or locked running wheels to investigate the modulatory effects of voluntary wheel running on EtOH intake and preference. Levels of fluid intake and activity were recorded daily across 60 days of experimentation. | **Sample:** Hamsters n=15 (m)<br>**Substance:** Alcohol | Prior to wheel running, levels of EtOH intake were sig less than levels of water intake, resulting in a low preference for EtOH (30%). Hamsters with access to an running wheel had decreased EtOH intake and preference compared with hamsters with access to a locked running wheel. These differences were sustained for up to 10 days after running wheels were re-locked. |
| Chen et al 2008 Taiwan | Examine the modulating effects of long-term, compulsive treadmill PE on the hedonic value of MDMA in mice. | **RCT**<br>**EX group1:** Treadmill PE for 4 weeks<br>**EX group 2:**Treadmill PE for 8 weeks. Speed increase at 8 week<br>**EX group 3**:Treadmill PE for 12 weeks. Speed increase at 8 and 12 week<br>Con group: Access to treadmill (unforced)<br><br>MDMA-induced CPP was used as a behavioral paradigm to indicate the reward efficacy of MDMA. | **Sample:** Mice n=24 (m)<br>**Substance:** MDMA | Acute MDMA-stimulated dopamine release in nucleus accumbens was abolished in the EX mice, whereas an obvious elevation of accumbal dopamine release was observed in control mice. 12-week EX programme did not alter the protein levels of primary dopamine receptors, vesicular or membrane transporters in this area. |
| Fontes-Ribeiro et al 2011 Portugal | To study the influence of chronic PE in the mechanism of addiction using an amphetamine-induced conditioned-place-preference | RCT<br>**EX group:** Chronic exercise a 8 week treadmill program, with increasing intensity.<br>**Con group:** No PE<br>The conditioned place preference test was performed in both groups using a | **Sample:** Rats unspecified number | Before conditioning rats showed no preference for a specific compartment. The amphetamine dose in the conditioning produced a marked preference towards the drug compartment.in the group without PE. |

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| | in rats | procedure and apparatus previously established. A 2 mg.kg-1 amphetamine or saline solution was administered intraperitoneally according to the schedule of the conditioned place preference. | | EX rats had sig preference for the compartment associated with saline was observed. |
| Lett et al<br>2002<br>Canada | Does prior experience with wheel running produces cross-tolerance to the rewarding effect of morphine | **Experiment**<br>**Phase 1**<br>**EX group 1:** Confined on running wheel 2hr's per day for 8 days<br>**EX group 2:** Confined in small metal cages.<br>**Phase 2:** A distinctive place was paired with morphine to produce CCP | **Sample:**<br>Ratsn=30(m) | CPP occurred in the cage-morphine group, but not in the wheel-morphine group, implying that prior wheel running resulted in cross-tolerance to the rewarding effect of morphine |
| Miller et al<br>2012<br>USA | Explore reciprocal inhibitory effects of intravenous d-methamphetamine<br>SA and wheel activity in rats | **RCT**<br>**EX group 1:** Wistar rats - Access to SA meth and wheel<br>**EX group 2:** Sprague Dawley rats access to SA meth and wheel.<br>**Con groups:** Access to wheel | **Sample:** Wistar rats n=54; Sprague Dawley rats n=13 | Meth SA was lower when the wheel was available concurrently from the start of self-administration training in both strains, even though EX2 rats SA twice as much and ran one-sixth as much compared to EX1 rats. Wheel access initiated after 7 or 14 days had no effect on meth SA in EX1s. Wheel activity was sig reduced in these groups compared with the group with concurrent wheel and meth access for the first 14sessions. |
| Ehringer et al<br>2009<br>Germany | Determine whether mice with high voluntarily alcohol consumption reduce when given access to a wheel. | **Experiment**<br>**EX group 1:** Unlimited 2 bottle choice with wheel access<br>**EX group 2:** Limited 2 bottle choice DID | **Sample:** Mice n=31<br>**Substance:** Alcohol | Two-bottle choice mice voluntarily SA less alcohol when wheel was present. Female mice SA less alcohol when they had access to a running wheel. Male mice SAless alcohol even if the running wheel was locked. There were no sig differences observed in alcohol metabolism or food consumption. Under the DID protocol, no differences in alcohol SA were observed in the presence of a running wheel |
| Zlebnik<br>2010<br>et al<br>USA | Explore the effect of wheel running on extinction and reinstatement of cocaine seeking of rats. | **Experiment**<br>Mice trained to run then exposed to cocaine.<br>**EX group:** Wheel running during extinction and reinstatement<br>**EX group 2:** Wheel running during extinction and a locked wheel during reinstatement<br>**Ex group3**: Locked wheel during extinction and wheel running during reinstatement<br>**EX group 4:** locked wheel during extinction and reinstatement | **Sample:** Rats n=37(f)<br>**Substance:** Cocaine | There were no group differences in wheel revolutions, in rate of acquisition of cocaine SA or in responding during maintenance when there was no wheel access. However, during extinction, Ex 1 and EX 2 responded less than EX 3 and EX4. EX3and EX1 had lower cocaine-primed reinstatement than EX2 and EX4. One later session of wheel exposure in EX2 also suppressed cocaine-primed reinstatement. |
| Solinas<br>et al<br>2008 | Can exposure to environmental enrichment during periods of abstinence | **RCT**<br>Mice were addicted to cocaine<br>**Ex group:** Following addiction housed in an enriched environment including | **Sample:** mice n=34<br>**Substance:** | 30 days of environmental enrichment completely eliminates behavioral sensitisation and conditioned place |

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| USA | after the development of addiction-related behaviours could reduce the enhanced reactivity of animals to the motivational effects of drugs and drug-associated environmental stimuli that leads to relapse. | a running wheel<br>**Con group:** Following addiction housed in standard housing | Cocaine | preference to cocaine. In addition, housing mice in enriched environments after the development of conditioned place preference prevents cocaine-induced reinstatement of conditioned place preference and reduces activation of the brain circuitry involved in cocaine-induced reinstatement. |
| Werme et al (2002) Sweeden | To test whether there is a behavioural interaction between running in running wheels and preference for ethanol | **RCT**<br>Rats showed 50-60% preference for ethanol in the 2 bottle free choice model<br>**EX group**: Access to wheel once ethanol removed<br>**Con group:** No access to wheel once ethanol removed<br>2 bottle free choice model then reinstated | **Sample:** Rats<br>**Substance:** Alcohol | Running potentiates ethanol intake and preference. Thus, running which shares many of the reinforcing properties with addictive drugs appears to potentiate rats to an increased preference for ethanol. Results describe a behavioural interaction where running increases ethanol consumption |
| McCulley III et al 2012 USA | Can running wheel activity protects against increased seizure susceptibility in ethanol withdrawn male rats | **RCT**<br>Animals were addicted to ethanol<br>**EX group 1:** Standard rat cages with functioning running wheels<br>**EX group 2:** Standard rat cages with wheels that are locked<br>**Con group**: Standard rat cages without wheels | **Sample:** Rats<br>**Substance:** Alcohol | Findings showed that chronic voluntary wheel running reduces the severity of ethanol withdrawal in our animal model. |
| Balter et al 2012 USA | To examine the effects of access to running wheels and group housing on spontaneous morphine withdrawal. | **RCT**<br>**EX group 1:**Singly housed with wheel<br>**EX group 2:** Group housed no wheel<br>**Con group:** Singly housed no wheel | **Sample:** Mice<br>**Substance:** Morphine | Both wheel access and group housing attenuate the increase in thermal sensitivity seen in morphine treated mice during morphine withdrawal. |
| Smith et al 2011 USA | Does access to a Running Wheel Inhibits the Acquisition of Cocaine SA | **RCT**<br>**EX group 1:**Wheel access<br>**Con group:** No wheel access | **Sample:** Rats n=14(mf)<br>**Substance:** Cocaine | Sedentary rats SA sig more cocaine than exercising rats during uninterrupted 23-h test sessions. This effect was apparent in both males and females. Sedentary rats escalated their cocaine intake to a sig greater degree than exercising rats over the 14 days of testing. Although females escalated their cocaine intake to a greater extent than males, exercise effectively attenuated the escalation of cocaine intake in both sexes. |
| Smith et al 2012 USA | Does wheel Running Decrease the Positive Reinforcing Effects of Heroin | **RCT**<br>Rats were addicted to cocaine<br>**EX group 1:**Wheel access<br>**Con group:** No wheel access<br>SA of heroin measured | **Sample:** Rats n=90(mf)<br>**Substance:** Heroin | Sedentary rats self-administered more heroin than exercising rats, and this effect was greatest at low and moderate doses of heroin. |
| Hosseini et al | Can treadmill exercise reduces self-administration of | **RCT**<br>**EX group 1:**Morphine and exercise (11 days) | **Sample:** Rats n=156(mf) | SA of morphine group was sig higher than Saline group. EX 1 and EX 2 groups, the |

| | | | | |
|---|---|---|---|---|
| 2009<br>Iran | morphine in male rats | **EX group 2**: Morphine and exercise (30 days)<br>**Con group 1:** Morphine no exercise<br>**Con group 2:** Saline no exercise | **Substance:**<br>Morphine | number of active lever pressing was sig lower than Morphine group. |
| Devaud<br>et al<br>2012<br>USA | Does voluntary wheel running attenuates ethanol withdrawal-induced increases in seizure susceptibility in male and female rats | **RCT**<br>**EX group 1:**Free access to wheel<br>**EX group 2**: Free access to locked wheel<br>**Con group 1:** No wheel | **Sample:** Rats (mf)<br>**Substance:**<br>Alcohol | EW increased seizure susceptibility at 1 day in non-exercising males and females and at 3 days in males. These effects were attenuated by access to running wheels in both sexes. |
| Rozeske<br>et al<br>2011<br>USA | Does voluntary wheel running produces resistance to inescapable stress-induced potentiation of morphine conditioned place preference | **EX group 1**: Free access to running wheel<br>**EX group 2**: no access to running wheel<br>Following 6 weeks rats began CCP | | Six weeks of voluntary wheel running constrains activation of DRN 5-HT neurons during exposure to inescapable stress. Six weeks of voluntary wheel running before inescapable stress blocked stress-induced potentiation of morphine CPP. |
| Mustroph<br>et al 2011<br>USA | What is the impact of running extinction of conditioned place preference for cocaine in mice depending on timing of wheel access | **RCT**<br>Mice experienced 30 days of running or sedentary treatments either before or after cocaine conditioning. Control animals always received saline and never cocaine, but otherwise underwent the same conditioning and exercise treatments. | **Sample:** Rats n=90 (m)<br>**Substance:**<br>Cocaine | Wheel running accelerated extinction of CPP when running occurred entirely after drug conditioning, whereas running delayed extinction when administered before conditioning. A single conditioning day after running was sufficient to abolish the accelerated extinction observed when all conditioning preceded running. |
| Cosgrove et al<br>2002<br>USA | Examines the effect of access to a running-wheel on intravenous cocaine SA in rats. | **RCT**<br>**EX group 1:** Access to cocaine and wheel<br>**EX group 2**: Access to cocaine alone<br>**Con group 1:** Access to running wheel alone | **Sample:** Rats n=17 (m,f)<br>**Substance:**<br>Cocaine | When cocaine infusions were concurrently available, wheel revolutions were reduced by 63.7% and 61.5% in males and females, respectively, compared to the wheel-only condition. This result did not differ due to sex, but it was statistically significant when data from males and females were combined. |

**Appendix 7: Table 6 -Meta analysis and systematic reviews**

| 1st Author; Year; Country | Central aim/central research question | Substance | Findings/recommendations |
|---|---|---|---|
| Smith 1984 | Use the principles of recovery to define positive and constructive alternatives in dealing with cocaine craving. | Cocaine | Exercise that produces cardiopulmonary stimulation is a helpful means of reducing drug hunger and anxiety during recovery therapy. |
| Kunstler 1992 | Explore the role of therapeutic recreation therapy in treating SUD's | SUD | Lack of involvement in active recreation, absence of a positive social network, and an inability to cope with stress can cause relapses. People report being happy when involved in inexpensive leisure pursuits such as reading, gardening, knitting. Other activities which may lead to flow include yoga, tai-chi, PE and outdoor activities |
| Read et al 2003 | Examine the potential role of PE in the process of recovery from AUD | Alcohol | Available evidence suggests that PE is a beneficial and easily utilized adjunct treatment or relapse-prevention strategy. Benefits include improved mood, self-efficacy, and decreased substance use. More research is needed to address methodological limitations of existing studies, expand current knowledge of person-specific and exercise specific factors and to establish the efficacy of exercise interventions in the treatment of AUD. |
| Dutra et al., 2008 | Provide effect sizes for various types of psychosocial treatments, as well as abstinence and treatment retention rates for cannabis, cocaine, opiate, and polysubstance abuse and dependence treatment trials | Cannabis<br>Cocaine<br>Opiates<br>Polysubstance | Controlled trial data suggest that psychosocial treatments provide benefits reflecting a moderate effect size interventions were most efficacious for cannabis use and least efficacious for polysubstance use. |
| Williams & Strean, 2008 | Provide an overview of common variables that contribute to addictive disease and summarises the relationship of PA to improvements on these variables. | SUD | With careful programme planning and thorough clinical assessment of clients, it may be possible for treatment teams to utilize PA as part of recovery for some SUD patients. more research on this topic is needed |
| Weinstock et al., 2012 | Review PE as an adjunctive intervention for opiate agonist treatment, especially in regards to improving mood and overall quality of life, while reducing other SUD. | Opiate | Poor adherence and dropout frequently prevent many individuals from garnering the many physical and mental health benefits of exercise |
| Zschucke et al., 2012) | Review studies addressing the therapeutic effects of PE in alcohol, nicotine and illicit drug abuse. | SUD | Evidence is strong for PE as an effective adjuvant treatment for nicotine addiction, whereas no generalizable and methodologically strong studies have been published for alcohol and drug treatment so far, allowing only preliminary conclusions about the effectiveness of PE exercise in these disorders. No methodologically firm studies are present to verify the long-term benefits of PE interventions with regard to craving, abstinence, relapse, and other psychological variables |
| Lynch et al., 2013 | Discuss clinical and preclinical evidence for the efficacy of PE at different phases of the addiction process. | SUD | PE generally produces an efficacious response but certain PE conditions may be ineffective or have detrimental effects depending on the level/type/timing of PE, stage of addiction, drug type, and the subject population. During drug use initiation and withdrawal, its efficacy may be related to its ability to facilitate dopaminergic transmission, and once addiction develops, its efficacy may be related to its ability to normalize glutamatergic and dopaminergic signaling and reverse drug-induced changes in chromatin via epigenetic interactions with BDNF in the reward pathway |
| Greer et al., no date | If effective, exercise may provide an additional approach to the treatment of stimulant use disorders. | Stimulants | PE appears to be a promising intervention for individuals with stimulant use disorders. It has limited side effects compared with medications, is not likely to interact with concurrent pharmacotherapy, is lower in cost), can be performed at home, can be continued indefinitely if effective in diverting relapse, and may be useful with vulnerable populations such as pregnant women |
| Wang et al ( 2014) USA | Examine whether long-term physical exercise could be a potential effective treatment for substance use disorders | SUD | Results indicated that PE can effectively increase the abstinence rate, ease withdrawal symptoms, reduce anxiety and depression. PE can more ease the depression symptoms on alcohol and illicit drug abusers than nicotine abusers, and more improve the abstinence rate on illicit drug abusers than others |
| Bardo & Compton (2015) USA | Determine our state of knowledge about the potential ability of physical activity serve as a protectant against drug abuse vulnerability | SUD | Preclinical evidence shows that PA in various forms is able to serve as both a preventive and treatment intervention that reduces drug use, although voluntary alcohol drinking appears to be an exception to this conclusion. There is circumstantial evidence that PA may reduce use of drugs other than nicotine, and there is essentially no solid information from random control studies to know if physical activity may prevent initiation of problem use. Brain systems are altered by PA, with the medial prefrontal cortex (mPFC) serving as one potential node that may mediate the putative link between PA and drug abuse vulnerability |
| Giesen et al | Explore the impact of clinical exercise | Alcohol | PE may have beneficial effects on certain domains of physical functioning including VO2max, basal heart rate, physical |

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| (2015)<br>Germany | interventions in alcohol use disorders: | | activity level and strength. A slight trend towards a positive effect on anxiety, mood management, craving, and drinking behavior have been shown. Results must be interpreted cautiously due to the numerous methodological flaws and the heterogeneity of the interventions and measures. RCTs with high methodological quality are urgently needed in future research |
| Linke &<br>Ussher<br>2015)<br>USA | Explore the evidence, theory, and practicality of PE based treatments for substance use disorders | SUD | Definitive conclusions are difficult to draw due to diverse study protocols and low adherence to exercise programs, among other problems. Despite the currently limited and inconsistent evidence, numerous theoretical and practical reasons support exercise-based treatments for SUDs, including psychological, behavioural, neurobiological, nearly universal safety profile, and overall positive health effects. |
| Brellenthin &<br>Koltyn<br>(2016)<br>USA | Explore the efficacy of PE as an adjunctive treatment for cannabis use disorder | Cannabis | Given that exercise is a potent activator of the eCB system, it is mechanistically plausible that exercise could be an optimal method to supplement cessation efforts by reducing psychophysical withdrawal, managing stress, and attenuating drug cravings. There is a strong behavioural and physiological rationale to design studies which specifically assess the efficacy of exercise, in combination with other therapies, in treating CUD. |
| Stoutenberg et al<br>(2016)<br>USA | Summarise the body of published literature supporting PE as a treatment strategy for individuals with AUDs. | Alcohol | There is a compelling case for further examination of integrating PE as a regular part of treatment programmes for individuals seeking treatment for AUDs. The proven ability of PE to successfully to impact quality of life is an additional benefit of exercise training and may increase commitment to abstinence |

**Appendix 8: Interview questions and prompts**

Questions

- How did you end up at Phoenix?
- What was your first impression of Phoenix?
- What have been the high points of your recovery?
- What have been the low points of your recovery?
- What is your previous exercise experience?
- How have you found the yoga and/or circuit classes?
- What were your first impressions of the classes
- What are the physical benefits if any?
- What are the psychological benefits if any?
- Are there any other benefits?
- What do you think has been most important about exercise for you?
- What are your fitness related goals?
- Where do you see yourself in the future?
- What social circles are you part of now?
- Is there anything you would change about this intervention?
- How should we go about getting more Phoenix residents exercising?
- Is there anything you would like to ask me?
- Is there anything we have covered in this interview that you would like to revisit?

*As stated in the main body of the thesis, thesis questions are not set in stone. They were just used as a guide. Each interview was very much participant led.*

Prompts

- Could you explain that in more detail?
- Re wording of questions.
- How do you feel now?
- Could you elaborate upon that?
- Could you describe a typical day during this period?
- Open answers designed to promote free speech.

# Appendix 9: Participant information sheet

## Exercise and Clean Living: An Investigation Into The Impact Of Exercise For People Recovering From Addiction.

**Researcher:** Chris Fitzgerald

You are being invited to take part in a research project investigating the impact of exercise for people recovering from addiction. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask your researcher if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

Thank you for reading this.

### What is the projects purpose?

The purpose of this project is to measure the value of physical exercise in the process of recovery for people who have suffered addiction.

Circuit classes for Phoenix Futures, that both residents and staff can attend free of charge, have already been set up.

Those who have been attending the circuit classes regularly have gone on to get a free gym membership and an exercise consultation. The consultation is to put together a training program which fits individual goals and requirements. This opportunity is open to all Phoenix Futures residents regardless of whether they agree to take part in this research or not.

The impact exercise has upon the recovery of Phoenix Futures residents shall be measured interview about their experience of exercise in their recovery process.

### Why have I been chosen?

You are a resident who has shown interest in attending circuit classes and all those expressing an interest will be approached.

### Do I have to take part?

You do not have to take part in any component of this research project. You will still be able to attend circuit classes and obtain a gym membership without this effecting your care at PF.

If you do decide to take part will be given a copy of this information sheet and asked to sign a consent form. You will still be free to withdraw from providing data at any time. You will not have to provide a reason for wanting to withdraw.

**What will happen to me if I do agree to take part?**

You do not have to take part in the interviews and fitness tests. You will still be able to attend circuit classes and obtain a gym membership.

If you agree to take part you will be asked to complete a series of fitness tests. These tests are designed to avoid over exertion. These involve a step test, where you will be asked to step up and down for 1minute. This process will be repeated a maximum of 5 times. The second test is a push up test, again asking you to complete as many push ups as you can over 1min. You can stop either tests when you feel you have had enough. We will take a recording of your heart rate taken before and after your tests. We shall take these via a strap which fits round your chest tight enough to stay in place but not too tight to cause any discomfort.

These exercise tests shall be carried out three times; once before you attend any circuit classes; once when you are first given your gym membership; once after eight weeks of having a gym membership. We are looking for changes, over time, that suggest that you are getting physically fitter. For example it's expected that you will be able to do more exercise at a lower heart rate.

You shall also be asked to take part in a minimum of three audio recorded interviews about your experiences of physical exercise. Again, interviews shall be carried out three times; once before you attend any circuit classes; once when you are first given your gym membership; once after eight weeks of having a gym membership. These will take place at a time convenient with you and in a private room at PF. Interviews may take between 30 mins to one hour. The interviews will be quite unstructured but you will be asked about how you have found the experience of exercise and whether or not you have found it beneficial and if so in what ways.

You may also be requested to take part in a fourth interview particularly if you move onto re-entry following your time spent at Phoenix Futures.

Chris Fitzgerald (researcher) will also be observing the general patterns of how people take part in the circuit classes. This will take place when during classes which Chris attends. After such classes Chris will make notes on how the class went and what he thought the general mood was. This will not involve making judgments about individuals, but general diary notes which will help Chris think about how the classes have gone.

It is important to note that you will have the right to withdraw from this study at any point. If you do so, you will be asked if any data gathered about your experiences as a participant can be used as part of this project. You have the right to request that any data pertaining to you is deleted. Should you wish to withdraw and have your data deleted you will still be able to attend circuit classes.

**Is there anything else I have to do?**

No.

**What are the possible disadvantages and risks of taking part?**

There is an element of physical risk in all physical activity. Before taking part in circuit classes you will be asked to complete a simple questionnaire designed to identify any underlying health issues you may have. This process shall be repeated should you gain a gym membership. This questionnaire is part of your assessment for any exercise program. The tests of fitness outlined above (step text and pushups) used in this research study are designed to be low impact. Over exertion shall be avoided.

Circuit classes are for people of all fitness levels. If you choose to exert yourself in this setting it is your decision to do so. Should you receive a gym membership you shall be coached on how to achieve whatever fitness related goals you may have in a safe fashion and if you ever feel unwell during exercise you should always stop.

There is a risk of covering topics which are upsetting during the interview process. The topic of addiction is likely to come up. If conversation becomes uncomfortable and you wish to change topic than all you need to do is say so. If you wish to stop the interview at any point then all you need to do is say so. If you later regret covering any topics, you can contact the investigator and ask for them to be removed from the investigation.

**What are the possible benefits of taking part?**

It is highly likely that taking part in circuit classes and going to the gym will improve your fitness and self-esteem. If you choose to take part in the interviews, then it is hoped that the data you provide will provide information about the role of physical exercise in aiding rehabilitation. It is hoped that this will aid the development of programs in the future.

**What happens if the project stops earlier than expected?**

If this should happen the reasons shall be explained to you in full.

**What if something goes wrong?**

If you are injured during circuit classes, gym sessions or testing a fully trained first aider will be on hand.

If you have any complaints regarding this project then please contact Chris Fitzgerald (researcher) using the details provided bellow. Should you have a compliant and feel that Chris has not dealt with it to your satisfaction then please feel free to contact Professor John Nichol: Tel: (+44)114 222 5453 or j.nicholl@sheffield.ac.uk

**Will my taking part in this project be kept confidential?**

All the personal information collected about you during the course of this project will be kept strictly confidential. The interview data will be anonymised, which means that we will give you an alias. Recorded interviews will be deleted as soon as they have been transcribed.

**What will happen to the results of the research project?**

This project is part of a PhD qualification. As such findings are likely to be used in the teaching carried out by the researcher, discussed at conferences and published in the form of journal articles. It is also possible that the anonymised data produced for this investigation shall be used as part of other investigations in the same area. It is important to note that you will be assigned an alias. As such your input into this project is entirely anonymous.

**Who is organising and funding this project?**

This project is funded by The University of Sheffield

**Who has ethically reviewed the project?**

This project has been ethically reviewed via University of Sheffield.

**Contact for further information**

Chris Fitzgerald is the sole researcher for this investigation. His contact details are provided below. Please feel free to make contact with any queries concerning this investigation and your participation in it.

**Researcher: Chris Fitzgerald**

School of Health and Related Research

Regent Court

30 Regent Street

Sheffield

S1 4DA

Tel: (+44)114 222545

cmfitzgerald1@sheffield.ac.uk

**Supervisor: Dr Jennifer Burr**

School of Health and Related Research

Regent Court

30 Regent Street

Sheffield

S1 4DA

Thank you for your time

**Appendix 10: PARQ**

# 2013 PAR-Q+

The Physical Activity Readiness Questionnaire for Everyone

The health benefits of regular physical activity are clear; more people should engage in physical activity every day of the week. Participating in physically active is very safe for MOST people. This questionnaire will tell you whether it is necessary for you to seek further advice from your doctor OR a qualified exercise professional before becoming more physically active.

## GENERAL HEALTH QUESTIONS

| Please read the 7 questions below carefully and answer each one honestly: check YES or NO. | YES | NO |
|---|---|---|
| 1) Has your doctor ever said that you have a heart condition ☐ OR high blood pressure ☐ ? | ☐ | ☐ |
| 2) Do you feel pain in your chest at rest, during your daily activities of living, **OR** when you do physical activity? | ☐ | ☐ |
| 3) Do you lose balance because of dizziness **OR** have you lost consciousness in the last 12 months? Please answer **NO** if your dizziness was associated with over-breathing (including during vigorous exercise). | ☐ | ☐ |
| 4) Have you ever been diagnosed with another chronic medical condition (other than heart disease or high blood pressure)? **PLEASE LIST CONDITION(S) HERE:** _____ | ☐ | ☐ |
| 5) Are you currently taking prescribed medications for a chronic medical condition? **PLEASE LIST CONDITION(S) AND MEDICATIONS HERE:** _____ | ☐ | ☐ |
| 6) Do you have a bone or joint problem that could be made worse by becoming more physically active? Please answer **NO** if you had a joint problem in the past, but it *does not limit your current ability* to be physically active. For example, knee, ankle, shoulder or other. **PLEASE LIST CONDITION(S) HERE:** _____ | ☐ | ☐ |
| 7) Has your doctor ever said that you should only do medically supervised physical activity? | ☐ | ☐ |

**If you answered NO to all of the questions above, you are cleared for physical activity.**
**Go to Page 4 to sign the PARTICIPANT DECLARATION. You do not need to complete Pages 2 and 3.**

- Start becoming much more physically active – start slowly and build up gradually.
- Follow International Physical Activity Guidelines for your age (www.who.int/dietphysicalactivity/en/).
- You may take part in a health and fitness appraisal.
- If you are over the age of 45 yr and **NOT** accustomed to regular vigorous to maximal effort exercise, consult a qualified exercise professional before engaging in this intensity of exercise.
- If you have any further questions, contact a qualified exercise professional.

**If you answered YES to one or more of the questions above, COMPLETE PAGES 2 AND 3.**

**Delay becoming more active if:**

- You have a temporary illness such as a cold or fever; it is best to wait until you feel better.
- You are pregnant - talk to your health care practitioner, your physician, a qualified exercise professional, and/or complete the ePARmed-X+ at **www.eparmedx.com** before becoming more physically active.
- Your health changes - answer the questions on Pages 2 and 3 of this document and/or talk to your doctor or a qualified exercise professional before continuing with any physical activity program.




# 2013 PAR-Q+

## FOLLOW-UP QUESTIONS ABOUT YOUR MEDICAL CONDITION(S)

| | | |
|---|---|---|
| 1. | **Do you have Arthritis, Osteoporosis, or Back Problems?** If the above condition(s) is/are present, answer questions 1a-1c | If **NO** ☐ go to question 2 |
| 1a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 1b. | Do you have joint problems causing pain, a recent fracture or fracture caused by osteoporosis or cancer, displaced vertebra (e.g., spondylolisthesis), and/or spondylolysis/pars defect (a crack in the bony ring on the back of the spinal column)? | YES ☐ NO ☐ |
| 1c. | Have you had steroid injections or taken steroid tablets regularly for more than 3 months? | YES ☐ NO ☐ |
| 2. | **Do you have Cancer of any kind?** If the above condition(s) is/are present, answer questions 2a-2b | If **NO** ☐ go to question 3 |
| 2a. | Does your cancer diagnosis include any of the following types: lung/bronchogenic, multiple myeloma (cancer of plasma cells), head, and neck? | YES ☐ NO ☐ |
| 2b. | Are you currently receiving cancer therapy (such as chemotherapy or radiotherapy)? | YES ☐ NO ☐ |
| 3. | **Do you have a Heart or Cardiovascular Condition?** *This includes Coronary Artery Disease, Heart Failure, Diagnosed Abnormality of Heart Rhythm* If the above condition(s) is/are present, answer questions 3a-3d | If **NO** ☐ go to question 4 |
| 3a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 3b. | Do you have an irregular heart beat that requires medical management? (e.g., atrial fibrillation, premature ventricular contraction) | YES ☐ NO ☐ |
| 3c. | Do you have chronic heart failure? | YES ☐ NO ☐ |
| 3d. | Do you have diagnosed coronary artery (cardiovascular) disease and have not participated in regular physical activity in the last 2 months? | YES ☐ NO ☐ |
| 4. | **Do you have High Blood Pressure?** If the above condition(s) is/are present, answer questions 4a-4b | If **NO** ☐ go to question 5 |
| 4a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 4b. | Do you have a resting blood pressure equal to or greater than 160/90 mmHg with or without medication? (Answer **YES** if you do not know your resting blood pressure) | YES ☐ NO ☐ |
| 5. | **Do you have any Metabolic Conditions?** *This includes Type 1 Diabetes, Type 2 Diabetes, Pre-Diabetes* If the above condition(s) is/are present, answer questions 5a-5c | If **NO** ☐ go to question 6 |
| 5a. | Do you often have difficulty controlling your blood sugar levels with foods, medications, or other physician-prescribed therapies? | YES ☐ NO ☐ |
| 5b. | Do you often suffer from signs and symptoms of low blood sugar (hypoglycemia) following exercise and/or during activities of daily living? Signs of hypoglycemia may include shakiness, nervousness, unusual irritability, abnormal sweating, dizziness or light-headedness, mental confusion, difficulty speaking, weakness, or sleepiness. | YES ☐ NO ☐ |
| 5c. | Do you have any signs or symptoms of diabetes complications such as heart or vascular disease and/or complications affecting your eyes, kidneys, OR the sensation in your toes and feet? | YES ☐ NO ☐ |
| 5d. | Do you have other metabolic conditions (such as current pregnancy-related diabetes, chronic kidney disease, or liver problems)? | YES ☐ NO ☐ |
| 5e. | Are you planning to engage in what for you is unusually high (or vigorous) intensity exercise in the near future? | YES ☐ NO ☐ |

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**6. Do you have any Mental Health Problems or Learning Difficulties?** *This includes Alzheimer's, Dementia, Depression, Anxiety Disorder, Eating Disorder, Psychotic Disorder, Intellectual Disability, Down Syndrome)*

If the above condition(s) is/are present, answer questions 6a-6b — If **NO** ☐ go to question 7

| | | |
|---|---|---|
| 6a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 6b. | Do you **ALSO** have back problems affecting nerves or muscles? | YES ☐ NO ☐ |

**7. Do you have a Respiratory Disease?** *This includes Chronic Obstructive Pulmonary Disease, Asthma, Pulmonary High Blood Pressure*

If the above condition(s) is/are present, answer questions 7a-7d — If **NO** ☐ go to question 8

| | | |
|---|---|---|
| 7a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 7b. | Has your doctor ever said your blood oxygen level is low at rest or during exercise and/or that you require supplemental oxygen therapy? | YES ☐ NO ☐ |
| 7c. | If asthmatic, do you currently have symptoms of chest tightness, wheezing, laboured breathing, consistent cough (more than 2 days/week), or have you used your rescue medication more than twice in the last week? | YES ☐ NO ☐ |
| 7d. | Has your doctor ever said you have high blood pressure in the blood vessels of your lungs? | YES ☐ NO ☐ |

**8. Do you have a Spinal Cord Injury?** *This includes Tetraplegia and Paraplegia*

If the above condition(s) is/are present, answer questions 8a-8c — If **NO** ☐ go to question 9

| | | |
|---|---|---|
| 8a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 8b. | Do you commonly exhibit low resting blood pressure significant enough to cause dizziness, light-headedness, and/or fainting? | YES ☐ NO ☐ |
| 8c. | Has your physician indicated that you exhibit sudden bouts of high blood pressure (known as Autonomic Dysreflexia)? | YES ☐ NO ☐ |

**9. Have you had a Stroke?** *This includes Transient Ischemic Attack (TIA) or Cerebrovascular Event*

If the above condition(s) is/are present, answer questions 9a-9c — If **NO** ☐ go to question 10

| | | |
|---|---|---|
| 9a. | Do you have difficulty controlling your condition with medications or other physician-prescribed therapies? (Answer **NO** if you are not currently taking medications or other treatments) | YES ☐ NO ☐ |
| 9b. | Do you have any impairment in walking or mobility? | YES ☐ NO ☐ |
| 9c. | Have you experienced a stroke or impairment in nerves or muscles in the past 6 months? | YES ☐ NO ☐ |

**10. Do you have any other medical condition not listed above or do you have two or more medical conditions?**

If you have other medical conditions, answer questions 10a-10c — If **NO** ☐ read the Page 4 recommendations

| | | |
|---|---|---|
| 10a. | Have you experienced a blackout, fainted, or lost consciousness as a result of a head injury within the last 12 months **OR** have you had a diagnosed concussion within the last 12 months? | YES ☐ NO ☐ |
| 10b. | Do you have a medical condition that is not listed (such as epilepsy, neurological conditions, kidney problems)? | YES ☐ NO ☐ |
| 10c. | Do you currently live with two or more medical conditions? | YES ☐ NO ☐ |

**PLEASE LIST YOUR MEDICAL CONDITION(S) AND ANY RELATED MEDICATIONS HERE:** _____

**GO to Page 4 for recommendations about your current medical condition(s) and sign the PARTICIPANT DECLARATION.**



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**If you answered NO to all of the follow-up questions about your medical condition, you are ready to become more physically active - sign the PARTICIPANT DECLARATION below:**

- It is advised that you consult a qualified exercise professional (with advanced university training) to help you develop a safe and effective physical activity plan to meet your health needs.
- You are encouraged to start slowly and build up gradually - 20-60 min of low to moderate intensity exercise, 3-5 days per week including aerobic and muscle strengthening exercises.
- As you progress, you should aim to accumulate 150 minutes or more of moderate intensity physical activity per week.
- If you are over the age of 45 yr and **NOT** accustomed to regular vigorous to maximal effort exercise, consult a qualified exercise professional before engaging in this intensity of activity.

If you answered **YES** to **one or more of the follow-up questions** about your medical condition:

You should seek further information before becoming more physically active or engaging in a fitness appraisal. You should complete the specially designed online screening and exercise recommendations program - the **ePARmed-X+ at www.eparmedx.com** and/or visit a qualified exercise professional to work through the ePARmed-X+ and for further information.

**Delay becoming more active if:**

- You have a temporary illness such as a cold or fever; it is best to wait until you feel better.
- You are pregnant - talk to your health care practitioner, your physician, a qualified exercise professional, and/or complete the **ePARmed-X+ at www.eparmedx.com** before becoming more physically active
- Your health changes - talk to your doctor or qualified exercise professional before continuing with any physical activity program.

- You are encouraged to photocopy the PAR-Q+. You must use the entire questionnaire and NO changes are permitted.
- The authors, the PAR-Q+ Collaboration, partner organizations, and their agents assume no liability for persons who undertake physical activity and/or make use of the PAR-Q+ or ePARmed-X+. If in doubt after completing the questionnaire, consult your doctor prior to physical activity.

## PARTICIPANT DECLARATION

- All persons who have completed the PAR-Q+ please read and sign the declaration below.
- If you are less than the legal age required for consent or require the assent of a care provider, your parent, guardian or care provider must also sign this form.

*I, the undersigned, have read, understood to my full satisfaction and completed this questionnaire. I acknowledge that this physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if my condition changes. I also acknowledge that a Trustee (such as my employer, community/fitness centre, health care provider, or other designate) may retain a copy of this form for their records. In these instances, the Trustee will be required to adhere to local, national, and international guidelines regarding the storage of personal health information ensuring that the Trustee maintains the privacy of the information and does not misuse or wrongfully disclose such information.*

NAME _____ DATE _____

SIGNATURE _____ WITNESS _____

SIGNATURE OF PARENT/GUARDIAN/CARE PROVIDER _____

**For more information, please contact**
**www.eparmedx.com**
**Email: eparmedx@gmail.com**

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**Appendix 11: Specialist terminology**

**The field of chaos**

- *Slouching* - Generally, slouching about is being lazy. In the context of heroin use it can also mean to be under the sedative effects of the drug.
- *Buying into your programme* - A term frequently used at PF which refers to taking ownership of one's recovery.
- *Caries* - Colloquial slang for the drug ecstasy
- *Phett* - Short for amphetamine
- *Gear* - Heroin.
- *To come down with* - To use a substance (usually an downer) to mitigate the after effects of another (usually an upper).
- *Clucking it out* - Withdrawing from opiate addiction without adequate medication.
- *On a script* - To be on a methadone (or any other) maintenance program.
- *Rattling* - Suffering withdrawal (usually opiate).
- *Bomb[ed]* - To take a drug (usually a stimulant) by wrapping a dose in a cigarette paper and swallowing it.
- *A dig and a lick* - To lick your finger and "dab" it into a bag or wrap containing a drug in order to lick the drug from the finger.
- *Dope sickness* - Opiate withdrawal.
- *Hitting rock bottom* - A term used in rehabilitation circles to describe the lowest stage in an addiction career.
- *Parcelled up* - To 'come in parcelled up' is to smuggle contraband into prison in the anus.
- *On strap* - To purchase drugs on credit.
- *Serve time* - To spend time in prison.
- *Getting your head down and keeping your nose clean* - To stay out of trouble.
- Shtook - Trouble

**The field of recovery**

- *Programme* - A person's rehabilitation at PF is often referred to as their program.
- *Storth Oaks* - The name of PF's main site in Sheffield.

- *The tools of the house* - The concepts and rules of in the PF community which facilitate right living.
- *Slip* - A piece of paper used to draw attention to the behaviour (positive or negative) of a fellow resident at PF.
- *Push up* - The outcome of a positive slip.
- *Pull up* - The outcome of a negative slip.
- *Pulling support* - Asking for support from a peer.
- *On department* - Carrying out a task in a specific area (cooking, cleaning, administration, gardening) at PF.
- *Exclusive relationship* - A relationship (often sexual) between two residents which is close to the point of being detrimental to their, and the community's recovery.
- *Work[ing] on myself* - To sit with one's feelings in a mindful fashion.
- *Take it to an encounter group* - To take something to an encounter group is to save a grievance to be brought up in the controlled environment of an encounter group.
- *Right living* - To live under the PF guiding principles.
- *Acting as if* - To recognise that knee jerk reaction to the external world comes from within and to 'act as if' whatever is happening is not an issue.
- *Rescue people/ on a rescue mission* - The hero personality type often rescues others to make themselves feel wanted/needed/better.
- Encounter [group] - Explained in detail in section 10.3, the encounter group is a no holds barred group at PF where negative behaviour is tackled by the community.
- *Selling out* - To be side-lining one's program despite an awareness of doing so.
- *Pinned* - To have constricted pupils due to recent opiate use.
- *Playing the hero* - Going on rescue missions (see above).
- *On the top garden* - To be cooling down outside (literally on the top garden).
- *Slipping* - To fill in a slip about a peer (see above).
- *Life story activity* - To tell one's entire life story to the PF community. This represents an important rite of passage in a resident's journey
- *Sanctions* - Punishments.
- *Welcome house* - The first stage of a PF resident's recovery (see *Table 1*).
- *Buddied up* - To be paired up with a more senior community member during the early stages of one's recovery.

- *Primary stages* - P1 and P2 are the main stages of a PF resident's recovery (see *Table 1*).
- *DH* - The department head is responsible for the running of a department at PF.
- *Bought into their programme* - Someone buys into their programme when they start using the languages and practices of recovery in an honest fashion.
- *Tommy disorder* - A group run for new residents at PF.
- *Benched* - To be told to sit on the bench at PF in order to reflect on an aspect of behaviour.

***The field of exercise***

- *Savasana* - Usually done at the end of a yoga class, *savasana* is a pose of total relaxation - making it one of the most challenging.
- *Floating ribs* - The 11th and 12th ribs - Simultaneously 'dropping the shoulder blades' whilst 'lifting the floating ribs' from the abdomen is a foundational aspect of many yoga poses.
- *Bumpers* - Weights that are designed to be dropped from height.
- *Tacky* - Tree sap which, when applied to the palm and forearm, increases grip strength for stone lifting.
- *Atlas stone* - A large concrete sphere synonymous with the sport of strongman.
- *Viking press* - A strongman event/piece of equipment which involves lifting weight overhead.
- *Duck walk* - A piece of strongman equipment.
- *Farmers walk* - A piece of strongman equipment.
- *Sticking point* - The point at which the bar slows down and/or stops during a heavy lift (typically the squat, deadlift, bench or an overhead press). The sticking point is a weak point in a person's range of motion that training is often tailored to address.
- *The lifts* - The core lifts are the foundation of strength. In powerlifting the term refers to the squat, deadlift and bench press. In strongman the overhead press is also considered a core lift.
- *Opener* - In powerlifting and weightlifting three attempts are made to lift the most weight possible in each of the lifts (squat, deadlift and bench press in powerlifting -

snatch, and clean and jerk in weightlifting). The first attempt in each lift is the opener. If it is successful, the 2nd and 3rd attempts will increase in weight incrementally.

- *PB* - Personal best. A PB is a personal record.
- *Push press* - An overhead lift which uses the legs as well as the upper body to propel weight overhead.

**Appendix 12: Pen profiles**

**Sean**

Age: Mid 20s. Sean was the first PF resident to gain a gym membership, the first to come to Strong Saturdays, the first to gain a gym instructor qualification and the first to start running an MBC circuit. He also spoke at a conference with me in 2015 and has comAnthonyd in 5 Strongman competitions. He says that public speaking was the most stressful of these achievements to complete! Sean is a consistent trainer. Section 11.7 is titled "Time spent under the bar". The meaning is simple. Developing strength requires, above all else, spending time with a bar on your back. Of all the participants, Sean has the most time under the bar.

**Kris**

Age: Late 20s. Kris is the first of the Strong Saturdays athletes to 'put 100 over head'. He is, along with Kevin, perhaps one of the most naturally gifted of the PF strength athletes. Kris finds the calming and anxiety reducing benefits of exercising to be more important than the physical. This was particularly the case when he went through his hepatitis C treatment. Kris began door work through connections he made at Strong Saturdays

**Kevin**

Age: Late 30s. Kevin is friendly, open and hardworking. By time of the completion of this thesis he had full time employment as a builder and was raising his Justin family. Although no longer training he would still come to Strong Saturdays with a coffee in hand just to be part of the group. His presence is always welcome. Kevin took joint 4th place with Sean in Wakefield's Strongest Man 2015.

**Brian**

Age: Early 40s. Brian is a wind up merchant! His banter is top drawer. He is also able to turn his hand to just about anything and was, by the completion of this thesis, employed in the building trade. Brian spent some time at Strong Saturdays but tends to train around his work at Hallam's public gym. Like Kevin he often stops by on a Saturday to say hello.

**Callum**

Age: Early 40s. Callum was fun to interview. He was a very engaging person to speak to and often made me laugh. Prior to his addiction Callum had a lot of physical capital. He was a black belt in judo and during a prolonged period of sobriety in prison, gained his level 2 gym based training qualification and became a gym orderly.

**Martin**

Age: Late 20s. Martin was so keen to exercise when I first met him. He rapidly took over responsibility for ensuring that PF residents got to Pam's circuit classes (see section 11.3). Martin had spent a lot of time in prison and coined the "badman" concept which featured in Chapter 9. Along with Sean and Kris, he was one of the first PF residents to gain a gym membership.

**James**

Age: Mid 40s. James has become a firm friend. By the end of this thesis he had gained level 2 and 3 gym based qualifications through Envisage (see Chapter 12) and had begun working for MBC and running circuit classes for Greens. He is a key member of the Strong Saturday community and has become part of the teaching team on an undergraduate sociology module I run called *Drug Use in Context*.

**Anthony**

Age: Early 50's. Anthony is as free spirit. He joined the Strong Saturday crew after meeting me at an NA meeting towards the end of 2015. Anthony's recovery was natural. This means that he recovered from his heroin addiction without rehabilitation. He is an active member of the national recovery movement and has been involved in a lot of conferences I have spoken at. By the end of this thesis, Anthony was living with his girlfriend and her son Keith. Whenever he comes back to Sheffield he visits Strong Saturdays with Keith in tow.

**Justin**

Age: Late 30s. Justin is a great performer and has tried a bit of everything from drug smuggling to DJing. The guest lectures he now does on my undergraduate sociology module *Drug Use in Context* are fantastic. He has also recently signed a book deal for a semi-auto-biographical piece that I've

sneaked a look at. It's excellent. Justin really took to yoga. At the time this thesis was completed he was attending three classes a week.

**Sasha**

Age: Mid 40s. I spent a lot of time with Sasha. At one stage we went swimming together once a week and I thoroughly enjoyed taking a tandem bike around a local (to Sheffield) reservoir with her (see Section 11.5). Sasha has a razor wit and a cracking sense of humour. She is small but don't mess with her.

**Jenny**

Age: Late 30s. Jenny was one of the first women to attend circuit classes. She is a very friendly, caring and open person. She also speaks so fast that her interview transcripts took twice as long to transcribe than anyone else's!

**Julian**

Age: Early 30's. Julian was one of the best SHMs I've ever seen. During the end of his time at PF he became a solid house peer. The community operated smoothly under his leadership. Julian entered PF with a substantial pool of physical capital and would often take junior residents for early morning runs. I lost touch with Julian when he returned home after completing his programme. I wish him all the best.

**Abby**

Age: Early 30s. I did not get to know Abby as much as I would have liked to as her favoured form of exercise was Jo's yoga classes.. Along with Maria, Abby chose to continue attending yoga without showing any desire to gain a gym membership. Talking to her about yoga and her progression to the point of being able to carry out full body scans was a real eye opener regarding the efficacy of therapeutic yoga to aid recovery.

**Mary**

Age: Mid 30s. Like Abby, Mary's preferred method of exercise was yoga. As such, I spent less time with her as my primary involvement was in circuits and Strong Saturdays. One thing which struck me about Mary was her environmental awareness. She was the first interviewee to point out the effect exercise was having on the community as a whole.

**Craig**

Age: Early 30s. When I first met Craig he came strutting into the Strong Saturdays gym with Kevin, both wearing matching white vests and keen to train. My biggest challenge in coaching them was making sure they backed off and thought about form rather than just attack everything. Much like myself, Craig wears his heart on his sleeve. The last I heard, he was moving cities to be with a new girlfriend. I hope it worked out.

**Christine,**

Age: Late 30s. Christine was the first woman to attend circuits. This opened the flood gates. Christine was the forerunner and for this I am thankful. Christine has grit. In the sporting world (particularly strength and combat sports) the term grit is used to refer to resolve, strength of character and the ability to push through pain and keep going. I enjoyed circuit classes with Christine as she was always sure to push the pace.

**David**

Age: Late 20s. Dave was one of the first residents to gain a gym membership. He was a firm friend of Martin's and the pair became training partners. When a resident reaches the end of the PF programme, a leaving ceremony is held. Daves was particularly heart-warming. He was a much loved community member.

**Daniel**

Age: Early 40s. Like Christine, Dan, a former soldier, has grit; the ability to really push himself when training. Dan was Julian's successor as SHM. In Chapter 10, he discussed this role as a chance to work on his communication and anger management skills. He was an effective and empathic SHM. It

was good to see him do so well. I perceive the role of SHM to be more challenging than working at PF!

**Eric**

Age: Mid 20s. I found Eric to be energetic (post detox!) and fun to be around. The interview I had with him was early on in his programme. He was just getting to grips with the language and tools of recovery and about to do his life story. I saw him progress in his recovery massively but his stay at PF was cut short before I was able to catch up with him.

**Katie**

Age: Early 20s. A good PF memory for me was of Katie singing karaoke. I can't quite recall the song but she has such a good voice. In a house with so much enthusiastic but often out of tunes singing, a good voice is a commodity! During some community free time, I arrived to interview Katie and was told she was in the front room. The Xbox karaoke game thing was plugged in and I arrived just in time to witness her take the mic and set a new high score. Magic.

**Julia**

Age: Early 40s. Jo was no stranger to exercise. She had, at one stage, owned a gym with her husband. I enjoyed spending time with Julia. She was very 'no nonsense' and her organisational skills were a valuable asset to the community. Paradoxically, she had to learn to 'not sweat the small stuff' which essentially means to not try to control everything!

**Mathew**

Age: Mid 20s. Mathew was one of the youngest PF residents involved in this research. With a history of exercise, he was also one of the fittest. A firm friend with Julian, he often went for early morning runs and attended a number of Strong Saturdays sessions. Upon completion of his programme, Mathew returned to his wife and kids. I wish him all the best.

**Appendix 13: Sean's poster**