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Why are groups good for us? Social determinants of well-being behind bars and beyond

by

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I hereby declare that this thesis has not been and will not be, submitted in whole or in part to another University for the award of any other degree.

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Context statement

This thesis has been prepared as a series of papers for publication. The exceptions to this are Chapters 1 and 6, which serve as the introduction and discussion chapters respectively and are more similar to the traditional thesis formatting. In Chapter 1 I provide an overview of my research, and in Chapter 6 I discuss the implications of my findings and offer concluding comments. Chapters 2 and 3 are papers that have been submitted for publication to academic journals, and are currently under review. The manuscript that makes up Chapter 4 has been published, and the manuscript that makes up Chapter 5 has been accepted for publication. Each paper's reference is provided on the title page of each chapter. Given the paper-based format of my thesis, the text within the chapters is identical to that of the submitted/ in press/ published papers. A single reference list for all chapters is provided at the end of my thesis. All figures, tables, and references have been re-numbered so as to be consistent with the chapter numbers. When I refer to a chapter of this thesis within another chapter, I cite both the paper's reference as well as the corresponding chapter in this thesis.

The papers that make up Chapters 2 and 4 of my thesis have three authors: myself, Dr Matthew Easterbrook, and Professor Brown, who are my PhD supervisors (Chapter 2); and myself, Dr Matthew Easterbrook, and Dr Tegan Cruwys, who was my main academic contact during my overseas institutional visit to the University of Queensland (Chapter 4). The papers that make up Chapters 3 and 5 of my thesis have two authors: myself and Dr Matthew Easterbrook. I am the lead author on all papers, and the corresponding author for each publication submission. I collected the data, conducted the analyses, and wrote up the first draft of each paper. I also independently identified and gained access to the large existing survey of prisoners used in Chapter 3, via the support of the Cambridge Prison Research team and Her Majesty's Prison and Probation Service (HMPPS); and I independently organized and conducted the primary study of prisoners within a secure prison reported in Chapter 3. The paper presented in Chapter 5, that evaluated the work of a charity that offers music workshops to prisoners, was also instigated via connections I formed myself. I received comments from all other authors on the first drafts of each paper, which I incorporated into the final version of each paper. Dr Matthew Easterbrook also provided advice and practical support with regards to the study designs and analyses of each paper. The author order is based on each author's input in each paper.

The authors

Arabella Kyprianides (me) is an ESRC funded PhD student and Associate Tutor at The University of Sussex; and an Applied Social Psychology (MSc), Anthropology (MA), and Sociology (BA) graduate. She has a history of extensive volunteer work, especially involving vulnerable social groups. Her research is focused on the social determinants of wellbeing in the criminal justice context.

Dr Matthew Easterbrook (PhD, University of Sussex) is a Lecturer in Psychology at The University of Sussex. His research focuses on the consequences of people's group memberships and social identities within different socio-cultural contexts. He is an associate editor of the *European Journal of Social Psychology*.

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Acknowledgments

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<u>University of Sussex</u>

Sofia-Anna-Arabella Kyprianides

Doctor of Philosophy in Psychology

Why are groups good for us? Social determinants of well-being behind bars and beyond

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SUMMARY

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This thesis investigates the social determinants of well-being, behind bars and beyond. Through a series of four papers, it empirically tests some of the theoretical claims made by the *social identity approach to health* (also known as *The Social Cure*; C. Haslam, Jetten, Cruwys, Dingle, & Haslam, 2018a) which proposes that our social connections and, in particular, our *social identity,* lies at the heart of our well-being; and advances its applications by investigating its applicability amongst criminal offenders. Although research has highlighted the importance of differentiating between different types of social ties (C. Haslam, Cruwys, Milne, Kan, & Haslam, 2016a), Chapter 2 extends this by demonstrating experimentally that group ties are especially beneficial because they are internalized as part of a person's social identity and, through this, provide a basis for beneficial forms of connectedness and self-worth. Furthermore, applied social cure research has demonstrated that group ties can protect people from adverse life experiences (C. Haslam et al., 2018a). Chapters 3, 4, and 5 provide the first investigation of the social cure amongst offenders. My findings make a novel contribution to the imprisonment and resettlement literatures that offer little insight into the impact that group ties have on adjustment, and the mechanisms through which group ties impact offender well-being. Chapter 3 demonstrates that strong prisoner ties and membership in groups are associated with greater prisoner well-being, and identifies psychological needs and group contact as explanatory mechanisms. Chapter 4 demonstrates that ex-prisoners have social stigma attached to them, and this can have negative consequences; but Chapter 5 shows that even in the case of stigmatized groups (prisoners), if the 'right' identities are part of these individuals' social worlds, groups can be curative. Theoretical and practical implications of my findings are discussed, which open up interesting avenues for future research.

Chapter 1: Overview of research

Introduction

Psychologists say that the loss of a loved one is life's most stressful event and can cause a major emotional crisis. They also say that a loss due to suicide can be among the most difficult losses to bear. They may leave survivors with a tremendous burden of guilt, anger, and shame. Survivors may even feel responsible for the death. I felt all those things, and more. I felt a profound lack of motivation and the feeling that life is meaningless.

Everyone faces problems and challenges in their life. These can be mental, emotional, and physical, can reflect major events as well as everyday troubles, and can often have a negative impact on our health and well-being. The question is, how do people cope with such challenges, and how do they retain their health and well-being?

All of us are bombarded with a multitude of different health messages from the media, the government, and the people that we know. If you google 'how to best manage your health and well-being' in the UK, the UK government's guidance list titled '10 top tips to improve your health and well-being', compiled in 2015, will hit top spot on the google search:

1. Check your weight
2. Drink less
3. Exercise regularly
4. Eat your 5 A DAY
5. Eat less salt and fat
6. Quit smoking
7. Watch your stress levels
8. Improve your sleep
9. Check that lump
10. 5 steps to mental well-being:
    - *connect* – connect with the people around you: your family, friends, colleagues and neighbours.
    - *be active* – find the activity that you enjoy and make it a part of your life
    - *keep learning* – learning new skills can give you a sense of achievement and a new confidence.
    - *give to others* – even the smallest act can count, whether it's a smile, a thank you or a kind word.
    - *be mindful* – be more aware of the present moment, including your feelings and thoughts, your body and the world around you.

Which tip did I find most useful? The 'connect' factor associated with tip 10, no doubt, because I couldn't possibly imagine dealing with what had happened alone. This was actually surprising, and refreshing, to see on the list, because in the past, research has conceptualised well-being and resilience as a purely individual phenomenon, located within the self (e.g. Bonanno, Wortman, & Nesse, 2004; J.D. Campbell, Chew, & Scratchley, 1991); and this is still widely accepted today (take tips 1-9 on the list as an example). This was not a surprise only for me. A recent study (S.A. Haslam et al., 2018) that asked 500 people of the general public in the US and UK to rank 11 factors in terms of their importance for health and mortality, showed that respondents ranked social support and social integration among the least important. Yet social connectedness has gained a place in the '10 top tips to improve health and well-being', and something tells me that it's there to stay.

Compare these '10 top tips to improve health and well-being' to the following 'new list for life' compiled by Psychology Professor, S.A. Haslam, last year (2018). This list will not read as familiar as the previous one, mainly because this advice treats social connectedness as the cornerstone of our lives:

- If you feel socially isolated, try to join a group.
- If you can, join more groups.
- Try to hold on to positive group memberships, especially if you are going through a challenging time.
- If you lose membership in an important group, seek out a new one.
- Invest in groups that are important to you and in groups by which you are valued.
- Be wary of groups that make unhealthy choices.
- Get support from your groups, but also give support to others in your groups.
- Recognise that it can sometimes be healthy to try to leave disadvantaged and stigmatised groups, while at other times it can also be healthy to stay.
- Challenge the stigma and disadvantage that produce health inequality.
- If you experience health problems seek professional help — ideally from a source with which you identify.

This advice, and in particular tip number 3, helped me cope with what had happened: 'Try to hold on to positive group memberships, especially if you are going through a challenging time'. And that's what I did. I realized just *how important it is* to have an extensive social network to turn to when life gets hard. Thankfully, for as long as I can remember, I've always been a part of lots of groups - my close group of friends, my

family, my school, the university I attended, my boxing club, my volunteer group – and they just made me feel good. Being a part of these social groups enhanced my resilience at this difficult time, which enabled me to cope more effectively with my loss, to get back on my feet, and to feel better about myself.

You might not be convinced by my personal example – of course having a supportive social network helped me deal with my *mental and emotional* crisis. But, surely, the UK government's tips 1-9 are more important health behaviours to maintain good *physical* health? Of course they are important – they are health behaviours that are well grounded in medical science, and familiar medical advice to all of us. What I am trying to say is that there exist *social* determinants of health that traditional approaches to health do not acknowledge, and current approaches are only beginning to acknowledge. If you have had a typical NHS check-up, you will know that the doctor asks you questions and carries out a few health tests that are then used to give you an 'overall' picture of your health. The health tests include having your blood pressure, weight and height measured; and the questions asked usually revolve around your family's medical history, your diet, and your exercise plans. What about your social life? Do you have a lot of friends? How often do you socialise? What groups do you belong to? How important are these to you? It would be a good idea for health practitioners to ask these questions. This is because a powerful predictor of people's mental *and* physical health is social connectedness and belonging to social groups – just as important as exercise and diet (Holt-Lunstad, Smith, & Layton, 2010; Holt-Lunstad, Robles, & Sbarra, 2017) - and not only in the face of adversity.

When it comes to physical health conditions, profound effects are also observed. For example, S. Cohen and colleagues (1997) showed that people with a diverse social network were less susceptible to common colds. Their findings demonstrated that the 20 percent of individuals in the sample who were least sociable were more than twice as likely to get colds compared to the 20 percent who were most sociable. Ten years later, Rutledge and colleagues (2008) reported that more isolated women experienced strokes twice as often compared to women with more social relationships.

Although, in the past, then, research has largely focused on the abilities of individuals *as individuals* to manage and maintain their well-being, social psychologists, like S.A.

Haslam, are now arguing that a person's social world is a core determinant of their health and well-being. There is now a large body of research – known collectively as 'the social cure'- showing that groups provide people with additional strength to cope with the challenges they may face, and that people with multiple group memberships are happier and healthier than people with few group memberships (Jetten, Haslam, & Haslam, 2012; C. Haslam et al., 2018a). But why? What is it that social groups provide us with that is so beneficial to our well-being? And how can we maximize the benefits of group membership for the well-being of those who need it the most?

The central aims of this thesis are (1) to advance social cure theory to understand how groups benefit health and well-being, and (2) to advance social cure applications to improve the health and well-being of vulnerable populations – in particular, *people that have been in contact with the criminal justice system*.

Why the offender population focus of aim 2? Groups have been found to be particularly important for populations going through difficult and potentially isolating times, capable of promoting adjustment, coping, and well-being for individuals dealing with a range of illnesses, injuries, traumas, and stressors (Jetten et al., 2012; C. Haslam et al., 2018a). In addition, I have worked in prison contexts both for my PhD and in a voluntary capacity for four years. I led the evaluation of the *Finding Rhythms* charity in UK prisons (Oct 2016- Oct 2018); and I volunteered on a board of independent reviewers at a prison in the UK (Oct 2014 – Feb 2018), monitoring day to day prison life, and reporting to the Secretary of State on fairness and respect for those in custody. It was exciting (and challenging) to engage with people from such diverse backgrounds in such a difficult period of their lives; and these positions, coupled with my research in prison contexts, broadened my horizons as I came closer to understanding this section of our community – a section that is commonly marginalised and misunderstood. Prisoners, a social group commonly stigmatised, are people too and their rights and well-being are a priority. I believe that every single person deserves to be treated equally and with respect. Serving time is a severe enough punishment for any crime – the closed environment of the prison must be as friendly and positive as it can be. To this end, my experience of applying research to the real world - working alongside the *Groups4Health* (a psychological intervention that directly targets the psychological distress that results from social isolation) team at the University of Queensland in

Australia, and working within the Crime Patterns Team at the Home Office in London - made me realise that applied research, especially in the prison context, can play an important role in solving everyday problems that often have an impact on overall well-being.

In what follows I present a literature review relating to these aims, introduce my research objectives, detail the research strategy I followed, and present a summary of each paper that makes up my thesis.

Literature Review

Research objective 1

We know that those with more social connections experience better well-being. Those with more social ties have reduced ill-health and live longer (e.g., Berkman & Syme, 1979; Holt-Lunstad & Smith, 2012), and the magnitude of these effects are comparable with many well-established risk factors such as smoking and physical inactivity (Holt-Lunstad et al., 2010; Holt-Lunstad et al., 2017). There is also substantial evidence supporting psychological (e.g. Cacioppo & Cacioppo, 2014), behavioral (e.g. DiMatteo, 2004a, 2004b), and biological pathways (e.g. Uchino, 2006) by which social connections influence risk for premature mortality. To date, it has been presumed that these effects generalize across relationship type (see House, 2001; Holt-Lunstad, 2018a), but this has recently been contested by research showing that social group ties (e.g., community groups) are better predictors of well-being than individual ties with a significant other (e.g., a child or a spouse; C. Haslam, Cruwys, & Haslam, 2014); and that more group ties, relative to more individual ties, are better predictors of well-being (C. Haslam et al., 2016a). This gives rise to two questions. First, why do group ties ensure better well-being, and, second, what are the mechanisms through which these additional benefits are realized?

Building on previous research informed by a social identity approach to health (e.g., Jetten et al., 2012; Jetten et al., 2017; C. Haslam et al., 2018a), in Chapter 2 of this thesis (Kyprianides Easterbrook, & Brown, under review) I argue that group ties have especially beneficial consequences for health because they provide a basis for social connectedness and self-worth. In this regard, the key difference between group and

interpersonal ties is that the former promote, and are internalized as part of, a person's social identity (Turner, 1985) and, through this, provide a basis for beneficial forms of connectedness and self-worth. In the studies that I report in Chapter 2 (Kyprianides et al., under review), I use experiments to examine this hypothesized pathway as it relates to the effects of group ties, and associated social identities, on the mood and life satisfaction of young millennials.

The first objective of the research reported in my thesis is therefore:

RO1. To advance Social Cure theory to understand how groups benefit health and well-being.

In my review of the literature below, we will come to see that no experimental work exists to support the claim that group ties are more beneficial than individual ties, and, consequently, no experimental work exists to support the proposed mechanisms that underpin this association; leaving causal examinations of these associations unexamined. Furthermore, little is known about *how* group memberships influence well-being, relative to relationships, beyond offering members greater levels of social support.

Social ties and well-being

We are social animals who live, and have evolved to live, in social groups. Historically, being part of a group provided us protection from predators and increased provision of food (Tomasello, 2014). Put simply, we would not survive without the care of others. Although this is most obvious at birth, social connections continue to play a vital role throughout the life span (Holt-Lunstad, 2018a). Social connectedness, then, is as much of a fundamental human need for survival as food and water; and social isolation, is as detrimental to our health and well-being as is thirst and starvation.

Durkheim (1897) observed, early on, that social relationships protect us from psychological harm. The comprehensive research tradition that followed defined social relationships as a critical component of our well-being because they fulfill a number of both emotional and material essential needs (S. Cohen & Wills, 1985; House, Landis, & Umberson, 1988; Kessler & McLeod, 1984; Lin, Dean, & Ensel, 1986; Thoits, 1995).

Since House and colleagues' seminal review (1988) of the impact of social relationships on health, the body of evidence has grown exponentially to now include hundreds of studies, millions of participants, and broader measurement approaches. Holt-Lunstad, for example, a key researcher in the field of social relationships and health, has examined the influence of both the quantity and quality of social relationships on long-term health and on risk for mortality by conducting two meta-analyses (Holt-Lunstad et al., 2010; Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015). The first meta-analysis investigated the association between social connection and longevity using data across 308,849 participants that were followed for an average of 7.5 years. Results revealed that those with adequate social relationships (in terms of network size and quality: not living alone, being married, participating in social groups, having more friends, and unstrained relationships) had a 50% greater likelihood of survival compared to those with poor or few social relationships (Holt-Lunstad et al., 2010). The second meta-analysis examined the association between social disconnection and mortality using data across 3,407,134 participants followed for an average of 7 years. Findings revealed a significant effect of social isolation, loneliness, and living alone on odds of mortality. The increased likelihood of death was 26% for reported loneliness, 29% for social isolation, and 32% for living alone (Holt-Lunstad et al., 2015. In both meta-analyses, Holt-Lunstad and colleagues control for potential alternative explanations for longevity and mortality respectively (e.g., age and initial health status), and thus provide evidence for the directional influence of social relationships on mortality. Together, these data demonstrate the critical role that social relationships (structural, functional, and quality of relationships) play in protecting people from premature mortality.

What's more, Holt-Lunstad and colleagues compare the magnitude of the effect of social ties to other well-established lifestyle risk factors. In the 2010 meta-analysis the researchers concluded that lacking social connection carries a risk that is comparable, and often exceeds, that of other well-accepted risk factors, including obesity, physical inactivity, smoking up to 15 cigarettes per day, and air pollution (Holt-Lunstad et al., 2010). In a later publication, Holt-Lunstad and colleagues (2017) consider a number of existing meta-analyses that examine the association between various aspects of social connection and longevity (e.g. Shor & Roelfs, 2015). Despite the variability in measures used, and of strength of association, all social connection indicators made a significant contribution to longevity, similar to that of other factors that currently receive

substantial public health attention and resources (Holt-Lunstad et al., 2017). Furthermore, the proportion of the population affected by social disconnection, is also comparable with the proportion of the population affected by well-established risk factors (Holt-Lunstad et al., 2017).

Social relationships influence a variety of mental and physical health outcomes. Evidence for this comes from numerous longitudinal studies of aging that have highlighted the central role that social relationships – both in terms of quantity (e.g., Barnes, Mendes de Leon, Wilson, Bienias & Evans, 2004; Bassuk, Glass, & Berkman, 1999; Ertel, Glymour, & Berkman, 2008) and in terms of quality (Bassuk et al., 1999; Glei et al., 2005; Glymour, Weuve, Fay, Glass, & Berkman, 2008; Krueger et al., 2009; Seeman, Lusignolo, Albert, & Berkman, 2001; Seeman et al., 2011; Barnes et al., 2004) - play in buffering cognitive health. For example, older adults who are isolated are at increased risk for cognitive decline, depression, and dementia (Cacioppo & Cacioppo, 2014; Global Council on Brain Health, 2017), and have reduced functional status (Shankar, McMunn, Demakakos, Hamer, & Steptoe, 2017); while older adults who participate in cognitively challenging group activities are better protected against dementia (Fabrigoule et al., 1995). Evidence for this also comes from studies that have shown that social relationships can influence health-related behaviors such as treatment/ medication adherence (e.g. DiMatteo, 2004a, 2004b) and willingness to engage in health-preserving behaviors (Glymour et al., 2008); and from studies that have shown that social relationships affect health-relevant physiology such as immune functioning, blood pressure, and inflammation (Yang et al., 2016; Hostinar, Sullivan, & Gunnar, 2014; Robles & Kiecolt-Glaser, 2003; Uchino, 2006). For example, in light of S. Cohen's (2004) contention that social participation protects people against the negative outcomes of stress, researchers (e.g. Fratiglioni, Wang, Ericsson, Maytan, Windblad, 2000; Seeman et al., 2001) have suggested that social participation alleviates the harmful effects of heightened physiological arousal that stress imposes on the central nervous system. While each of these examples are important endpoints themselves, each has also been implicated as pathways to mortality risk (Holt-Lunstad, 2018b). Thus, there is considerable evidence supporting psychological, biological, and behavioral, pathways by which social connections influence risk for premature mortality.

While such processes all seem to be an important part of the story, a newer body of social-psychological research (Jetten et al., 2012; Jetten et al., 2017; C. Haslam et al., 2018a), that has focused its efforts on demonstrating the distinctive benefits of group memberships, proposes an integrated explanation of why and how these elements are related. These social psychologists draw on the recently developed Social Identity Approach to Health (Jetten et al., 2012; Jetten et al., 2017; C. Haslam et al., 2018a) to propose that the critical factor that underpins these elements is an individual's sense of social identification with fellow group members. This, they argue, provides the basis for productive engagement with others – and, in particular, productive social connectedness and feelings of self-worth – of a form that promotes health and well-being.

The social identity approach to health and well-being

The social identity approach – backed up by a 50-year old evidence base developing the idea that social identity, a sense of us-ness, is integral to the study of intergroup and intragroup relations - has shed new light on old phenomena; and researchers within the field of social identity have progressed the theory via both clarifying and elaborating the theory, but also via using the theory to apply to new domains (see Turner, Oakes, Haslam & McGarty, 1994; S.A. Haslam, 2004; Hornsey, 2008; Postmes & Branscombe, 2010). In very broad terms, this work can be summarized as showing that how we understand, treat, and engage with other people depends on the degree to which we see them as sharing a social identity with us (C. Haslam et al., 2018a). Critical to my thesis is that the last decade has seen the social identity approach inform and transform the field of health and well-being.

Four publications are especially influential in this regard: A paper by S.A. Haslam and colleagues published in 2009; 'The Social Cure' book compiled by Jetten and colleagues in 2012; a special issue by the European Journal of Social Psychology published in 2017 (Jetten et al., 2017); and the most recent contribution to the field, C. Haslam and colleagues' book (2018a), 'The new psychology of health: unlocking the social cure', published last year. As the title of this latest book indicates, they collectively argue for a new psychology of health that is inherently social. Their general argument is that what lies at the heart of our health is the nature of the social connections that exist between us and, in particular, the sense of shared identity that these connections both produce and are produced by – that is, our *social identity*.

In facilitating to understand the importance of social connectedness for health, the Social Identity Approach to Health draws on two related theories in social psychology: social identity theory (SIT; Taijfel &Turner, 1979), and self-categorisation theory (SCT; Turner, Hogg, Oakes, Reicher, Wetherell, 1987; Turner et al., 1994). SIT and SCT both deal with antecedents to and consequences of social identification. The basic difference of scope between the two theories is that SIT is concerned with the psychology of intergroup relations while SCT focuses on the psychology of intragroup behaviour and group processes.

Social identity was first defined by social psychologist Henri Tajfel (1972) as the sense of self that people derive from their membership in social groups. In its original form, SIT, had nothing to do with health. SIT originated from Tajfel (1978) following the surprising results of the *minimal group paradigm* experiments conducted by himself and his colleagues (Tajfel, Billig, Bundy & Flament, 1971). SIT was further developed by Tajfel and John Turner in 1979. The theory proposes that the process of categorizing oneself as a group member gives an individual's behaviour a distinct meaning, creating a positively valued social identity; and this group identity then becomes an integral aspect of an individual's sense of 'who they are'. In this way, the groups to which we belong are an important source of self-esteem, and we can feel good about ourselves by engaging in *positive distinctiveness* – that is, we strive for a positive self-concept by attempting to boost the status of any group that we belong to (S.A. Haslam, 2001).

After Tajfel's death in 1982, the importance of social identity for understanding social behaviour was refined and extended by Turner and colleagues within SCT (Turner et al., 1987). Turner and colleagues aimed to move beyond the intergroup focus of SIT and to comment on intragroup processes as well. One of the cornerstones of SCT is the notion of *depersonalization* that describes how people come to see themselves in terms of social identity. The other is the concept of *social identity salience* that explains why people define themselves in terms of one self-categorisation (i.e. social identity) rather than another. SCT proposes that in a salient group context people depersonalise and take on characteristics associated with the prototypical qualities of their groups. The group identity not only describes what it is to be a group member, but also prescribes what kinds of attitudes, emotions and behaviours are appropriate in a given context. In addition, SCT goes on to postulate that via a shared sense of identification with fellow

group members, we can influence, and be influenced by, those members. As such, SCT provided a more thorough investigation of intragroup processes (the conditions and consequences when people define themselves in terms of their group membership) than had been possible within the rubric of SIT, which was concerned with intergroup relations (S.A. Haslam, 2001).

Both intergroup processes and self-categorisation processes lie at the heart of the social identity analysis of health and well-being (Jetten et al., 2017; C. Haslam et al., 2018a), and, are referred to as the 'social identity approach' in combination. The social identity approach proposes that in order to understand a person's thoughts, beliefs, and behaviour, we need to understand how they categorise themselves in relation to others. A key premise of both theories is that social groups (be that nationality, gender, a friendship group, or a sports team) furnish people with a distinctive sense of self. We can define our sense of self (who we think we are) in social and not just personal terms (i.e. not just as 'I' and 'me' – e.g. 'Arabella'- reflecting my personal identity comprised of my idiosyncratic qualities and my personality traits, but also as 'we' and 'us' – e.g. 'Sussex PhD students'– in terms of my social identity, that is the group memberships I share with others) (Tajfel & Turner, 1979; Turner, 1982). When social identity is salient, shared group memberships impact on people's psychology, including their health and well-being, through their capacity to be psychologically internalized as part of the self; and, as a result, people's health and well-being is closely entwined to the conditions of the groups to which they belong (Jetten et al., 2017). On the 'up-side', social identity is beneficial for well-being when it is the basis for a positive sense of connection (a 'social cure'; Jetten et al., 2017). On the 'down-side', social identity can also be detrimental for well-being when it becomes a basis for stress (a 'social curse'; Jetten et al., 2017). Social identity is thus central for both well- and ill-being because it is the basis for meaningful group life (Jetten et al., 2017).

As the most influential 'social cure' researchers have pointed out (Jetten et al., 2012; Jetten et al., 2017; C. Haslam et al., 2018a), the following quote by John Turner (1982, p. 21) captures the critical significance of social identity for health and well-being:

  'Social identity is the cognitive mechanism which makes group behaviour possible.'

This is the fundamental argument that underpins the social identity approach to health. Let me examine this a little further with a personal example. When I first moved to Brighton one particular form of group activity I wanted to take part in was as a member of a local Sanda (Chinese kickboxing) club called 'Nam Yang'. Psychologically what is it that allowed me to do this? For Turner (1982), the key point was that to behave as a member of Nam Yang, I first had to be able to define myself as a member of Nam Yang; and if I could only ever see myself and other club members as individuals (i.e. in terms of personal identities), this would be impossible. It is the fact that we (we, NamYang members) saw ourselves training together (in terms of a shared social identity) that allowed NamYang to work as a meaningful entity that allowed us (us, members of NamYang) to contribute to, and benefit from, its collective achievements. Moreover, the more we embraced the NamYang identity, and the more we defined ourselves as NamYang members – that is, the stronger our social identification with the group – the better we felt.

Indeed, there is plenty of evidence that shows that belonging to a group, just like NamYang, – a choir (Dingle, Brander, Ballantyne, & Baker, 2013; Stacy, Brittain, & Kerr, 2002; Stewart & Lonsdale, 2016) or a neighbourhood club (Cruwys et al., 2013) - is good for you. Critically, by internalizing such group memberships, the resulting social identities have been shown to lay the foundation for distinctive and productive forms of group behavior (e.g., support, co-operation, communication, influence, and leadership; Turner, 1982; see S. A. Haslam, 2001). Membership within *a single group* appears to provide individuals with the additional strength that they require to cope with the challenges that they may face and to keep going. Evidence for this comes from studies of physically demanding tasks (e.g. E. Cohen, Ejsmond-Frey, Knight, & Dunbar, 2010), people facing prejudice (Branscombe, Schmitt & Harvey, 1999; Jetten, Branscombe, Schmitt & Spears, 2001; Schmitt & Branscombe, 2002; Latrofa, Vaes, Pastore, Cadinu, 2009; McNamara, Stevenson, & Muldoon, 2013; Jasinskaja-Lahti, Liebkind, Jaakola, & Jaakola, 2006; Giamo, Schmitt, & Outten, 2012; Jetten et al., 2001; Redersdorff, Martinot, & Branscombe, 2004; Garstka, Schmitt, Branscombe, & Hummert, 2004), people undergoing stress (Jetten, Haslam, Iyer, & Haslam, 2010; Platow et al., 2007; Häusser, Kattenstroth, van Dick, & Mojzisch, 2012; Levine & Reicher, 1996; S.A. Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005; S.A. Haslam, Reicher, Koppel, & Mirsky, 2006; Dawans, Kirschbaum, & Heinrichs, 2011), people

facing significant life changes (e.g. C. Haslam et al., 2008; Jetten, Haslam, Haslam, & Branscombe, 2009; Cruwys et al., 2013; Cruwys et al., 2014a; Jones et al., 2012), survivors of natural disasters (Drury, Cocking, & Reicher, 2009a; Drury, Cocking, & Reicher, 2009b; Drury, Brown, González, & Miranda, 2015), and participants of mass religious gatherings (Khan et al., 2015; Alnabulsi & Drury, 2014; Tewari, Khan, Hopkins, Srinivasan & Reicher, 2012). This literature reveals that *only to the extent that people identify with a given group membership* do they experience the health-related benefits of that group.

To qualify this point further, there now exists a considerable body of research that has linked social identification to lots of positive outcomes. The findings of two meta-analyses provide evidence that these effects are reliable and fairly large. Cruwys and colleagues (2014b), for example, assessed the relationship between social identification and depression in a large sample (based on 14 studies and more than 2600 participants) made up of diverse types of groups - ranging from Australian school students (Bizumic, Reynolds, Turner, Bromhead, & Subasic, 2009) to heart surgery patients (S.A. Haslam et al., 2005) - and found that, in every case, greater social identification was associated with less depressive symptoms and lower levels of depression (mean r = -.25). Three years later, a meta-analysis of the relationship between social identification and health in organisational settings, conducted by Steffens and colleagues (2017), identified 58 independent samples (including close to 20,000 participants). In each case, greater workgroup identification and greater organisational identification were reliably associated with improved health (r = .21) – including both psychological and physical health outcomes (r = .23 and r = .16, respectively). The evidence that shows that social identification is the critical element that leads to health-related benefits or costs of a given group membership is thus convincing.

Since group membership and its associated social identity has the capacity to benefit well-being, it is no surprise that research has demonstrated that the benefits of group membership are additive. It seems that people with multiple group memberships are *more* resilient and persistent, happier and healthier than people with few group memberships. There exists a wide array of evidence for the additive health and well-being effects of an increasing number of group memberships in a variety of settings. Evidence comes from studies of general well-being (e.g. Jetten et al., 2015), people

facing important life changes (e.g. Iyer, Jetten, Tsivrikos, Postmes, & Haslam, 2009; Jetten et al., 2015; Steffens, Cruwys, Haslam, Jetten, & Haslam, 2016), older adults (e.g. C. Haslam et al., 2014a; Jetten et al., 2015), people who are homeless (Jetten et al., 2015; Walter, Jetten, Dingle, Parsell, & Johnstone, 2016), and refugees and voluntary immigrants (Bobowik, Martinovic, Basabe, Barsties, & Wachter, 2017); and from research that has examined the clinical advantages that may stem from groups for people suffering depression (e.g. Cruwys et al., 2013), a stroke (C. Haslam et al., 2008), or people engaging in health-damaging behaviour (e.g. Sani, Madhok, Norbury, Dugard, & Wakefield, 2015). There is also experimental evidence for a 'the more the merrier' effect that investigates peoples' persistence on cognitively or physically demanding tasks (e.g. Jones & Jetten, 2011). Just like the evidence put forward regarding group membership, these beneficial effects of *multiple* group membership are only observed when the identities in question are important for the individual's definition of self.

All in all, then, there is now ample evidence that the benefits of group memberships are additive; identifying with a greater number of groups is associated with more positive outcomes. This work reinforces two key points within the social identity approach to health that were not envisaged in original formulations of social identity and self-categorisation theories – namely, that it is the *social identity* that stems from groups that is responsible for their health-related benefits (Jetten et al., 2017); and that social identities are an important psychological *resource* (Jetten, Haslam, Haslam, Dingle, & Jones, 2014; Greenaway, Cruwys, Haslam, & Jetten, 2016). If the first point is true, it would help to understand the intriguing results from the few studies which suggest that there is something special about multiple group memberships, compared to multiple interpersonal relationships. The second revelation too speaks to the question of 'how groups benefit health and well-being' because it explains why *multiple* identities are more beneficial: the more social identities a person has, the more benefits they should experience because these give them access to more health-related resources – at least to the extent that those identities are important for them (Iyer et al., 2009).

These points raise two important questions that I will next address. First, what exactly are the psychological resources that social identities provide? Second, if it is indeed the group identity that is key, can it be shown, experimentally, that groups are more

beneficial than relationships for well-being due to the social identities (and associated psychological resources) they provide their members with?

Social Identities as Psychological Resources

Research informed by the social identity approach to health outlines four broad key processes that are especially important in helping me to answer the first question posed above. Social cure researchers (see C. Haslam et al., 2018a, p. 27) have proposed the following psychological resources as the most important resources that flow from internalized group memberships. These are:

- connectedness and positive orientation to others
- meaning, purpose and worth
- social support
- control, efficacy and power

However, when I began my PhD, it was unclear quite *how* the social cure effects work. The nature of these aforementioned psychological resources that stem from group identities was thus only beginning to be uncovered. In my thesis, I examine the following needs that arguably flow from internalized social identities: relatedness and social support, self-esteem and competence, autonomy, control and meaning; and it is encouraging to see that my selection of psychological needs is somewhat reflected in most recent advancements of the social cure agenda. As we will come to see later on in this literature review, rather than claiming that I am the first to assess these needs as mediators of the social cure effect more generally, the key point is that I am the first to examine these needs as explaining the beneficial effects of groups *relative to relationships*, and as explanatory mechanisms regarding the effects of groups on *prisoner* well-being.

It is easy to see how social identities might meet the needs of support and relatedness, self-esteem and competence, autonomy, control, and meaning. Social identity provides individuals with a feeling of social connection – the sense that they are psychologically close to other members of their ingroup (e.g. Alnabulsi & Drury, 2014; Berkman & Syme, 1979; Cruwys, Dingle, Hornsey, & Walter, 2014c; see also Cacioppo & Patrick,

2008). Social identity might increase the perception of *relatedness* to other people – the sense of social connectedness or the sense that one comes together and interacts positively with other people. When group members appreciate that they share a social identity with fellow group members, the group provides feelings of connectedness through the self-categorisation perceptions of similarity, prototypicality, and in-group homogeneity (Easterbrook & Vignoles, 2013; Hogg & Hains, 1996; 1998); and, in this way, the social identities that are embedded within groups satisfy the need to belong (Baumeister & Leary, 1995; Manstead, 1997). As C. Haslam and colleagues explain (2018), this is because a shared social identity results in perceiving fellow ingroup members as a part of the self. Indeed, for example, the more pilgrims at the Hajj in Mecca – a massive religious festival – identified with the other people participating in the pilgrimage, the more connected they felt to their fellow pilgrims (Alnabusi & Drury, 2014). Similarly, the more people who had lost someone to suicide identified with, and consequently felt a sense of connection to, others who took part in a suicide awareness event, the better able they were to cope with their loss (Kearns, Muldoon, Msetfi, & Surgenor, 2017); and the more autistic individuals felt a sense of connection (i.e. identity) with others who have autism, the greater their sense of worth and the lower their symptoms of anxiety and depression (K. Cooper, Smith, & Russell, 2017).

A shared social identity lies at the heart of the receipt and provision of *social support* (S.A. Haslam, Reicher & Levine, 2012). Social identity is actually a critical determinant of the dynamics of social support (Underwood, 2000). Specifically, when people are operating in terms of a shared group membership, they should be more likely to give fellow ingroup members support, receive support from other ingroup members in return, and interpret this received support in the way in which it is intended (Levine, Cassidy, Brazier, & Reicher, 2002; Levine, Prosser, Evans, & Reicher, 2005; Reicher, Cassidy, Wolpert, Hopkins, & Levine, 2006). Indeed, this has been found to be the case for football supporters (Levine et al., 2005), and for international aid providers (Levine & Thompson, 2004), as well as for participants at mass religious gatherings (e.g. Hopkins & Reicher, 2017). S.A. Haslam and colleagues (2005) show that when people internalize social identities, this is usually associated with well-being via increased social support. The study by Hopkins and Reicher (2017) showed that high pilgrim identifiers perceived the difficulties they were faced with (illness, coldness) as collective challenges that facilitated social support provision. Moreover, the shared

identity as pilgrims also enhanced the significance of the event, making it more meaningful to participants of the mass gathering.

Social identity, thus, also provides people with a sense of *meaning,* purpose and worth because groups dedicate the majority of their time working towards collective outcomes (Cruwys et al., 2014c) that channels their attention and energy (Hopkins et al., 2016). People strive to maintain a positive social and, by extension, personal identity, therefore their salient social identity functions to construct their *self-esteem* (Hogg & Abrams, 1990). Groups can also impart feelings of *competence* to group members as they enact their social roles and receive encouraging feedback from their supportive group members (Deaux & Martin, 2003; Stets & Burke, 2000), and because groups can achieve things as collectives that individuals cannot (Bettencourt & Sheldon, 2001; R. Brown, 2000; Greenaway et al., 2016). The process of contributing to the group's common goal, for example, is likely going to be valued by fellow ingroup members, and thus likely to make one's efforts seem worthy. Social identities thus afford people a sense of purpose and direction that makes them feel that their lives are worthwhile and meaningful (S.A. Haslam et al., 2009). Speaking to the plausibility of my hypothesis, previous research has shown that when people internalize social identities, this is often associated with well-being via (a) greater feelings of self-esteem (e.g. Jetten et al., 2015), and (b) a greater sense of meaning (e.g. Greenaway et al., 2016).

Involvement in collective projects can also afford people a sense of *control* (C. Haslam et al., 2018b). Groups are naturally agentic (Brewer, Hong, & Li, 2004; Reicher & Haslam, 2006a) thus by developing a related social identity people feel that they can be in control of their lives (Greenaway, Haslam, Cruwys, Branscombe, & Ysseldyk, 2015; Guinote, Brown, & Fiske, 2006; van Zomeren, Spears, Fischer, & Leach, 2004). Indeed, Greenaway and colleagues (2015) found that people's identifications with their local community, their nation and the world were significantly associated with heightened levels of perceived control, which was also linked to well-being. Formal tests of statistical mediation revealed that control might be partly accounting for the identification-well-being relationship (also see Greenaway et al., 2016). Moreover, social groups can provide their members with a sense of *autonomy* in two ways: by providing members with a stronger self-definition which, in turn, strengthens the experience of one's decisions as autonomous; and by providing its members with a

platform to interact with fellow group members, making them aware of the ways in which they can uniquely contribute to the group, which leads to the perception of themselves as autonomous individuals (Koudenburg, Jetten, & Dingle, 2017). Koudenberg and colleagues (2017) demonstrated that social inclusion amongst marginalized individuals, brought about via the context of an alcohol rehabilitation centre and community organization, fostered these people with feelings of personal autonomy, which in turn, led to increased feelings of self-efficacy and hope. Precisely because social identity tends to contribute to group members' feeling that they are in charge of their own destiny, shared social identity is a basis for not only perceived personal control, but also for a sense of collective agency, power and efficacy (Avanzi, Schuh, Fraccaroli, & van Dick, 2015; Drury & Reicher, 2005). Smeekes and colleagues (2017), for example, show that the Syrian identity enhanced self-efficacy amongst Syrian refugees in Turkey, if they identified strongly with other Syrians.

The beneficial effects of group ties (relative to individual ties)

The literature on social ties and well-being recognises that it is not the mere quantity of social relationships, but also the quality of social relationships that incur health and well-being benefits (as we saw in the above section 'social ties and well-being'). We thus know that people with many valuable social relationships are likely to be healthier and happier than people with few or unimportant social relationships (George, Blazer, Hughes & Fowler, 1989; House, 2001; House et al., 1988; Putnam, 2000). The above analysis ('the social identity approach to health'; 'social identities as psychological resources') allows us to take this first analysis to the next level by making a further distinction, considering the power of psychological group membership (i.e., social identification): rather than assuming that the effects of social ties on well-being generalize across relationship type (see House, 2001; Holt-Lunstad, 2018a), it might be useful to distinguish ties grounded in different kinds of social relationship – specifically individual versus group ties. Do *group ties* offer any additional benefits? Existing research speaks to the importance of this distinction (C. Haslam et al., 2010; C. Haslam, et al., 2014a; C. Haslam et al., 2016a), and it seems that the answer to this question is *yes*.

Cross-sectional studies have consistently shown strong correlations between various 'social' measures and subjective health and well-being (e.g. Helliwell & Putnam, 2004;

Helliwell, Barrington-Leigh, Harris, & Huang, 2010). For example, Helliwell and Barrington-Levy (2012) used large-sample Canadian survey data to uncover the powerful effects that social connections and associated social identities have on subjective well-being. Their evidence is based on (a) a number of measures of the extent and frequency of use of social networks, combined with several measures of general and domain-specific trust (which they group under 'social capital'), and (b) three key measures of social identity – people's sense of belonging to their communities, province, and country. First, they found that social capital predicted subjective well-being. Second, in line with the social identity approach, they found that the group identity variables added significantly to the explanation of life satisfaction among Canadian respondents – more so than the interpersonal relationships variables.

In a number of parallel studies, Jetten and her colleagues (2015) extend this finding to be true for samples of varying social demographics (young children, adolescents, university students, older adults, homeless people) from other parts of the world (Australia, China, Great Britain, and the USA). Despite this diversity, they were able to correlate people's multiple group memberships with self-esteem: the more groups people were part of, the higher their self-esteem. Using a longitudinal design in two of the studies, the researchers were able to pinpoint the direction of the relationship. Although earlier multiple group memberships predicted later self-esteem, earlier self-esteem did not predict later group membership. In other words, happier people did not join more groups, rather, people that belonged to more groups were happier. Similar to the Helliwell and Barrington-Levy (2012) design, some of the studies included measures relating to people's interpersonal relationships which, compared to the group identity variables, were weaker correlates of self-esteem. Sani and colleagues (2012) found similar results. In two studies they compared the effects of social contact vs. group identification on mental health (e.g. stress and depression) across two different groups – family identification and social contact with family members; and army unit identification and social contact with army unit members. Across both groups, group identification predicted mental health better than social contact.

The most convincing evidence for the beneficial effects of group ties comes from the social identity and aging literature. Reminiscence therapy is a technique sometimes used with elderly people suffering from dementia. It involves the sharing of past memories

and experiences. C. Haslam and her colleagues (2010) compared the effectiveness of a 6-week *group* reminiscence therapy intervention with a more conventional *individually* based reminiscence therapy (just the patient and the clinician). There was also a control group of patients who participated in a weekly game of skittles. Only those in the group reminiscence condition showed any improvement in cognitive functioning by the end of the intervention. In another study of interest to us, theoretically grounded in social identity reasoning, C. Haslam and colleagues (2014a) sought to establish whether group ties were especially beneficial for the cognitive health of older adults. Their research used population data from three waves of the English Longitudinal Study of Aging (N = 3413), to investigate the association between the number of social group memberships (e.g., community groups) and individual relationships (e.g., with a relative or a friend) that respondents reported, and their cognitive functioning 4 years later. Analysis indicated that only group ties had a significant and sustained impact on cognitive health, and that the effects of group engagement were stronger with increasing age. In a more recent study, C. Haslam and colleagues (2016a) compared the protective role of group, relative to interpersonal, ties for cognitive health as we age. They conducted two cross-sectional studies on 242 older adults – an online survey and a face-to-face interview – and findings confirmed group ties as a stronger predictor of cognitive health than individual ties. Notably, group ties were found to be especially important because they fostered social identification that laid the foundation for social support.

Such studies suggest that group ties, relative to individual ties, are especially beneficial because they cultivate social identification. Although these longitudinal designs suggest the direction of effects, none of the work comparing group ties to individual ties has directly investigated causality through experimental designs. Furthermore, little is known about *how* group memberships influence well-being, relative to relationships, beyond offering members greater levels of social support – and only one study (C. Haslam et al., 2016a) provides evidence (that is not experimental) for the mediating role of social support.

I address RO1 by (1) testing experimentally, for the first time, whether the beneficial effects of multiple group memberships are distinguishable from, and stronger than, those associated with multiple interpersonal relationships, and by (2) investigating the

mechanisms through which groups enhance well-being relative to relationships – specifically investigating *social identity processes.*

The Social Identity Approach to Health makes several predictions about the health-related benefits of social groups. In particular, when, and to the extent that, people define themselves in terms of shared identity (1) they will be more likely to perceive themselves as similar and connected and to be positively oriented towards each other; (2) that identity will focus their energies and imbue them with a sense of meaning, purpose, and worth; (3) they will (a) expect to give each other support, (b) actually give each other support and (c) construe the support they receive more positively; and (4) they will develop a sense of collective efficacy, agency and power. In other words, it is likely that multiple group memberships benefit well-being because they satisfy the psychological needs of support and relatedness, self-esteem and competence, autonomy, control and meaning. In this respect, the key difference between groups and interpersonal relationships is that groups promote, and are internalized as an important part of, a person's sense of self (Turner, 1985) and, in this way, form the basis for beneficial forms of support and relatedness, self-esteem and competence, autonomy, control and meaning.

Thus, in Chapter 2 (Kyprianides et al., under review) I set out to provide the first experimental evidence for the beneficial effects of group memberships, in comparison to interpersonal relationships, with a view to investigating the mechanisms through which group ties, relative to individual ties, enhance well-being. In light of the evidence that exists showing that social identities provide a number of psychological resources (outlined above), I set out to test the possibility that group memberships, relative to relationships, offer members greater levels of social support, *as well as* increased feelings of relatedness, self-esteem and competence, autonomy, control and meaning.[i] Critically, Chapter 2 (Kyprianides et al., under review) tests the possibility that the additional benefit to well-being associated with groups is driven by the social identities they provide (i.e., what I refer to as the "social identity cure").

As we have seen in this section, the social identity approach to health has many applications in the real world: groups are particularly beneficial for those going through transitions and stressful times, and for vulnerable populations who may be suffering

from isolation. In what follows I provide a rationale for investigating the application of the social cure approach in *offender* populations by reviewing the literature that exists on prison and post-prison life, social determinants of prisoner and ex-prisoner well-being, and on efforts to foster social connectedness amongst prisoners.

Research objective 2

Incarceration and post-prison life are both high risk times for social isolation. Prisoners do not cope well with the pains of imprisonment (Crewe, Hulley & Wright, 2017; NAO, 2017). They find life in prison stressful (Hochstetler, Murphy & Simons, 2004; Maschi, Viola, & Koskinen, 2015), and experience low well-being (Fazel, Hayes, Bartellas, Clerici & Trestman, 2016; Gullone, Jones & Cummins, 2000), loneliness (Flanagan, 1980; Zamble, 1992), and frustration of their basic needs (Toch, 1977; Wright, 1989). Things are not easy after being released either: ex-prisoners struggle under the life-long stigma that comes with the label 'ex-convict'. They are subject to discriminatory practices (Flake, 2015; House of Commons, 2017; Human Rights Watch, 2004) and negative attitudes (Hirschfield & Piquero, 2010), which effectively extends their punishment and reduces their ability to function as normal citizens.

Research into both imprisonment and resettlement adjustment has paid attention to how social factors impact on prisoner and ex-prisoner well-being. Whilst there has been considerable emphasis on one-on-one relationships as a principal source of support and interpersonal closeness (for prisoners see e.g. reviews by De Claire & Dixon, 2015; Hairston, 1991; Poehlmann, Dallaire, Loper, & Shear, 2010; for ex-prisoners see e.g. reviews by Petrosino, Derzon, & Lavenberg 2009; Petersilia, 2003; A.L. Solomon, Waul, Van Ness, & Travis, 2004), to date the imprisonment and resettlement literatures have offered little insight into the effects that other ways of connecting to people might have on imprisonment and resettlement adjustment. The research that *does* exist on the impact of wider social ties and social engagement on prisoner (e.g. Crewe, 2012; Earle & Phillips 2015; Harvey, 2007; De Viggiani, 2006) and ex-prisoner well-being (e.g. Bazemore, Nissen & Dooley, 2000; Clear & Sumter, 2002; Yeager, 2012) says very little about the ways in which these effects are realized. In this thesis a social identity theoretical approach was applied to explore (1) the effects that other ways of connecting

to people might have on imprisonment and resettlement adjustment, and (2) how these other ways of connecting to people might improve prisoner and ex-prisoner well-being.

The second objective of the research reported in my thesis is therefore:

RO2. To advance social cure applications to improve the health and well-being of vulnerable populations.

Unlike any models in the imprisonment and resettlement literatures, the social cure model recognizes the role of social networks and groups in the well-being, health, and life outcomes of individuals from vulnerable populations; and finds that people who are members of purposeful and meaningful groups that are highly valued (be that their gym group, an organisation they are part of, a hobby group, etc.) show better adjustment and have better health. This, in turn, enables them to proactively engage with life (be that with education, employment, or recreational activities). There is now a substantial body of evidence that supports this (see C. Haslam et al., 2018a), however the social cure model has never been investigated amongst prisoners.

I explore the applicability of the social cure approach to prisoners and ex-prisoners by testing the effects that multiple group membership might have on prisoner and ex-prisoner well-being (Chapters 3: Kyprianides & Easterbrook, under review; and 4: Kyprianides, Easterbrook, & Cruwys, 2019). I then use the social cure approach to evaluate an intervention with prisoners to better understand how social connectedness and social identity processes can play an important role in improving prisoner well-being (Chapter 5: Kyprianides & Easterbrook, 2019).

The pains of imprisonment on the 'inside' and 'out'

> *No one truly knows a nation until one has been inside its jails. A nation should*
> *not be judged by how it treats its highest citizens, but its lowest ones.*
> (Nelson Mandela, 1995)

Imprisonment is defined as the state of being confined in an institutional setting such as a prison following violation of the law. To this end, in every country, imprisonment is

understood as the restraint of a person's liberty. However, as Nelson Mandela points out, prison establishments and conditions differ internationally, and even within every country; and prisoners face country-and cultural-specific discrimination and stigma upon release (see Jacobson, Heard & Fair, 2017). It is therefore important to note, from the outset, that my research speaks to *prisoners residing in UK prisons*, and *ex-prisoners living in the US after being released*.

Life in prison involves (1) the deprivation of liberty, (2) the deprivation of goods and services, (3) the deprivation of social relationships, (4) the deprivation of autonomy, and (5) the deprivation of security. These are also known as the 'pains of imprisonment' (Foster, 2012; Sykes, 1958), and each of these impact on prisoner well-being and a person's capacity to adjust to life in prison. This is demonstrated in studies that assess prisoners' life satisfaction (Tang & Chan, 2017), loneliness (Flanagan, 1980; Zamble, 1992), general psychological well-being and mental health (Crewe et al., 2017; Fazel et al., 2016; Hochstetler et al., 2004; Maschi et al., 2015; NAO, 2017), including depression, stress and anxiety specifically (Gullone et al., 2000; Silverman & Vega, 1990; Verona, Patrick & Joiner, 2001), physical well-being (Maschi et al., 2015), suicidal and self-harm tendencies (Chapman, Specht & Cellucci, 2005; Fazel et al., 2016; Maden, Chamberlain, & Gunn, 2000), risk of violence and victimization (Fazel et al., 2016), and general imprisonment adjustment (Adams, 1992; Bonta & Gendreau, 1991; Derosia, 1998; Harding & Zimmerman, 1989; Kruttschnitt & Gartner, 2003; Toch, 1975; Warren, Hurt, Loper, & Chauhan, 2004; Zamble & Porporino, 1988). Together, this work demonstrates that prisoners are a socially isolated population that do not cope well with the pains of imprisonment (also see Colsher, Wallace, Loeffelholz, & Sales, 1992; Fogel & Martin, 1992; Hurley & Dunne, 1991 for reports of disproportionately elevated levels of depression, loneliness, nervousness, and anxiety found among prisoners).

The pains of imprisonment are a burden that ex-prisoners carry into life after being released from prison. Ex-prisoners in the US face stark social stigma, as their identity is often equated with their past, whereby committing a crime is not perceived only a poor life choice, but also a reflection of a deficient personality (Duthie, 2005; Nussbaum, 1974). Once released, an ex-prisoner remains a 'criminal' and therefore a 'bad person' in the public's eyes, less deserving of services, and unwelcome in the community that is

made up of 'good people' who have not been to prison (Hirschfield & Piquero, 2010). Beyond social stigma, ex-offenders in the US also face structural obstacles, including restrictions in housing, employment, and voting (Flake, 2015; House of Commons, 2017; Human Rights Watch, 2004; L. Solomon et al., 2014). Sometimes indefinitely (depending on the crime committed and the state), people with a criminal record are restricted from voting in elections (Uggen, Manza, & Thompson, 2006). In addition, ex-offenders are often barred from government-subsidized housing, and the private housing market is not accessible due to ex-offenders' low income, and landlords' hesitation to rent to ex-offenders (Human Rights Watch, 2004). Furthermore, beyond the legal barriers associated with a criminal record and certain jobs, employers are less likely to employ someone who holds a criminal record (Cnaan, Draine, Frazier, & Sinha, 2008).

Social stigma and structural discrimination impact on ex-prisoner well-being and a person's capacity to adjust to life after being released from prison. This is demonstrated in studies that assess ex-prisoners' risk of reoffending (Durnescu, 2011; Petrosino et al., 2009; SEU, 2002; Brunton-Smith & Hopkins, 2013; Thomas et al., 2015), and general resettlement adjustment (Chui & Cheng, 2013; B.A. Hunter, Lanza, Lawlor, Dyson, Gordon, 2015; Markson, Lösel, Souza & Lanskey, 2015; Moore, Stuewig, & Tangney 2016; Lösel, Pugh, Markson, Souza, & Lanskey, 2012; Schneider & McKim, 2003; I. Smith & McCarthy, 2016). An extensive body of literature has documented poor health and well-being outcomes in offending populations after return to the community (Fazel & Danesh 2002; Kinner, 2006; Cutcher, Degenhardt, Alati, & Kinner, 2014). Very high rates of mental illness (Fazel & Danesh 2002) have been observed among ex-prisoners, and they are at greatly increased risk of mortality associated with suicide (Pratt, Piper, Appleby, Webb, & Shaw, 2006), drug overdose (Merrall et al. 2010) and injury (van Dooren, Kinner, & Forsyth, 2013), as well as death from natural causes (Spaulding et al. 2011). Together, this work demonstrates that ex-prisoners are a socially rejected population that do not cope well with the challenges of re-entry, and this hinders their reintegration.

Predictors of prisoner/ ex-prisoner well-being

In these contexts, numerous theories have been developed to account for imprisonment and resettlement adjustment, and there exist a large number of studies investigating the question of what predicts prisoner and, later, ex-prisoner, well-being – both in the UK

(R. Morgan & Owers, 2001; SEU, 2002; House of Commons, 2005), and in the US (Travis & Petersilia, 2001; Visher, LaVigne & Travis, 2004). Theory and research on the social determinants of well-being within both the imprisonment and resettlement literatures are especially relevant to the present investigation which focuses on the particular importance of social relationships and their contribution to a person's self-definition.

Two dominant theories in the prison literature are the deprivation and the importation models. The deprivation model posits that characteristics of the prison environment (e.g. the deprivation of a number of basic needs) determine how prisoners respond to life behind bars (Sykes, 1958). In contrast, the importation model posits that pre-existing characteristics of the prisoners (e.g. their backgrounds, attitudes, and experiences) determine how they adjust to life in prison (Irwin & Cressey, 1962). However, instead of an either/or approach to understanding imprisonment adjustment, the interaction between the prisoner and his environment (Wright, 1985, 1991; Zamble & Porporino, 1988), and consequently the importance of integrating the two perspectives (Dye, 2010; Foster, 2012; Paterline & Petersen, 1999), has been stressed.

Research applying these and other theories (e.g. general strain theory) to imprisonment adjustment has identified a number of consistent predictors of prisoner well-being. These include predictors relating to (a) the conditions of imprisonment - sentence length, institutional activities available, prison overcrowding, and prisoner safety, tend to be the strongest predictors of prisoner adjustment and well-being (see reviews by Adams, 1992; Gadon, Johnstone & Cooke, 2006; Gendreau, Goggin, & Law, 1997; Gonçalves, Gonçalves, Martins, & Dirkzwager, 2014; also see Morris, Carriaga, Diamond, Piquero, & Piquero, 2012); and (b) attributes of the prisoner - age, criminal history, mental health, and an antisocial or aggressive attitude tend to dominate this literature (see reviews by Adams, 1992; M.A. Campbell, French, & Gendreau, 2009; Fazel et al., 2016; Gendreau et al., 1997; Goncalves et al., 2014; Guy, Edens, Anthony, & Douglas, 2005; Leistico, Salekin, DeCoster, & Rogers, 2008; Singh, Grann, & Fazel, 2011; Schenk & Fremouw, 2012; Walters, 2003; also see DeLisi, Berg, & Hochstetler, 2004; DeLisi, Trulson, Marquart, Drury, & Kosloski, 2011). Attributes of individuals and of environments, then, combine to influence prisoner adjustment and well-being.

Conversely, two key models in the resettlement adjustment literature are the two 'deficit' models of resettlement, described as 'risk-based', and 'need-based' (Andrews, Bonta & Hoge, 1990; Maruna & LeBel, 2002). The *Risk Principle* refers to criminogenic variables, such as those that have been established as predictors of recidivism and resettlement adjustment. These include juvenile delinquency, a history of criminal activity, criminogenic needs, socialisation with other prisoners, and antisocial personality, offence type, age, and longer prison sentences (Bonta et al. 1998; Gendreau, Little, & Goggin, 1996; Lösel et al., 2012; Brunton-Smith & Hopkins, 2013). The *Needs Principle* refers to deficits that have been shown to increase the likelihood of re-offense and act as barriers to reintegration. These include unstable housing, limited educational attainment, limited job skills/ employment opportunities, financial debt, as well as mental and physical health concerns and substance abuse (Baillargeon, Hoge, & Penn, 2010; Dowden & Brown, 2002; Durnescu, 2011; Fazel & Yu, 2011; Freudenberg, Daniel, Crum, Perkins, & Richie, 2005; Fu et al. 2013; Maruna, 2001; Petersilia, 2001; Petersilia, 2003; Lösel et al., 2012; SEU, 2002; Brunton-Smith & Hopkins, 2013; Thomas et al., 2015; Travis, Solomon & Waul, 2001; Travis, 2005; van Olphen, Freudenberg, Fortin, & Galea, 2006; van Olphen, Eliason, Freudenberg, & Barnes, 2009; Visher, Kachnowski, Vigne, & Travis, 2004; Yu, Geddes, & Fazel, 2012). Adherence to these models by practitioners has confirmed substantial reductions in recidivism rates (Lowenkamp, Latessa & Holsinger, 2006).

Among these common predictors of both prisoner and ex-prisoner well-being, social relationships, which are the focus of the present thesis, have been considered. As we saw in section 1, social connectedness has consistently been linked to well-being among the general population. However, this relationship is more complicated for people confined in prisons, and later released back into the community. The physical and social stressors encountered by prisoners are likely to increase their need for supportive social relationships. At the same time, imprisonment isolates prisoners from social networks in 'the outside world', and exposes them to new social networks inside the prison (Lindquist, 2000). The implications of these unique circumstances for people confined in prisons, and later released back into society, have been explored, and research has tended to emphasize the importance of individual relationships with one or more significant others for diminishing the effects of prison hardship, and challenges to re-entry, on various measures of well-being.

When considering contact with the outside world, an important predictor in the literature, the focus has been on family ties – typically a spouse or partner and children (see Crewe et al., 2017, and reviews by De Claire & Dixon, 2015; Hairston, 1991; Adams, 1992; Poehlmann et al., 2010; Schenk & Fremouw, 2012). This is based on the evidence that maintenance of family ties during incarceration improves prisoners' well-being, provided that the quality of their relationships is high and that they are supportive (also see I. Smith & McCarthy, 2016; Carlson & Cervera, 1991; Segrin & Flora, 2001). For example, Segrin and Flora (2001) demonstrated that having a satisfying marriage reduced loneliness during imprisonment; and Carlson and Cervera (1991) found that conjugal visits increased prisoners' perception of closeness.

Apart from support originating from outside the prison, from these significant others, support originating from inside the prison – from relationships with staff members (see Biggam & Power, 1997) and fellow inmates (see Maitland & Sluder, 1996; McCorkle, 1993) – has also been considered. But, again, the focus is on individual ties – typically a staff member or fellow prisoner. For example, Biggam and Power (1997) found that positive staff-prisoner relationships predicted reduced anxiety, depression, and hopelessness amongst prisoners; both Maitland and Sluder (1996) and McCorkle (1993) found that prisoners who had a friend in prison, spent time with them, could count on them if attacked, and could confide in them about personal problems, experienced higher well-being; and Desmond (1991) found that having internal social support (in the form of confidants) was associated with lower levels of loneliness amongst prisoners.

Social relationships have also been considered among common resettlement predictors. Here, too, research has tended to emphasize the importance of individual relationships with one or more significant others – typically a spouse or partner, children, and friends. Extensive research has documented the critical role of family ties in the transition after imprisonment (I. Smith & McCarthy, 2016; Shapiro & DiZerega, 2010; Petrosino et al., 2009; La Vigne, Visher, Castro, 2004; Markson et al., 2015; Lösel et al., 2012; Sampson & Laub, 1993; SEU, 2002; I. Smith & McCarthy, 2016; A.L. Solomon et al., 2004). For example, I. Smith and McCarthy (2016) linked strong family ties to post-release success (lower reoffending risk, improved employment levels, and reduced drug taking). A.L. Solomon and colleagues (2004) found that familial contact during and

after imprisonment reduced recidivism and fostered reintegration. Similarly, Lösel and colleagues (2012) found that high quality family relationships, good family ties prior to, and communication during, imprisonment, predicted a broad range of resettlement outcomes. These researchers also found that social support from friends had similar effects on the same resettlement outcomes (also see La Vigne et al., 2004). Indeed, in her book on prisoner re-entry, Petersilia (2003) concluded that the strongest predictors of successful reintegration are informal social bonds.

Nevertheless, while these relationships are certainly important, they do not address the contribution of offenders' other social relationships. As with the general population, prisoners and ex-prisoners are connected to broader society in other, qualitative ways. Social ties may be present at several levels, ranging from intimate confiding ties to distant, community ties, and particularly ties with social groups that are valued (e.g. faith-based, leisure, and community groups). Excluding these from analysis potentially limits understanding of the impact of others ways of connecting to people might have on imprisonment and resettlement experiences. There is thus a need for a broader conceptualization of social integration amongst offenders, and more comprehensive indicators of prisoners' and ex-prisoners' social ties. One such indicator that has been examined is wider social support.

Generally speaking, research demonstrates that lower levels of social support hinder imprisonment adjustment (Cochran, 2012; DeLisi et al., 2004; Jiang & Winfree, 2006). Wright (1989) found that prisoners ranked support as their uppermost need or concern, followed by social stimulation; and Flanagan (1980) found that prisoners ranked missing social life as one of their most severe problems. Indeed, one study found that a lack of close friends outside prison predicted anxiety, depression, and psychological morbidity amongst prisoners (C. Cooper & Berwick, 2001); and another found that isolation from social networks predicted poor mental health (De Viggiani, 2007). Community social support also improves chances for successful resettlement after being released from prison (Bazemore et al., 2000; Breese, Khaz & Grant, 2000; Cullen, 1994). The social context to which people return to plays an important role in their successful reintegration (Durnescu, 2011; Haines, 1990; Hipp, Petersilia, & Turner, 2010). This is because there is a well-established link between poverty, social exclusion, and well-being (Wilkinson & Marmont, 2003). Responses to stigma significantly

influence behaviour after release from prison (Durnescu, 2011; Moore et al., 2016; Lösel et al., 2012). For example, Moore and colleagues (2016) found that perceived stigma worsened resettlement adjustment (operationalized as community adjustment, recidivism, mental health symptoms, and substance dependence).

Although empirically underexplored, the impact of wider social relationships (i.e. social group ties) on the well-being of prisoners is hypothesized to be beneficial (Lindquist, 2000). Findings from the few (qualitative) studies that have been conducted with people in prison show that wider social interaction and relations have a positive impact on well-being (e.g. Crewe, 2012; Earle & Phillips 2015; Harvey, 2007; De Viggiani, 2006). However, this is mainly based on the evidence that social groups within prison can provide prisoners protection from victimisation and violence. Social engagement with prison programs and activities - what prisons in the UK refer to as 'meaningful activitity' - also appears to positively impact prisoners (De Viggiani, 2007). For example, prisoners have reported that prison education programs enhance the quality of day-to-day prison life, provide safe havens behind bars, and increase their resilience to more effectively deal with an often hostile prison environment (Fagan, 1989; T.A. Ryan & McCabe, 1994). The prosocial support derived from prison-based educational programs seemingly leads to fewer prison rule violations (Gaes & McGuire, 1985; McCorkle, Miethe, & Drass, 1995; see also Adams et al., 1994). Baybutt and Chemlal (2015) observed similar findings for prisoners taking part in gardening activities. They found that the natural environment improved psychological health and mental well-being amongst prisoners - it reduced stress and improved mood, and provided a restorative, therapeutic environment that facilitated social contact by bringing people together.

On a similar note, a third key model in the resettlement literature is the 'strengths-based' model of resettlement (Maruna & LeBel, 2002; Ward & Stewart, 2003) that is characterized by themes of community partnership, repair, and reconciliation (see especially Newell, 2001; Farrant & Levenson, 2002). Unlike the risk and need based approaches, strength based approaches understand offenders as community assets to be utilised 'rather than merely liabilities to be supervised' (Travis, 2005, p. 7). The *Strengths Principle* therefore refers to social factors that have been shown to cultivate pro-social self-concepts and identity, generally in the form of rewarding work that is advantageous to others. Several studies document the implementation of 'strengths-

based approaches', specifically with sex offenders in community-based programs and in prison (Purvis, Ward & Shaw, 2013; Ward & Marshall, 2004; Willis, Ward & Levenson, 2014), violent offenders (P.R. Whitehead, Ward & Collie, 2007), and amongst forensic populations (Barnao, Robertson & Ward, 2010). Similarly, participation in community based-programs has been found to reduce recidivism amongst ex-prisoners (e.g. Paige, 2013). Taking up a volunteer role, for example, after being released from prison, provides ex-offenders with a focus for the day, a positive outlet for energy, and an opportunity to increase their social networks and to interact with others in similar situations (StepTogether, 2018). The prosocial support derived from community based programs thus has the potential to break the cycle of criminality for ex-prisoners, which is often ingrained in their attitudes, social networks, and families.

Although most existing research on the social worlds *within* and *beyond* prison shows a positive association between social engagement and well-being (for exceptions see Schmid & Jones, 1993; Lindquist, 2000), it says very little about the ways in which these effects are actualized.

As I have outlined above, then, an evident gap in both the imprisonment and resettlement literatures is that (1) they offer little insight into the effects that other ways of connecting to people might have on prisoner and ex-prisoner well-being, and (2) the insight that is offered says very little about the ways in which social engagement and well-being are related. On these points, the growing body of work outlined in section 1 speaks to the role that social group memberships (e.g. in leisure or professional groups) might play in imprisonment and resettlement adjustment. Importantly, because the basis for a person's sense of social identity is structured by these groups (Tajfel & Turner, 1979), they tend to be central to an individual's self-definition, assisting the individual to make sense of who they are, where they belong, and how they understand the world. When a person's group membership informs their sense of self (i.e., where their social identity as "us members of the Kyprianides family," is salient), then this structures their behavior and thoughts, affecting how they feel, and how they act in different contexts. Importantly too, these groups are an important psychological resource—providing a basis for support, connection, self-esteem, control, and meaning (Greenaway et al., 2015; C. Haslam et al., 2018a; Jetten et al., 2014).

The social cure approach

The social cure approach (outlined in section 1, Tajfel & Turner, 1979; Turner et al., 1987) can help to understand how social connectedness can play an important role in improving prisoner and ex-prisoner well-being.

According to the social cure approach, it is not social group contact but a sense of identification with the group that influences peoples' thoughts, beliefs, and behaviour, (including those that influence mental health and well-being) (Sani et al., 2012). This is because it is via social identification that people internalize the values and norms of their group memberships. Moreover, as we saw in section 1, the social cure approach contends that social groups, and their associated social identities, provide people with important psychological resources necessary for well-being: connectedness and positive orientation to others; meaning, purpose and worth; social support; control, efficacy and power (C. Haslam et al., 2018a).

As social group memberships provide access to these benefits, it is not surprising that, as previously mentioned, studies have found that the more group memberships people have access to, the more their general well-being (Iyer et al., 2009) and self-esteem improves (Jetten et al., 2015). The importance of multiple social groups has been highlighted for those facing significant life changes such as retirement (C. Haslam et al., 2018b), becoming a university student (Iyer et al., 2009), or a new parent (Seymour-Smith, Cruwys, Haslam, & Brodribb, 2017), or experiencing a stroke (C. Haslam et al., 2008). In all these studies on vulnerable populations, multiple group memberships were critical to protecting group members' well-being due to the connection between these group memberships and the individuals' sense of self. Indeed, as mentioned above, the most compelling social cure evidence is applied, but the well-being consequences of membership in multiple groups among people confined in prison have never been explored, despite the promise of this approach amongst vulnerable populations.

The social cure phenomenon has been demonstrated in the realms of social status and health, stigma and health, stress, trauma and resilience, ageing, depression, addiction, eating, acquired brain injury, acute pain, chronic mental health conditions, and chronic physical health conditions (see C. Haslam et al., 2018a). In Chapters 3 and 4, then, I explore the well-being consequences of membership in multiple groups among

offenders residing in prison (Chapter 3: Kyprianides & Easterbrook, under review), and later, upon release (Chapter 4: Kyprianides et al., 2019). This is an important area of investigation because some evidence does exist that shows that group membership is harmful, mostly from studies on particular highly stigmatized groups that face discrimination, whose norms often prescribe harmful activities (e.g. Cruwys & Gunaseelan, 2016; Dingle, Stark, Cruwys, & Best, 2015; Kellezi & Reicher, 2012; Schmitt, Branscombe, Postmes, & Garcia, 2014). To this end, in Chapter 4 (Kyprianides et al., 2019), I also consider the role of perceived rejection in shaping the effects of group membership on ex-prisoner well-being.

Approaches that foster social connectedness amongst prisoners

Prisons have adopted arts-based work with prisoners in the UK. The Prisoners' Education Trust lists 16 creative arts initiatives that take place in prisons in the UK on their website (Prisoners Education Trust, 2018). These include music projects for offenders in prison, a theatre company working with prisoners, a comedy school that delivers shows and other art skills to prisons, a needlework organization that teaches needlework to prisoners and sells their products, interactive drama workshops, and the list goes on. In Chapter 5 (Kyprianides & Easterbrook, 2019) of this thesis I investigate one such intervention with prisoners – the Finding Rhythms (FR) charity that provides music workshops to prisoners (Finding Rhythms, 2018) – from a social cure perspective.

Indeed, one approach to developing meaningful social connections is through engagement in the arts, such as music, visual art, drama, and creative writing (see Stickley & Hui, 2012a; Stickley & Hugh, 2012b; E. Williams et al., 2018). Research on art-based groups consistently finds that participation in these groups improves mental well-being (Clift & Morrison, 2011; Clift, Manship & Stephens, 2017; Crone et al., 2018; Grocke et al., 2014; Smyth, Nazarian, & Arigo, 2008), promotes psychological flourishing (Pearce, Launay, Machin, & Dunbar, 2016), and fosters a sense of connectedness and belonging amongst participants (Bailey & Davidson, 2005; Dingle, et al., 2013; Plumb & Stickley, 2017; Stickley, Wright & Slade, 2018). A particularly relevant study by E. Williams and colleagues (2018) found that participation in art-based groups – a choir or creative writing group – was effective in improving mental well-being in adults with chronic mental health problems, *only* for those who strongly

identified with the group. This finding is in line with the social cure approach, and demonstrates that an integral part of unlocking the benefits of participation in art-based groups is group identification.

Successful imprisonment adjustment is defined by rebuilding a worthwhile life in preparation for release (House of Lords, 2017). Thus, belonging to a group which is defined by its rehabilitative orientation should encourage members to adopt the hope and empowered behaviours associated with resettlement. This has certainly been the case for non-offender populations whereby the recovery orientation of groups has encouraged recovery behaviour for people undergoing treatment for substance misuse (Best et al., 2016), people suffering depression (Cruwys et al., 2014a), disadvantaged adults (Koudenburg et al., 2017), and for people using mental health services (Stickley et al., 2018).

Although mental health support groups and resettlement workshops can be helpful for promoting well-being through the recovery values and norms that they represent, they may also be aligned with the prisoners' mental health diagnosis (e.g. depression, substance use) or with the prisoners' status as a prisoner (as has been found to be the case amongst non-offender clients of mental health support groups, Cruwys et al., 2014a; Koudenburg et al., 2017). Therefore, there is also potential for prisoners to associate the group with the stigma related to having a mental health condition or with the stigma related to being a prisoner (as has been found amongst non-offender participants in the context of the stigma related to having a mental health condition (Corrigan, Markowitz, & Watson, 2004)). For non-offender populations, arts-based groups have been found to reduce these issues because they develop a positive social identity around a particular skill or strength and are often conducted by arts professionals (E. Williams et al., 2018). This means that involvement in these groups is less likely to generate mental-health related stigma (Stickley et al., 2018).

In contrast to focusing on mental health or life upon release, then, I argue that FR, a program conducted by music professionals in a prison setting, will develop a social identity around music. I argue that through their sense of identification with FR – a music programme - prisoners can draw psychological resources such as connectedness, self-worth, and volitional agency (psychological needs outlined above). For example, by

joining FR, prisoners have the opportunity to connect with like-minded people (connectedness), become recognized as a musician and develop a sense of what they can achieve (self-worth), and access opportunities to develop (volitional agency) (see Greenaway et al., 2016). Moreover, sharing the FR group identity with other people can cultivate trust, which can enable the provision and receipt of social support (see S.A. Haslam et al., 2012).

In this thesis I thus argue that applying the social cure approach to offender populations can help to address the gaps identified in my review of the literature above: (1) by broadening investigation to include wider social relationship predictors, and (2) by helping us to understand how social connectedness can play an important role in improving prisoner and ex-prisoner well-being. I explore the applicability of the social cure approach to prisoners and ex-prisoners by testing the effects that multiple group membership might have on prisoner and ex-prisoner well-being (Chapter 3: Kyprianides & Easterbrook, under review; and Chapter 4: Kyprianides, Easterbrook, & Cruwys, 2019). My work also contributes to understanding the ways in which efforts to foster social connectedness amongst prisoners benefit prisoner well-being (Chapter 5: Kyprianides & Easterbrook, 2019).

Research strategy: a mixed methods approach

In the above review I have situated my research questions within the social cure literature, and I have described why it makes sense to ask these questions. In this section I provide a general overview of how I went about answering my research questions.

The dual nature of my research – advancing theory, as well as applying theory – lent itself to different methodological approaches. Moreover, studying prisoners or ex-prisoners can be a daunting task due to the hard-to-reach nature of these populations and the challenges associated with conducting research in prisons. I had to deal with practical difficulties inherent in securing research access to prisons, and recruiting prisoner and ex-prisoner participants. The establishment of prison contacts, development of collaborative relationships, and the implementation of rigorous research methods deemed to be helpful in facilitating the research process. I also faced a literature gap whereby social identity processes had not been investigated in the context

of prisons or in the context of reintegration back into the community. Considering these matters, I decided that using a single methodological approach would not be adequate since I had to draw on a variety of methodological principles and analytical techniques.

In Chapter 2 (Kyprianides et al., under review), I demonstrate that people derive strength and other beneficial qualities from their groups, relative to their relationships. Chapter 2 (Kyprianides et al., under review) is based on a series of experiments (one in the lab, and two online) conducted on young millennials, that I designed to help unpack the social identity processes involved in the beneficial effects of group belonging on well-being. There was also a qualitative component to my investigation that involved undertaking a thematic analysis of participants' descriptions of their groups and relationships. The quantitative experimental approach allowed me to test and progress an already constructed theory (the social cure) about how and why this phenomenon occurs; whilst the thematic analysis – a technique that allows unexpected findings to emerge (Braun & Clark, 2006) - provided further insight into the beneficial effects of groups, relative to relationships.

In Chapter 4 (Kyprianides et al., 2019), I demonstrate that some groups (ex-prisoners) have social stigma attached to them, and this can have negative consequences. Chapter 4 (Kyprianides et al., 2019) is based on an online survey distributed to ex-prisoners living in the US, that included both closed and open-ended questions. The mixed method approach allowed me to explore whether the social cure approach applies to this vulnerable group by testing my hypothesized model, but also to gain insight into ex-prisoners' actual experiences of rejection. In Chapters 3 and 5, however, I demonstrate that, even in the case of stigmatized groups, if the 'right' identities are part of these individuals' social worlds, groups can be curative. Chapter 3 is based on a secondary data analysis of a large-scale dataset that includes data on prisoners residing in all prison establishments in the UK, and on a questionnaire booklet that was completed by prisoners residing in one prison in the UK. This combination of quantitative approaches allowed me to explore whether the social cure approach applies to this vulnerable group by allowing me to test my basic predictions among a large sample of prisoners situated in a range of different prisons, and to conduct a test of the framework's predictions within a specific context. Chapter 5 (Kyprianides & Easterbrook, 2019) is based on a mixed method approach, comprised of pre and post- program questionnaires, and on

semi-structured interviews with prisoners, that were designed to evaluate a music intervention with a vulnerable group based on the social cure approach. The methodological approach allowed me to test the social cure hypothesis in my evaluation of the intervention, and to provide complementary information that explored these processes qualitatively, and captured prisoners' experiences of the intervention.

It becomes apparent from this summary that, for the purposes of my thesis, I drew on a variety of methods, which included collecting and analysing both quantitative and qualitative data. The general approach I adopted was thus a *mixed methods approach*. Mixed-methods research can be understood as 'research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or [as in my case] a program of inquiry' (Tashakkori & Creswell, 2007, p. 4). Within mixed-methods research, qualitative and quantitative approaches can complement each other in different ways (see D. Whitehead & Schneider, 2012). I adopted a 'simultaneous combination of quantitative and qualitative mixed methods approach' (D. Whitehead & Schneider, 2012), that is most useful when, like in my research, there is a quantitative foundation to the research and qualitative methods are used to provide complementary information. My research is testing hypotheses about the social cure approach (whether groups are more beneficial than relationships; whether the social cure properties of groups can be observed amongst prisoners/ ex-prisoners). The phenomenological method is used to uncover the experience for this select group (prisoners/ ex-prisoners) who acknowledge the benefits that they derive from their groups.

The greatest value of mixed-methods research is that researchers are able to use more of the tools available to them to collect more comprehensive data; and this provides broader insight into the questions under exploration (Foss & Ellefsen, 2002). Moreover, since each method comes with its own limitations, a mixed-methods approach can counter-balance the weaknesses of each respective methodology with the strengths of the other (McGrath, 1981; D.L. Morgan, 2007), provided that the differences and the limitations of each approach be acknowledged: the quantitative components of my research can be criticized as being weak in understanding the context or setting in which data was collected; the qualitative components of my research may be critiqued for including biases and not lending themselves to statistical analysis and generalization;

however my use of mixed method strategies can arguably offset these weaknesses by allowing for both exploration and analysis in my overall program of research.

I take a post-positivist approach (Fox, 2008) that considers both quantitative and qualitative methods to be valid approaches to knowledge generation, and that draws from social constructionism in forming understandings of reality. It made sense to attempt to make a theoretical advancement of the social cure approach (Chapter 2: Kyprianides et al., under review), and to investigate the applicability of the social cure approach in defined unexplored populations (ex-prisoners in Chapter 4: Kyprianides et al., 2019, and prisoners in Chapters 3: Kyprianides & Easterbrook, under review; and 5: Kyprianides & Easterbrook, 2019) using surveys, questionnaires and experiments that yielded quantitative data. In line with social constructionist approaches, post-positivism also centers on the notion that meanings are not established separately within each individual but in coordination with other individuals (Fox, 2008). A prominent example of a social construction, used in the literature (e.g. Howard, 2000; Zack, 2017; Zolkowska & Kaliszewska, 2014), is indeed the concept of social identity, precisely because social identity is fundamentally about an individual's self-concept within their social world. Charles Horton Cooley (1902), a sociologist following the social constructionist tradition, stated the following in his discussion of what he called the 'Looking Glass Self':

I am not who you think I am; I am not who I think I am; I am who I think you think I am.

This quote demonstrates that how we perceive our sense of self (but also more generally, how we construct ideas, concepts, and realities), may not actually exist without the existence of others to validate that sense of self (or those ideas, concepts, and realities). In this regard, I argue that the social context is very important. Hence social stigma matters, for instance in Chapter 4 (Kyprianides et al., 2019) that examines the role of multiple group membership in ex-prisoners' social worlds. Or the conditions of imprisonment, such as the prohibition of social contact, matters, for instance in Chapter 3 (Kyprianides & Easterbrook, under review) that examines the effect of multiple group membership on prisoners' well-being.

All in all, despite the time and resource-intensive drawbacks associated with undertaking mixed-methods research (D. Whitehead & Schneider, 2012), and recognizing the different epistemological backgrounds entailed in the methodological and analytical approaches I followed for my data collection and analysis, I believe that the mixed-methods background served well considering my research objectives. It offered a balance between objectivity and subjectivity, as well as control over the data; and it complemented each method's weaknesses; providing unique insights from multiple perspectives into the power of group membership and the nature of social identities in the prison context and post-prison life.

Thesis Overview

My thesis comprises of 5 more chapters. Chapters 2-5 contribute to addressing the central objectives of my thesis: Chapter 2 (Kyprianides et al., under review) is focused on advancing social cure theory to understand how groups benefit health and well-being. Chapters 3 (Kyprianides & Easterbrook, under review), 4 (Kyprianides et al., 2019), and 5 (Kyprianides & Easterbrook, 2019) are focused on advancing social cure applications to improve the health and well-being of vulnerable populations.

In Chapter 2 (Kyprianides et al., under review), I include an experimental investigation into the mechanisms through which multiple group memberships, relative to multiple interpersonal relationships, are associated with well-being. The manuscript reports three experimental studies (Ns = 120, 317, 183) which progress the social identity approach to health by demonstrating that: a) priming people to think about their important group memberships satisfies psychological needs and enhances and restores well-being to a greater extent than priming people to think about their important interpersonal relationships; b) that this is in part due to the collective identities that groups provide; and c) that psychological need satisfaction mediates these findings. My work therefore experimentally demonstrates the importance of group identities for affective and cognitive well-being, and identifies mediating mechanisms.

In Chapters 3 and 4, I include two investigations into the application of the social cure approach in defined vulnerable populations. The manuscript in Chapter 3 (Kyprianides & Easterbrook, under review) reports two studies on prisoners in the UK. I analyse the

relationships between prisoners' individual (Study 1, N = 11,880, prisons = 113) and group (Study 2, N = 157, 1 prison) ties, psychological need satisfaction, and well-being. My work provides evidence that strong prisoner ties and membership in groups are associated with greater well-being among prisoners, and identifies psychological needs and group contact as explanatory mechanisms. The manuscript that makes up Chapter 4 (Kyprianides et al., 2019) reports an online survey of people that have spent time in prison or who have a criminal record in the US (N = 199). I analyse the relationships between perceived group-based rejection, ex-prisoner identity, multiple group memberships, and well-being. My findings provide a new perspective on the rejection identification model and the social cure properties of multiple group memberships. I discuss the important policy and practical implications of both manuscripts respectively.

In Chapter 5 (Kyprianides & Easterbrook, 2019), I present an investigation of an intervention with vulnerable groups (prisoners) based on the social cure approach. The manuscript reports two studies that evaluate, from a social identity perspective, Finding Rhythms, a charity program that brings prisoners together to create a professional music CD over six weeks of studio sessions. I distributed a questionnaire measuring FR group identification, psychological need satisfaction, and well-being, to participants at the commencement of the FR program and upon completion of the program 6 weeks later (Study 1; N = 104; 13 prisons). I also interviewed prisoners who took part in the program about the role of emergent social identities and group processes during the FR workshops (Study 2; N = 15; 2 prisons). I first show quantitatively that changes in identification with the group predicts increases in psychological need satisfaction, which predicts increases in well-being. Then I explore this qualitatively, finding some interesting insights: the group activities and identity not only bridge differences and pre-existing boundaries between prisoners during the group activities, but also back within prison, and seem to affirm their dampened musician identities. This work applies theory to practice and provides an evaluative account of an innovative program using a robust and comprehensive mixed methods approach; and encourages practitioners to welcome creative projects that improve social life in prison and opportunities upon release.

Finally, in Chapter 6, I present a general summary of my findings and discuss their theoretical and practical implications. I also address the limitations of my research program and propose avenues for future research.

Chapter 2: Group identities benefit well-being by satisfying needs.

Abstract

Research has shown that being able to access multiple group identities is associated with enhanced health and well-being. Yet, little research has directly investigated whether group memberships are only beneficial because they facilitate interpersonal relationships among members. We designed a series of experiments that: a) primed either multiple group memberships or multiple interpersonal relationships (vs. films) and observed the effects on participants' induced negative moods (S1, N = 120); b) primed different types (S2, N = 317) and features (S3, N = 183) of groups and observed which led to the greatest increases in life satisfaction; and c) investigated whether feelings of connectedness and self-worth mediated these effects (S1-3). We found that priming relationships satisfied psychological needs and restored and enhanced well-being, but that priming group memberships did so to a greater extent, especially when participants reflected on the group's identity rather than its members. This work contributes to our understanding of why multiple group memberships are beneficial, and highlights how important social identities associated with groups can be for well-being.

Key words. *Social identity; mood; life satisfaction; psychological need satisfaction; multiple group membership*

Introduction

Group memberships and the social identities associated with them are capable of promoting adjustment, coping, and well-being (Cruwys, South, Greenaway, & Haslam, 2015; Gleibs et al., 2011; S.A. Haslam et al., 2005; S.A. Haslam et al., 2009). Furthermore, evidence has confirmed that the 'the more (groups) the merrier': belonging to *more* groups rather than fewer has a range of positive benefits (Jetten et al., 2015). Experiments have also shown that priming multiple group memberships increases resilience (Jones & Jetten, 2011), satisfies psychological needs and decreases depression (Greenaway et al., 2016), and leads to less negative mood (Cruwys et al., 2015). Although this body of research, dubbed 'the social cure', appears promising, it is open to criticism that group memberships are only beneficial because they facilitate interpersonal relationships among members (Christakis & Fowler, 2007; Christakis & Fowler, 2008). Challenging this claim, others have argued that groups provide something more than a simple conglomerations of personal relationships –*they cultivate a sense of shared social identification* (e.g. C. Haslam et al., 2014a). No experimental evidence yet supports this claim. In this paper, we present three experiments that address these issues by: a) priming either multiple group memberships or multiple interpersonal relationships (vs. films) and observing the effects on participants' induced negative moods (S1); b) priming different types (S2) and features of groups (S3) and observing which leads to the greatest increases in well-being; and c) investigating whether psychological need satisfaction mediates these effects (S1-3). In doing so, we sought to compare the beneficial effects of priming multiple group memberships versus priming multiple interpersonal relationships, and then examine potential underlying mechanisms.

Benefits of group memberships

Research shows that group memberships can be beneficial for individual health and well-being (Cruwys et al., 2014b; Gleibs et al., 2011; Greenaway et al., 2016). Furthermore, the benefits of group memberships seem to be additive; both Jetten et al. (2015) and Steffens et al. (2016) found that identifying with a greater number of groups is associated with more positive outcomes (Jetten et al., 2015; Steffens et al., 2016). Both of these papers employed a longitudinal design, suggesting that people who belonged to more groups consequently had higher self-esteem rather than the reverse.

Although such longitudinal designs are suggestive of the direction of effects, little of the work in this 'social cure' tradition has investigated causality through experimental designs. An exception is Cruwys and colleagues (Study 2, 2015), which investigated whether a manipulation of social identity salience could reduce depressive attributions and negative mood following task failure. Participants in the social identity salience conditions wrote about either one or three of their important group memberships. These participants reported reduced negative mood and made more positive attributions than participants in the control condition. Jones and Jetten (Study 2, 2011) observed similar results in their experimental study of people's ability to withstand cold. Student participants were instructed to think of either one, three, or five, groups that they considered important, before putting their hand in a bucket of ice-cold water and being told to keep it there for as long as they could. Those in the 'one group' condition lasted *20 seconds less* than those in the 'five group' condition. Importantly, these experiments demonstrate the benefits that result from *priming* group memberships (see also, Greenaway et al., 2016).

The first goal of the research reported here is to add to the limited experimental evidence for the social cure by testing whether experimentally priming participants' multiple group identities has beneficial and restorative effects on their well-being. In study 1, we developed a new experimental paradigm to examine whether priming group identities can be *psychologically* restorative for participants who are placed in a negative mood.

Groups vs. Relationships

Although research suggests it is the *social identities* associated with groups that drive the beneficial effects of group memberships, there has yet to be an experimental investigation of whether group memberships are beneficial over and above interpersonal relationships, or vice versa. There is thus the possibility that group memberships are only beneficial because they facilitate interpersonal relationships among members (Christakis & Fowler, 2007; Christakis & Fowler, 2008). As an important next step, then, we investigate experimentally how far the beneficial effects of multiple group identities can be distinguishable from those associated with multiple interpersonal relationships. In doing so, we recognize this is posing a somewhat artificial distinction since, inevitably, many groups, especially those involving face-to-face interaction, are

also often the locus of people's important interpersonal relationships (Easterbrook & Vignoles, 2013). Indeed, such a natural conflation between group memberships and interpersonal ties presents the researcher with something of a methodological challenge. Nevertheless, for analytical purposes it is a challenge worth confronting.

The benefits for health and well-being of *close relationships* are well established (Holt-Lunstad et al., 2010; House et al., 1988; Slatcher & Selcuck, 2017). However, these studies rarely separate interpersonal relationships from group memberships. Thus far, correlational studies have compared the effects of group ties against individual ties. For example, Helliwell and Barrington-Levy (2012), using large-sample global and Canadian survey data, found that group identity variables (people's sense of belonging to their communities, province, and country) added significantly to the explanation of life satisfaction, and to a greater extent than did the interpersonal relationships variables. Jetten and colleagues (2015) found that measures relating to people's interpersonal relationships were weaker correlates of self-esteem than group identity variables. C. Haslam and colleagues (2016a) found that group ties are stronger correlates of cognitive health than individual ties, probably due to their capacity to enhance a sense of shared social identification. Finally, drawing on three waves of the English Longitudinal Study of Ageing, C. Haslam and colleagues (2014a) showed that group-based social engagement (vs. individual based social engagement) made a sustained and unique contribution to subsequent cognitive function.

Such studies suggest that group ties are especially beneficial because they cultivate social identification (also see Sani et al., 2012). However, the independent causal effects of relationships and groups remain ambiguous. Disentangling the effects on well-being of multiple groups, compared to multiple relationships, would indicate that it is the *social identities* associated with groups that drive their beneficial effects. Thus, the second goal of this research is to investigate experimentally how groups are important for well-being and psychological need satisfaction. We address this in study 1 by priming either multiple group memberships or multiple interpersonal relationships and observing the effects on participants' induced negative moods.

As noted above, we anticipate that there will be some overlap between priming multiple group memberships and multiple interpersonal relationships. People belong to many

different social groups, ranging from family, small friendship groups, flatmates, or work colleagues, to larger categories such as British, female, student, Muslim, or psychologist. The former usually involve face-to-face interactions and often meaningful interpersonal relationships; the latter often may not (C. Haslam et al., 2018a) and instead offer meaningful and shared identities (Deaux & Martin, 2000; Easterbrook & Vignoles, 2012, 2013; Postmes et al., 2015; Prentice, Miller & Lightdale, 1994). For small groups, then, especially, like families or hobby groups, a separation between 'groups' and 'relationships' is rather artificial. Nevertheless, groups may still offer something special *over and above* multiple interpersonal relationships. Indeed, as we saw in the preceding section, the *curative* properties of groups seem to be driven by the shared *social identity* that groups provide their members with, rather than group membership *per se* (i.e., by simply having a multitude of social relationships bounded within any given group; e.g., Cruwys et al., 2014b). We thus argue that groups provide people with clearly defined identities *as well as* interpersonal relationships (Easterbrook & Vignoles, 2013). With this in mind, we aimed to investigate (a) whether groups can restore (study 1) and enhance (studies 2 and 3) well-being, and (b) examine whether groups can restore (study 1) and enhance (studies 2 and 3) well-being more so than relationships can.

Mediating processes underlying the beneficial effects of groups

We also examine *why* groups might confer well-being benefits. Research on mediating processes underlying positive outcomes associated with group memberships has suggested that social identities enhance well-being because they provide their members with the important psychological resources that are required for well-being (e.g., C. Haslam et al., 2018a). But there has never been a direct comparison of the processes that might link group memberships *and* interpersonal relationships to well-being. We address that gap here.

Previous research has established social support as one of the core mediators of favourable group membership outcomes (e.g., Alnabulsi & Drury, 2014; S.A. Haslam et al., 2005). A shared social identity among people acts as a basis for both giving and receiving social support (Drury et al., 2015, S.A. Haslam et al., 2005), which in turn benefits well-being (e.g., Johnstone, Parsell, Jetten, Dingle & Walter, 2015). Critically, research has demonstrated that group identification also increases the *perception* that

fellow group members will be supportive (Alnabulsi & Drury, 2014). As C. Haslam and colleagues explain (2018a), this may be because all group members become interchangeable exemplars within one's self-concept, and so each is a potential source of support. Beyond social support, groups also provide feelings of belonging or relatedness, in part because of the interactions among group members, but also through the self-categorization perceptions of similarity and self-stereotyping typically associated with large and abstract social categories with clear collective identities (Easterbrook & Vignoles, 2013; Hogg & Hains, 1996; 1998). We thus argue that, apart from the actual support groups provide, social identities create a subjective sense of connectedness that relies on the *perception* of connectedness amongst group members.

Of course, these needs can also be satisfied by interpersonal relationships. Relationships provide feelings of intimacy and relatedness, which account for some of the beneficial effects of relationships on well-being (Baumeister & Leary, 1995; Deci & Ryan, 2000; Hadden, Smith & Lee, 2013; La Guardia & Patrick, 2008). Relationships have also been shown to enhance perceptions of social support (Pennington, Gillen & Hill, 1999), which in turn reduce anxiety (Boyes, 2015). This work demonstrates that relatedness and social support may mediate the beneficial effects of both relationships and groups (R.M. Ryan & Deci, 2000; Becker et al., 2014).

In addition, both groups and relationships can enhance a sense of self-esteem, competence and effectiveness (Vignoles, Regalia, Manzi, Golledge, & Scabini, 2006). In regard to groups, self-esteem has been established as a core mediator of the positive outcomes associated with groups (e.g., Greenaway et al., 2015, 2016), and previous research has shown that social identities act as sources of self-esteem (e.g., Jetten et al., 2015), and that the fulfilment of this need benefits well-being (e.g., Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999). Groups can also impart feelings of competence to group members as they enact their social roles and receive encouraging feedback from their supportive group members (Deaux & Martin, 2003; Stets & Burke, 2000), and because groups can achieve things as collectives that individuals cannot (Bettencourt & Sheldon, 2001; Greenaway et al., 2016). Regarding relationships, competence fulfilment plays a key role in relationship satisfaction primarily because people can only be truly responsive to a partner's needs if they feel competent and adequate in the relationship (Patrick, Knee, Canevello, & Lonsbary, 2007). Romantic

relationships, especially, provide people with increased self-esteem (Luciano & Orth, 2017) because people internalize their partner's positive judgments of them (Boyes, 2015). Romantic relationships may also enable people to achieve things they could not as individuals (Gabb, Klett-Davies, Fink, & Thomae, 2013). Thus, self-esteem and competence may mediate the benefits of both relationships and groups; and these two needs are similar in that they both relate to a sense of effectiveness and personal value (Becker et al., 2014; R.M. Ryan & Deci, 2000). We therefore also test whether these needs mediate the positive outcomes associated with group memberships.

Study 1

Feeling unhappy – that is, being in a negative affective state – is one of the many forms encompassed by the broad construct of well-being (Diener, 1984). In the first study we adopt this conceptualization, and operationalize well-being as the presence of positive mood and the absence of negative mood (Diener & Emmons, 1984). Cruwys and colleagues (2015, Study 2) found that people reported less negative mood after thinking of their important group memberships, compared to a control condition. We build on this by investigating whether *psychological* resilience – that is, *recovery* from a negative mood state – can be increased by thinking of important group affiliations. Importantly, we did not constrain participants as to the kinds of groups they might think about because we did not want to rule out *a priori* small groups since these are so manifestly important to many people (Lickel et al., 2000).

We tested the following hypotheses:

(H1) Thinking and writing about important group memberships or important interpersonal relationships will have positive effects on mood, in comparison to thinking and writing about films; but thinking and writing about important group memberships will be more beneficial than thinking and writing about important interpersonal relationships.

(H2) The satisfaction of psychological needs of connectedness and self-worth will mediate the restorative effect of group memberships on mood.

In Study 1 we set out to test these hypotheses using a novel experimental procedure. We also conduct a thematic analysis on participants' reflections of their important group memberships and relationships. We report all measures, manipulations, and exclusions in this study. All studies were approved by the relevant institutional ethics committee.

Method[ii]

Participants and design. We first conducted a pilot study with 60 university students (36 female; Age: M=22.72, SD=2.99, Range = 19-33 years) to determine a suitably powered sample size for study 1. Power analysis (using G*Power) indicated that 120 participants across three conditions would be required to detect an effect similar to that found in the pilot study (using the pilot study effect size of the critical and significant 'groups vs. relationships' comparison observed there), with 80% power and $\alpha = .05$. The sample therefore consisted of 120 people (80 female; Age: M=23.48, SD=5.65, Range = 18-60 years), with 40 participants in each condition. Participants were either university students or people that used a public library. No participants were excluded from the study. We employed a 2 (time: mood pre-manipulation vs. mood post-manipulation) x 3 (experimental condition: groups vs. relationships vs. films) mixed design, with experimental Condition as a between-subjects factor and Time as a within-subjects factor. Well-being was operationalized as relative positive affect.[iii]

Procedure, materials and measures. Participants were tested individually. First, they underwent a negative mood induction procedure. This comprised a combination of two well-established mood induction methods, Prokofiev's *Russia under the Mongolian Yoke* played at half speed (Clark, Iversen, & Goodwin, 2001), and writing about an unhappy life event (Fishbach & Labroo, 2007). We did extensive pre-testing that confirmed the effectiveness of our experimental manipulation.[iv]

Immediately after the mood induction, participants reported their mood with a version of the Positive and Negative Affect Schedule (PANAS; adapted from D. Watson, Clark, & Tellegan, 1988). Participants were asked to indicate the extent to which they were experiencing six positive emotions (e.g. happy; $\alpha = .75$) and six negative emotions (e.g. down; $\alpha = .92$) using a 5-point scale ranging from 1 *Not at all* to 5 *Extremely*. We

reverse coded the negative emotion scales and the mean PANAS score of all items served as our measure of relative positive affect pre-manipulation ($\alpha = .90$).

Next, participants completed the experimental manipulation. They were randomly assigned to write about *either* three important social groups ('Family'[v] (31%) was the most frequent response in the Groups condition, followed by 'Nationality' (16%) (*n*=40)), *or* three important interpersonal relationships ('Relative' was the most frequent response (36%) in the Relationships condition, followed by 'Friend' (26%) (*n*=40)), *or* three films/ TV programs of their choice (*n*=40). We selected three groups, as this had proved to be a sufficient number to demonstrate an effect in previous research (Cruwys et al., 2015, Study 2), and because using three groups avoids any idiosyncratic effects due to any one particular group. We chose films as the control condition because we wanted the control task to be as engaging as the other conditions but without any explicit reference to relationships or groups. Those in the Groups condition were given ten examples of social groups (e.g., age, gender, nationality, sports club, my family) and were told that 'these are a number of groups that are important to people. Some are social category memberships, and some involve face-to-face interactions with people.' Those in the Relationships condition were given ten examples of relationships (e.g., romantic partner, relative, friend, teacher, flat mate) and were told that 'these are a number of people that may be important to you. All involve close individual relationships with people'.

After choosing three groups or relationships, those in the Groups and Relationships conditions indicated how much they agreed with the statements '*This group/ relationship is important to me', and 'I identify with this group/ relationship',* on a scale from 1 *Strongly disagree* to 7 *Strongly agree,* before they read the following instructions: *'Now take a moment to think about your groups/relationships. In a few words, please describe why your group/relationship is important or unimportant to you.'* Participants in the control condition rated how much they liked the films they had listed on a scale from 1 *Not at all* to 7 *Very much*, before describing each film in a brief sentence. Participant booklets looked identical so the experimenter was blind to the condition that each participant had been assigned to.

Next, participants reported their mood again by completing a second (adapted) 12-item PANAS, which served as our measure of relative positive affect post-manipulation (α = .93; PA items post-manipulation α = .81, NA items post-manipulation α = .94). This contained slightly different items from the pre-test measure to avoid repetition and boredom, to obscure the purpose of the manipulation and hence discourage socially desirable responding (e.g. sad and cheerful).

Prior to completing demographic information, participants completed a series of measures that were included as potential mediators, presented to participants in random orders.[vi] All measures used a 5-item scale ranging from 1 *Strongly Disagree* to 5 *Strongly Agree.* These included four items measuring social support *(e.g. 'I can get the emotional support I need from other people'*; α = .94; S.A. Haslam et al., 2012); three items measuring self-esteem *(e.g. 'On the whole, I am satisfied with myself';* α = .94; Jetten et al., 2015); three items measuring competence (e.g. *'I feel that I can successfully complete difficult tasks and projects'*; α = .94; Deci & Ryan, 2000), and three items measuring relatedness *(e.g. 'I feel a sense of contact with people who care for me and whom I care for'*; α = .95; Deci & Ryan, 2000). Participants were finally thanked and debriefed.

Results

Manipulation checks. Our manipulations were successful. Replicating the pilot study, mean relative positive affect pre-manipulation (M = 2.26, SD = .69) was significantly lower than the mid-point of 3 on the 5-point mood scale, 95% CI [-.86, -.61], t (119) = -11.69, p < .001. We were also successful in priming participants to focus on their *important* groups or relationships, defined by whether importance of, and identification with, the group or relationship was above the mid-point (4) on the 7-point importance, and identification, scales. Mean importance for groups and relationships (M = 6.41, SD = .73) was significantly higher than the mid-point of 4, 95% CI [2.25, 2.57], t (79) = 29.73, p < .001; and mean identification for groups and relationships (M = 6.33, SD = .69) was significantly higher than the mid-point 4, 95% CI [2.17, 2.48], t (79) = 30.02, p < .001. Furthermore, we are confident that participants were thinking of groups in the group condition, relationships in the relationship condition, and films in the film condition, as 100% of participants in the groups condition actually wrote about groups,

98% of participants in the relationships condition actually wrote about relationships, and 100% of participants in the films condition actually wrote about films.

Groups prime effect (H1). Hierarchical multiple regression was used to examine the effects of condition on post-mood, controlling for pre-mood, using two orthogonal contrasts: 'Social vs. Control' (effect-coded: groups (1), relationships (1), films (-2)); 'Groups vs. Relationships' (effect-coded: groups (1), relationships (-1), films (0)) (see Table 1). The addition of 'Social vs. Control' and 'Groups vs. Relationships' (Model 2) to Model 1 significantly improved the model fit, $\Delta R^2 = .51$, $F(2, 116) = 62.85$, $p < .001$, and both contrasts significantly predicted post-mood ('Social vs. Control': $\beta = .68$, $p < .001$, CIs [.33, .48], Cohen's $d = 2.16$; 'Groups vs. Relationships': $\beta = .24$, $p < .001$, CIs [.11, .37], Cohen's $d = .86$). Thus, replicating the large effect size in the pilot study, participants in the Groups ($M = 4.31$, $SD = .62$) and Relationships ($M = 3.87$, $SD = .38$) conditions reported significantly more post-manipulation enhanced overall mood compared to Control ($M = 2.82$, $SD = .66$), and thinking about Groups also enhanced mood significantly more than thinking about Relationships.

Table 1. *Hierarchical multiple regression predicting post-relative positive affect from 'Social vs. Control' and 'Groups vs. Relationships': Study 1*

	Overall-affect Post-Manipulation							
	Model 1				Model 2			
Variable	B	*Std. Error*	β	95% CI (B)	B	*Std. Error*	β	95% CI (B)
Constant	3.36***	.26		[2.84, 3.88]	3.52***	.19		[3.15, 3.88]
Pre-affect	.14	.11	.11	[-.09, .36]	.06	.08	.05	[-.09, .22]
Social vs. Control					.41	.04	.68***	[.33, .48]
Groups vs. Rels					.24	.07	.24***	[.11, .37]
R^2	.01				.53			
F	1.46				42.89***			
ΔR^2	.01				.51***			
ΔF	1.46				62.85***			

Note. $N = 120$. ***$p < .001$

Mediators of the effect of the Groups prime (H2). [vii] Several of the proposed mediators are conceptually similar, particularly relatedness and social support, which

both relate to the sense of connection and solidarity with others, and competence and self-esteem, which both relate to a sense of effectiveness and personal value (R.M. Ryan & Deci, 2000). Indeed, they were all highly correlated with one another ($r > .60$; see Table 2). To determine whether it would be more parsimonious to collapse some of the needs into composites, we conducted an exploratory factor analysis using principal axis factoring and direct oblimin rotation of two factors (based on an initial scree plot and eigenvalues > 1). Factor 1 contained the items measuring social support and relatedness, and accounted for 71% of variance, with all factor loadings above .69 and no cross loadings above .30; Factor 2 was formed of the items measuring self-esteem and competence, and accounted for 11% of variance, with all factor loadings above .84 and no cross loadings above .30. We thus merged the self-esteem and competence items into a Self-Worth factor ($\alpha = .96$), and the relatedness and support items into a Connectedness factor ($\alpha = .96$).[viii]

Table 2. Pearson correlations between means of each mediator

	Self-esteem	Relatedness	Competence
Support	.69**	**.81****	.67**
Self-esteem		.69**	**.87****
Relatedness			.69**

Note. Bold correlations indicate relationships between needs that were combined into composite measures. ** $p < .01$.

We used Hayes' PROCESS (2012) model 4 to specify a multiple mediation model with the two needs mediating the effects of the 'Groups vs. Relationships' contrast on post-mood, with the 'Social vs. Control' contrast and pre-mood as covariates (see Figure 1). This model showed that connectedness and self-worth were underlying the effects of the critical 'Groups vs. Relationships' comparison. Once these needs were included in the model, 'Groups vs. Relationships' *only indirectly* predicted relative positive affect via connectedness (indirect = .09, CIs [.02, .20]) and via self-worth (indirect =.22, CIs [.10, .38]). The direct effect of 'Groups vs. Relationships' on relative positive affect was not significant (direct = .01, CIs [-.10, .12]). Thus, after a negative mood induction, participants who thought about groups had an enhanced mood compared to those who thought about relationships, and this was due to increased feelings of connectedness and self-worth.
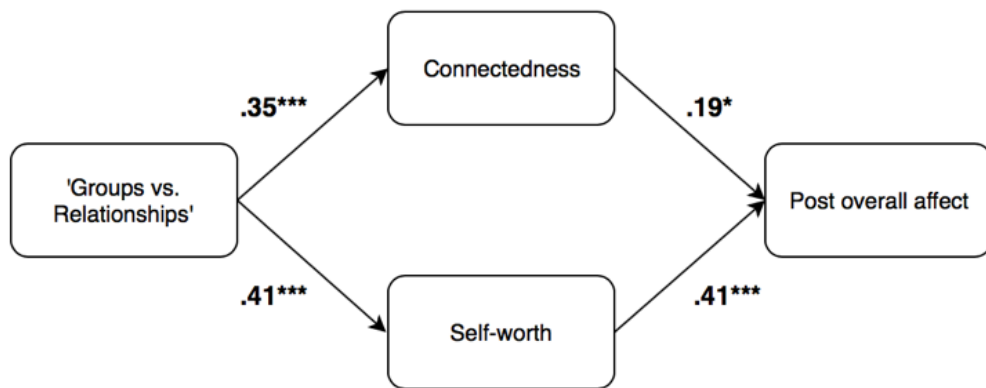
Figure 1. Regression coefficients for the relationship between 'Groups vs. Relationships' and relative positive affect post manipulation as mediated by connectedness and self-worth, controlling for 'Social vs. Control' and relative positive affect pre-manipulation.
*p < .05; ***p < .001

Qualitative responses: Groups vs. Relationships.[ix] Before we designed Study 2, we undertook a thematic analysis – a qualitative method used for 'identifying, analyzing and reporting patterns (themes) within data' (Braun & Clarke, 2006) – of Study 1 participants' responses to the instruction 'please describe why your group/ relationship is important or unimportant to you' to investigate whether (a) there is indeed some overlap in what participants wrote about in the groups condition, compared to the relationships condition; and (b) whether the groups manipulation did indeed invoke identities and psychological needs (that matched our theoretical predictions and quantitative results) in a way that the relationships manipulation did not. An independent researcher trained in thematic analyses and blind to the conditions and purpose of the study was provided with a random sample of 20 participant responses. The researcher then devised a coding framework by coding participants' responses and grouping these codes into themes. We then used this coding framework to analyze participants' responses. The following is structured in terms of the main themes which emerged from the responses.

We gained insight into the additional functions that groups provide (in comparison to relationships). Our qualitative analysis of participants' responses revealed an important distinction between the functions of groups and relationships: like relationships, groups allow people to interact with one another (46% of participant responses in the groups condition, and 50% of participant responses in the relationships condition made

references to interactions), but, additionally, groups also provide people with a clearly defined *identity* (38% of participants in the groups condition vs. 3% of those in the relationships condition made references to their social identity). Here are two examples:

I love being an Indian. It is who I am. I am proud to be a part of it. I love variety in my life and being an Indian allows me to enjoy different cultures. I love being with other Indians.

Besides my family, my health and fitness are the most important aspect of my life. My job as a trainer has become a part of who I am for 20 years.

These suggest that social groups are valued by participants because they provide them with a self-definition that helps them to understand themselves and their social world, and that this satisfies psychological needs and enhances well-being. In fact, we found that both relationships and groups seemed to offer feelings of support and relatedness, but that groups additionally satisfy self-esteem and competence needs. Participants writing about their groups, like those writing about their relationships, wrote about the feelings of support (mentioned by 65% of participants in the groups condition and 60% of participants in the relationships condition) and relatedness (mentioned by 54% of participants in the groups condition and 43% of participants in the relationships condition) they receive from their group members. For example, one participant explained that his flatmates are very supportive: 'Essentially my family away from my family. They are so supportive and there for me and by my side in anything I want to do'. Another participant described how his nationality offers feelings of relatedness: 'it's important to me to feel at home in this country by meeting and spending time with others who share the same nationality – we have a lot in common and share the same lifestyles.' The group identity here (that of nationality) appears to lay the foundation for friendships with those who share the identity (Hogg & Hains, 1996), so connectedness does not appear to be derived solely from interpersonal intimacy.

However, in contrast to relationships, groups also provided people with a sense of self-esteem (mentioned by 25% of participants in the groups condition vs. 2% in the relationships condition) and competence (mentioned by 31% of participants in the groups condition vs. 0% in the relationships condition). For example, one participant

described his 'PhD group' as 'important from a professional and motivational point of view and for [his] self-confidence'; and another participant wrote that his sports team 'motivates [him] to perform well for the team, it makes [him] feel like a better player.'

Our qualitative analysis therefore suggests that there is some overlap in what participants wrote about in the groups condition, in comparison to the relationships condition, but, nevertheless, there is clear evidence that the group manipulation did invoke identities and additional psychological needs in a way that the relationships manipulation did not. In the next two studies, then, we sought to provide quantitative evidence for the idea that priming social groups leads to stronger effects than priming relationships due to the social identities that are unlocked, and that this satisfies psychological needs and enhances well-being.

Studies 2 and 3

In the next two studies we built on Study 1 by investigating the mechanisms through which groups can enhance well-being. To do this, we primed different types (Study 2) and features (Study 3) of groups and observed which led to the greatest increases in well-being, in an attempt to disentangle identity effects from other collateral effects of groups and relationships.

It is important to note, however, that, while differentiating between different types of groups is a useful research methodology to disentangle the dual functions of groups – the provision of a social identity as well as a base for interactions - in reality both functions are dynamic, mutually reinforcing, and present in virtually all groups (Deaux & Martin, 2000; Easterbrook & Vignoles 2012; 2013; Prentice et al., 1994; Postmes et al., 2005; Reicher, 2001). The dichotomy between social categories and interpersonal networks therefore should not be reified. In Studies 2 and 3, then, we asked participants to reflect on either social categories or social network groups merely as a useful way of empirically distinguishing different group functions, rather than an endorsement of any particular typology of groups.

We conducted studies 2 and 3 online, which allowed us to collect a more heterogeneous sample than the student participants in study 1. Partly for this reason, we also removed

the initial mood induction (impractical and unethical to implement online) and focused on a different and more general well-being outcome — life satisfaction, another form that the construct of well-being encompasses (Diener, 1984), and a measure that has been used in previous social cure work (Greenaway et al., 2016) — thus testing the generalizability and effectiveness of group priming manipulations beyond their ability to raise artificially dampened mood.[x]

We hypothesized that:

(H3) Thinking about groups that have stronger identities will have positive effects on life satisfaction in comparison to thinking about groups that are more focused on interactions.

(H4) The satisfaction of psychological needs of connectedness and self-worth will mediate the beneficial effect of group identities on life satisfaction.

Study 2

We report all measures, manipulations, and exclusions in this study.

Method

Participants and design. An online survey was advertised on social media and completed by 317 participants (185 female; Age: M=26.72, SD=9.05, Range = 16-77 years).[xi] Of these, 84 participants dropped out at very early stages of the survey and were therefore excluded from the study. Participants were randomly assigned to one of the three conditions (social categories vs. social networks vs. relationships). All participants then completed measures of psychological need satisfaction (relating to their groups or relationships) and well-being.

Materials and measures

Conditions. In the Social categories condition (n= 103)/ Social networks condition (n = 110)/ Relationships condition (n = 104), participants were provided with a brief definition of a social category/ social network/ relationship and were asked to list three of their social categories/ social networks/ relationships. These definitions were

respectively: "Social categories can be very large and inclusive such as nationality, gender, or age, or more exclusive, such as Sussex University students. You do not have to know all the members of the category, you only need to consider yourself a member of that category" (nationality (26%) was the most frequent social category listed, followed by profession (21%) and gender (19%)); "Social networks can be anything from formal organisations such as your group of work colleagues, to informal groups such as your family, friends, and flatmates, but you should know all or most of the members of the group personally" (family (34%) was the most frequent social network listed, followed by group of friends (30%) and group of colleagues (17%)); "An interpersonal relationship is a strong, deep, or close association or acquaintance between two people that may range in duration from brief, such as a teacher or flat mate, to enduring, such as a romantic partner or relative" (relative (36%) was the most frequent relationship listed, followed by romantic partner (23%) and friend (22%)).

Psychological need satisfaction. Participants then completed measures of psychological need satisfaction relating to each of their three social categories, social networks, or relationships (same needs as in Study 1). Participants' listed social categories, social networks, or relationships were re-displayed on these subsequent pages, so that they could be seen whilst being rated. All items used a 5-item scale from 1 *Strongly Disagree* to 5 *Strongly Agree* that consisted of a single item for each need. These measured: social support ('This group/ relationship makes me feel like I have the support I need from other people'; $\alpha = .71$; adapted from items used in S.A. Haslam, Reicher & Levine, 2012), self-esteem ('This group/ relationship gives me high self-esteem'; $\alpha = .76$; single-item self-esteem scale; Robins et al., 2001), competence ('This group/ relationship makes me feel that I am good at what I do'; $\alpha = .78$; adapted from Basic Psychological Needs Scale (BPNS); Deci & Ryan, 2000), and relatedness ('This group/ relationship makes me feel close and connected to the people that are important to me'; $\alpha = .72$; adapted from Basic Psychological Needs Scale (BPNS); Deci & Ryan, 2000). We computed the mean rating for each of the needs by averaging the three items assessing that need (one for each relationship/group).

Well-being. Life satisfaction served as our measure of well-being. Life satisfaction was measured using the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, &

Griffin, 1985) and the mean SWLS score of all items served as out measure of life satisfaction (α = .93).

Results

Types of groups: social categories vs. social networks. The following contrasts were computed: 'Social categories & Networks (groups) vs. Relationships' (effect-coded: categories (1), networks (1), relationships (-2)), and 'Social categories vs. Social networks' (effect-coded: categories (1), networks (-1), relationships (0)) which, when included in the same regression model, both significantly predicted life satisfaction ('Social categories & Networks (groups) vs. Relationships': β= .43, p < .001, CIs [.37, .59], Cohen's d = .97; 'Social categories vs. Social networks': β= .10, p = .04, CIs[.01, .38], Cohen's d = .30). In other words, social categories (M = 5.32, SD = 1.44) and social networks (M = 4.93, SD = 1.08) supported higher life satisfaction than relationships (M = 3.70, SD = 1.65), and, critically, social categories supported higher life satisfaction than social networks. We are confident that participants were responding to the conditions correctly because we checked that those in the social categories, social networks, and relationships conditions listed social categories (97%), social networks (95%), and relationships (97%), respectively.

Mediators of the social categories vs. social networks effect. We created the same two composite need measures as in Study 1: Self-Worth (α = .91) and Connectedness (α = .90). Tests for evidence of mediation were conducted using PROCESS (2012) model 4. We specified a multiple mediation model with the two needs mediating the effect of the 'Social categories vs. Social Networks' contrast on life satisfaction, with 'Social categories & Networks (groups) vs. Relationships' as a covariate (see Figure 2).[xii] This model showed that connectedness and self-worth were underlying the effects of the critical 'Social categories vs. Social Networks' comparison. Once these needs were included in the model, 'Social categories vs. Social Networks' *only indirectly* predicted life satisfaction via connectedness (indirect = .07, CIs [.02, .16]) and via self-worth (indirect =.06, CIs [.01, .14]). The direct effect of 'Social categories vs. Social Networks' on life satisfaction was not significant (direct = .07, CIs [-.08, .23]). Thus, participants who thought about groups that have stronger identities had a more positive

outlook on life than participants who thought about groups that are more focused on interactions, and this was due to increased feelings of connectedness and self-worth.
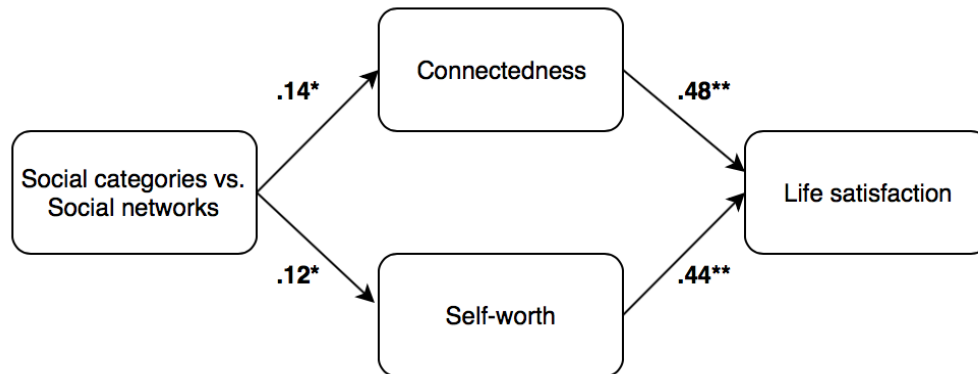
Figure 2. Regression coefficients for the relationship between 'Social categories vs. Social networks' and life satisfaction as mediated by connectedness and self-worth, controlling for 'Social categories & Networks (groups) vs. Relationships'.
*$p < .05$; **$p < .01$.

Study 3

Study 2 showed that participants who wrote about groups had a more positive evaluation of their life than participants who wrote about interpersonal relationships. Critically, however, supporting H3, participants who wrote about social categories had a more positive evaluation of their life than participants who wrote about social networks. The greater beneficial effect of social categories was due to the greater feelings of connectedness (social support and relatedness) and self-worth (self-esteem and competence) they provided (supporting H4). These results suggest that the clear collective identities that groups provide may be driving the findings from our first two studies: that groups are beneficial for well-being because these identities more strongly satisfy the psychological needs for self-worth and connectedness.

In study 2, we used social categories versus social networks to distinguish empirically the group functions of providing clear identities and a base for interactions. In study 3, we determined whether it is indeed these group *identities* that are responsible for the beneficial effects on well-being by taking a more focused approach to assessing these two group functions. Firstly, we asked participants to think of groups that either offer them clear identities or that support their interactions, thus using more realistic instructions and removing the false dichotomy of categories and networks. Second,

because we found that groups were consistently more beneficial than relationships, we decided to focus only on the dual functions of groups and hence dropped relationships from the design. We report all measures, manipulations, and exclusions in this study.

Method

Participants and design. An online survey was administered and completed by 183 participants (111 female; Age: M=27.51, SD=12.58, Range = 15-78 years), who were recruited through social media advertisements online.[xiii] Of these, 59 participants dropped out at very early stages of the survey and were therefore excluded from the study. Participants were randomly assigned to one of the two conditions (group identity vs. group interaction). All participants then completed measures of psychological need satisfaction and well-being.

Materials and measures

Conditions. In both conditions, participants were provided with a brief definition of a social group: "People belong to many different social groups, ranging from small friendship groups, flatmates, or work colleagues, to larger and more inclusive categories of people such as British, female, University of Sussex student, Muslim, footballer, or psychologist." They were then asked to write down three groups that they belonged to and were important to them. Participants in the Group identity condition (n = 90) were provided with the following instructions: "Now, please spend some time thinking about how these group memberships affect your sense of who you are, or your identity. Please try to describe in a few sentences how these group memberships affect your sense of who you are." (profession (34%) was the most frequent group listed, followed by nationality (24%) and religion (9%)); whereas participants in the Group interaction condition (n= 93) were provided with the following instructions: "Now, please spend some time thinking about what it is like when you interact with other members of these groups. Please write down a few sentences about what it's like to interact with other people who are members of these groups." (group of colleagues (21%) was the most frequent group listed, followed by group of friends (19%) and family (18%)).

Psychological need satisfaction. Participants then completed measures of psychological need satisfaction (same needs as in Studies 2 and 3). All measures used a 5-item scale from 1 *Strongly Disagree* to 5 *Strongly Agree,* and were made up of the same items used in Study 1. These included items measuring social support ($\alpha = .96$), self-esteem ($\alpha = .96$), relatedness ($\alpha = .94$), and competence ($\alpha = .97$).

Well-being. As in Study 2, life satisfaction was measured using the SWLS ($\alpha = .97$).

Type of group. At the end of the survey participants were asked to indicate whether the groups they listed at the beginning of the survey were a Social Category or a Social Network. This was in order to be able to determine whether participants primarily drew on their social category memberships when asked to consider their group memberships that provide them with clear identities, and on their network groups when asked to consider their group memberships that afford them interpersonal interactions.

Results

In line with our hypothesis, our manipulation primed participants to choose specific kinds of groups - social categories when asked to think about the identities groups provide them with (67% of participants in the group identity condition focused on social categories), and social networks when asked to think about what it's like to interact with fellow group members (79% of participants in the group interaction condition focused on social networks).

There was a significant association between Condition and Type of group (categories vs. networks) for each of the three groups that participants listed: $\chi(1) = 60.46$, $p < .001$ (group 1); $\chi(1) = 32.67$, $p < .001$ (group 2); $\chi(1) = 31.06$, $p < .001$ (group 3). Participants primarily drew on their social category memberships when asked to consider their group memberships that provide them with clear identities, and on their network groups when asked to consider their group memberships that afford them interpersonal interactions.

Functions of groups: group identity vs. group interaction. An independent groups t-test showed that life satisfaction differed by condition $t = 7.98$, $p < .001$. The mean life satisfaction score for those in the group identity condition (M = 5.90, SD = 1.27) was

higher than for those in the group interaction condition (M = 4.16, SD = 1.64) (M_{diff} = 1.74, CIs [1.31, 2.17], Cohen's *d* = 1.18).

Mediators of the category group identity vs. network group interaction effect. We created the two composite needs measures of Connectedness (α = .96) and Self-worth (α = .97). Tests for evidence of mediation were conducted using PROCESS (2012) model 4. Condition was coded as Category group identity (2) and Network group interaction (1). There was a significant *indirect* effect of Condition on life satisfaction via connectedness (indirect = .36, CIs [.041, .631]) and via self-worth (indirect = 1.21, CIs [.870, 1.64]); but the direct effect of Condition on life satisfaction was not significant (direct = -.17, CIs [-.190, .528]). (see Figure 3).
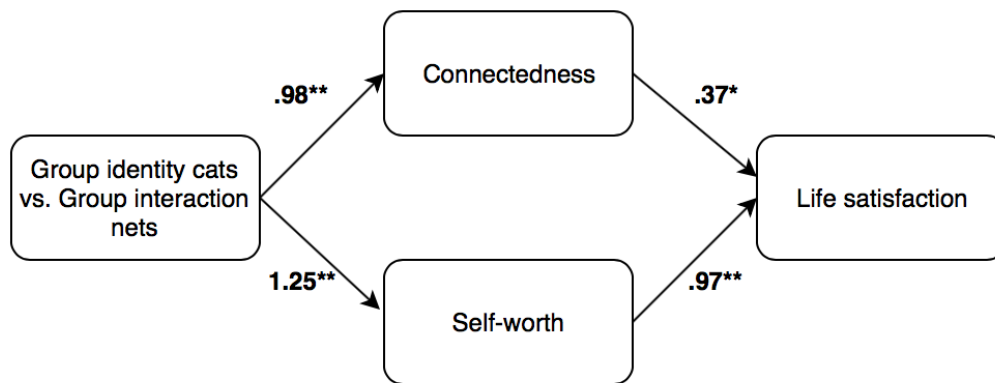
Figure 3. Regression coefficients for the relationship between condition and life satisfaction as mediated by connectedness and self-worth.
*p < .05; **p < .001.

General discussion

Across three studies, we report the first *experimental* evidence demonstrating that reflecting on one's important group memberships satisfies the psychological needs of connectedness and self-worth to a greater extent than reflecting on one's important relationships, and thus better restores (study 1) and enhances (studies 2 and 3) well-being. Crucially, we also demonstrated that the additional benefit to well-being associated with groups was driven by the collective identities they provide (studies 2 and 3).

Study 1 demonstrated that people who suffered an immediate emotional challenge benefited from pondering on their group memberships; suggesting social identities can provide a cognitive resource that promotes psychological resilience. We also provided

experimental evidence suggesting multiple group memberships may protect well-being to a somewhat greater extent than interpersonal relationships (experiment 1) because they provide strong identities (experiments 2 and 3). This latter finding demonstrates that, over and above providing more opportunities for building important relationships, groups provide something additional - clear social identities. The results of all three studies also demonstrated that the beneficial consequences of thinking about social groups when feeling down, and the ability of groups to promote a positive outlook on life, was partly due to the greater feelings of connectedness to others and sense of self-worth that groups provide. This complements and extends previous work (e.g., Greenaway et al., 2016) and provides a novel explanation of the potential additional well-being that groups can provide.

Our findings also have the potential to inform interventions. Research has shown the advantages that group memberships can have for people suffering depression (e.g., Cruwys et al., 2013). We complement this by showing that people who suffer an immediate emotional challenge in a lab-based context can benefit from pondering on their group memberships. This is an important advance because being able to bounce back from challenging situations could have real-world implications related to managing stress and lowering chances of depression (Charles, Piazza, Mogle, Sliwinski, & Almeida, 2013). The results from studies 2 and 3 also suggest that online group priming manipulations could be feasible interventions to promote a positive outlook on life. This, too, is an important advance because online interventions could help reach people who are hard to research, or who are immobile, or who struggle to engage in face to face interactions.

We acknowledge two limitations of the research presented here. First, we recognize the methodological difficulty inherent in experimentally disentangling the effects of groups from relationships. There may have been some overlap between the Groups and Relationships conditions in Study 1, but we addressed this issue in Studies 2 and 3. Second, Study 1 relied on a homogenous sample of students which might compromise generalizability. However, this disadvantage was outweighed by the tighter experimental control and greater participant engagement that individual participant testing afforded. Despite these limitations, our work provides rare experimental evidence that suggests that thinking about group memberships can restore and enhance

well-being to a greater extent than thinking about relationships, and that it does so because groups satisfy psychological needs through the collective identities they provide.

Chapter 3: Social factors boost well-being behind bars: the importance of individual and group ties for prisoner well-being.

Abstract

Background: Prisoners often suffer from social isolation and higher levels of ill-health and ill-being. Research has demonstrated the positive health consequences that stem from social interaction, and especially *group* ties, amongst non-offender populations.

Methods: This work is based on a secondary analysis of a large-scale dataset that includes data on prisoners residing in all prison establishments in the UK (Study 1: N = 11,880; prisons = 113), and on a questionnaire booklet that was completed by prisoners residing in one prison in the UK (Study 2: N = 157).

Results: Study 1 showed that positive prisoner interactions are associated with greater prisoner well-being, due to the feelings of autonomy that these interactions provide. Study 2 showed that prisoners who reported being members of multiple groups had higher well-being, an effect mediated by the satisfaction of particular psychological needs; and an effect moderated by group contact discrepancy.

Conclusions: This work provides evidence that strong prisoner ties and memberships in groups are associated with greater well-being among prisoners, and identifies psychological needs and group contact as explanatory mechanisms; which progresses the field and has important policy and practical implications.

Key words. social interaction; multiple group membership; psychological needs; social contact; well-being; prisoners.

Introduction

Health and well-being in UK prisons

There are currently 84,255 people incarcerated in the UK alone (Official Statistics, 2018), all of whom are at risk of poor mental and physical health (NAO, 2017). It has long been recognised that prisoners have complex health and well-being issues, including higher rates of physical (e.g. that stem from illness or physical victimisation) and mental health needs (e.g. that stem from depression, bipolar disorder, and schizophrenia), drug/ alcohol dependence, poorer access to health services, as well as backgrounds of poverty, unemployment, poor education and homelessness (Public Health England, 2016). Prisoners' mental health is further exacerbated by social isolation and prisoners suffer as a result of minimal social contacts and supports (NAO, 2017).

We therefore need to better understand what factors are capable of promoting the well-being of prisoners, and the processes through which these factors affect prisoner well-being. Well-being is a broad construct that has been defined in emotional, mental and physical terms (Diener, Oishi, & Lucas, 2002: 63), yet social connectedness may well be an important factor strongly affecting prisoners' well-being especially because prisoners are at high risk of social isolation – from each other and society in general (Nurse, Woodcock, & Ormsby, 2003). This paper investigates the potential beneficial role of social factors – interactions with fellow prisoners and group memberships – to prisoner well-being. Social connectedness – stemming from both close relationships (Slatcher & Selcuck, 2017; Holt-Lunstad et al., 2010) and social groups (Jetten et al., 2017; Greenaway et al., 2016; Cruwys et al., 2014a; Gleibs et al., 2011) - has been found to be a powerful predictor of people's physical and mental health. We thus consider the role of social ties in promoting the health and well-being of prisoners: in study 1 we investigate the association between *prisoner-to-prisoner relations* and well-being, and in study 2 we investigate the relationship between *multiple group memberships* (inside and outside prison) and well-being.

Prison social life in the UK

Sociological research on men's social relationships in prison has outlined two possible scenarios (e.g. Liebling & Arnold, 2012). One account describes strong social ties between prisoners characterized by high levels of in-group loyalty and cohesion, especially in contexts where prisoner subgroup relations have been hostile. The other account describes weak social ties between prisoners, reflecting a disorganized world of social caution and mistrust. On the other hand, Crewe's (2012) seminal work on the subject has revealed a detailed, critical, and complex view of prisoner relationships that cannot be neatly polarised into these two scenarios. Although it is clear therefore that prison social life is complex, with some negative aspects to it such as bullying and coercion, research (Setty, Sturrock, & Simes, 2014; Harvey, 2007, Crewe, 2012) points to the importance of interpersonal ties – inside and outside the prison – in maintaining prisoners' well-being by facilitating survival and adaptation to life inside.

However, we know little about prisoner group life in the UK, compared to the US evidence base that is far more developed (see e.g. Rhodes, 2014; Tewksbury, 2006). Prison establishments and conditions differ internationally, and prisoners experience a country-and cultural-specific social life in prison (see Jacobson et al., 2017). It is therefore important to note that my research speaks to *prisoners residing in UK prisons*. Studies in the UK have revealed that prisoner groups have not (yet) been associated with involvement in anti-social behaviour (Phillips, 2012). Setty and colleagues (2014) found that motivations to form groups in prison are based on perceptions of similarity, and, like Crewe (2012), Setty and colleagues (2014) found that the foundation of prisoner collectives, from the perspective of prisoners, is that one can rely on other people to 'help you out' or 'have your back'.

Work by Harvey (2007) explores the nature of support in prison. Harvey (2007) found that cell mate relationships had the potential to offer a unique supportive role, and that the more interaction and support prisoners received from the outside, the more capable they felt to utilise supportive relations on the inside. In both cases, these supportive social relationships benefitted prisoners' well-being. Later work by Crewe (2012) provided an in-depth analysis of HMP Wellingborough's social world. Like Harvey (2007), Crewe (2012) found that, although prisoner relationships were not *always* unequivocally supportive or beneficial due to a wide range of factors such as different

statuses among prisoners and power differentials, social relationships within the prison - friendships, interpersonal loyalties and affiliations, and social groups (formed around factors such as locality, religion, age, lifestyle, and criminal identity) – generally provided prisoners with material, social, and physical support. Prisoners' accounts in Earle and Phillips' (2015) ethnographic study of social relations in two male prisons also revealed that support and collective security is sourced through local affiliations with fellow prisoners.

The sociology of prison social life has clear links to the psychological literature on the benefits of social group memberships. For example, Setty and colleagues' (2014) account of prisoner groups in prison showed that 'collectives' (i.e. groups) in prison appear to be forming in response to the prison environment, and have meaning, serve purposes, and are thus beneficial for those involved. In addition, Setty's (2014), Harvey's (2007) and Crewe's (2012) accounts imply, like social cure theorists argue (e.g. Jetten et al., 2017), that social groups enhance well-being because they provide their members with the important psychological resources that are required for well-being (in these accounts, social support – an established mediator of the social cure effect (e.g. S.A. Haslam et al., 2012)). However, the reviewed research is limited and primarily qualitative, heavily relying on interview methods. This is a limitation because qualitative research may include biases and does not lend itself to statistical analysis and generalization (Creswell, 2013).

Based on the above review, we set out to provide quantitative evidence to assess whether social connectedness in prison is positively associated with well-being, and thus our first hypothesis is that prisoners' well-being will benefit from a positive social climate amongst prisoners, characterised by positive prisoner interactions (study 1, H1). We also aimed to develop the (little) research that exists on prisoners' *social groups* by taking this promising social psychological group-based approach to enhancing health and well-being – the 'social cure' – and exploring its applicability to a prison population. To this end, in study 2, we consider the role of prisoners' multiple group memberships in promoting well-being.

The social cure – is this the case for prisoners?

An emerging body of research has found that belonging to (many) social groups, particularly subjectively important groups that people identify with (i.e. groups that become a significant part of a person's self-concept that therefore are able to link people with others), enhances adjustment, coping, and well-being, especially for individuals dealing with illnesses, injuries, traumas, and/or stressors. The benefits of group memberships—dubbed the "Social Cure"—are well established (Jetten et al., 2012): people who belong to lots of groups – at home, work, the gym - are happier (Greenaway et al., 2016), healthier (Cruwys et al., 2014a), and more resilient (Gleibs et al., 2011) than people with few group memberships. Yet no research has investigated its applicability to prisoners, despite the promise of the approach among vulnerable populations.

We know from existing research findings that the beneficial consequences of groups are especially strong for those who are stigmatized or suffering, such as people suffering depression (Cruwys et al., 2014a), the elderly (Gleibs et al., 2011), and the homeless (Johnstone, Jetten, Dingle, Parsell, & Walter, 2016), who, like prisoners, are at high risk of social isolation. This work demonstrates that groups can be formed even within the most vulnerable populations, and that they have beneficial consequences for well-being and adjustment.

Study 2 thus questions whether the social cure properties of groups are present in prisoners' groups, but based on the qualitative research that exists on the benefits that stem from (a) group life in prison, and (b) ties to the outside, we predict that prisoners' well-being will actually benefit from membership in multiple groups (study 2, H1).

Psychological resources as a mediator

Although past research suggests that there will be a positive association between prisoners' social ties – prisoner relations and membership in lots of groups – and well-being, it is less apparent what factors may explain this association among this particular population, beyond offering prisoners a pool of social support. We therefore also examine *why* social relationships and groups might be beneficial for prisoners, considering the mediating role of the psychological needs of connectedness, self-worth,

and autonomy in explaining the beneficial effects of prisoners' social ties on their well-being.

Research on the deprivation of autonomy amongst prisoners dates back to Sykes' (1958; 2007) now-classic ethnographic account of the 'pains of imprisonment', that describes the negative impact a lack of autonomy has on prisoner well-being. Prisoners, Sykes (1958; 2007) argues, have no independence, are denied self-determination, and have very few choices; and being constantly controlled by officers can cause helplessness and frustration, leading to increased stress and aggression. We argue that social relationships and groups can afford people a sense of autonomy. Koudenburg and colleagues (2017) recently examined interventions that aimed to improve the health and social connections of marginalised individuals. They found that group inclusion stimulated the development of personal autonomy amongst these disadvantaged adults, and this appeared to make an important contribution to their recovery and mental health. Koudenburg and colleagues (2017) explained that social groups can provide their members with a sense of autonomy in two ways: by providing members with a stronger self-definition which, in turn, strengthens the experience of one's decisions as autonomous; and by providing its members with a platform to interact with fellow group members, making them aware of the ways in which they can uniquely contribute to the group, which leads to the perception of themselves as autonomous individuals.

We predict that positive relationships with other prisoners (study 1, H2) and multiple group memberships (study 2, H2) will be positively associated with autonomy satisfaction. In turn, autonomy satisfaction will predict prisoners' well-being (study 1 and 2, H3); and, therefore, that autonomy satisfaction will mediate the relationship between social integration – operationalised as positive interactions with other prisoners in study 1 (H4), and multiple group memberships in study 2, (H4) – and prisoners' well-being.

Social Cure theorists argue that social ties and group memberships satisfy a range of other needs necessary for well-being (Jetten et al., 2017). These include both giving and receiving social support (e.g., S.A. Haslam et al., 2012), self-esteem (e.g., Jetten et al., 2015), meaning (Greenaway et al., 2016) and personal control (e.g., Greenaway et al., 2016). A particularly relevant study by Kyprianides, Easterbrook, and Brown (under

review) demonstrated that the beneficial consequences of thinking about social groups when feeling down, and the ability of groups to promote a positive outlook on life, was partly due to the greater feelings of connectedness to others (operationalised as feelings of support and relatedness) and sense of self-worth (operationalised as feelings of self-esteem and competence) that groups provide.

In study 2, then, we also assess the mediating role of the psychological needs of connectedness (social support and relatedness), self-worth (self-esteem and competence), meaning, and control. We predict that multiple group membership will satisfy these psychological needs, alongside autonomy (study 2, H2), and, in turn, these needs will benefit prisoners' well-being (study 2, H3 and H4).

The role of social contact (moderator)

Seeking to investigate what factors may attenuate or exaggerate the relationship between multiple group memberships and well-being for prisoners, we consider the role of social contact. Social contact is likely to be particularly important among this population given the challenging reality of prisoner life in which prisoners are prohibited from seeing the people that they want to see.

The benefits for health and well-being of social contact are well established, as are the detrimental effects of a lack of social contact (for a review, see Holt-Lunstad et al., 2010). However, within the social cure literature, few studies have investigated whether social contact with group members is a significant predictor of well-being. In line with researchers who have argued for the importance of a person's social contact with groups (Sani et al., 2012), findings by Cruwys and colleagues (2016) showed that increased group contact enhances life satisfaction for undergraduate students. However, it remains to be seen whether social contact with group members affects the impact of multiple group memberships on well-being.

Considering the population under investigation, we address this gap in the literature further and consider the possibility that group contact *discrepancy* – the discrepancy between prisoners' actual social contact and prisoners' desired social contact – affects the link between multiple group memberships and well-being. We expect that this variable will be important among the prisoner population, which faces obvious barriers

that hinder social contact (SEU, 2002). Furthermore, theory on actual- desired discrepancies (e.g. self-discrepancy theory; Higgins, 1987) argues that high discrepancies cause emotional vulnerabilities; and research on *social contact* discrepancy has related high social contact discrepancy to negative outcomes such as difficulties in adjustment and adaptation (Zheng & Berry, 1991). In study 2 we thus consider group contact discrepancy as a moderator of the social cure effect, and predict that the well-being benefits associated with having multiple groups will be more pronounced for those whose social contact reflects what they want it to be while in prison (study 2, H5).

The present studies

The questions this research seeks to answer are: What contribution do social factors – prisoner interactions and group memberships – make to prisoners' well-being? Through what processes do these social factors enhance the well-being of prisoners? Our investigation into the consequences for well-being that stem from social interaction amongst prisoners uses two complementary studies:

(1) We conduct a secondary analysis of the Measuring the Quality of Prison Life (MQPL) dataset to investigate whether the benefits of individual ties can be observed among prison populations. The MQPL survey is used by Her Majesty's Prison and Probation Service (HMPPS) to assess the quality of life in all prison establishments in England and Wales, and includes measures of prisoner interactions, autonomy, and well-being. This analysis allows us to test our basic predictions among a large sample of prisoners situated in a range of different prisons.

(2) We conduct the first investigation of the applicability of the social cure framework to a prison population via a questionnaire study at one male local prison. This study precisely assesses the core variables of the social cure framework - those between social group ties, psychological needs, and well-being - enabling us to conduct a test of the framework's predictions within a specific context.

The MQPL analysis thus investigates social interactions amongst prisoners, and personal autonomy, which may be important for well-being. The local prison study then

compliments this by investigating prisoners' multiple group memberships, and the satisfaction of additional psychological needs, known to underlie the social cure process in other populations.

Study 1 – Secondary analysis of the MQPL dataset

Although we cannot assess causality or the direction of the relationships among these constructs, we can examine whether the associations between them follow our predicted patterns. We will use structural equation modelling (SEM) to test the following:

H1. Positive interactions with other prisoners will predict prisoners' well-being.

H2. Positive interactions with other prisoners will predict autonomy satisfaction.

H3. Autonomy satisfaction will predict prisoners' well-being.

H4. Autonomy satisfaction will mediate the relationship between positive interactions with other prisoners and prisoners' well-being.

Method

The MQPL survey dataset: participants, recruitment and design

The Cambridge Prison Research Centre (PRC) designed and validated the survey that HMPPS uses to measure the quality of prison life in UK prisons (MQPL; Liebling, Hulley & Crewe, 2011). HMPPS granted us access to the full data set of the HMPPS MQPL questionnaire from all participants of the most recently published HMPPS survey of each prison establishment that was still in operation with the same function on 26.05.17: 11880 questionnaires from 113 different prisons. These establishments hold people who have been sentenced or are on remand awaiting trial for a range of crimes, but vary in function, definition and responsibility (see House of Commons, 2018).

The survey takes about 20 minutes to complete and was distributed to 120 randomly selected prisoners at each establishment – a number deemed appropriate by the MQPL team to represent the general prison population. For each survey, the MQPL Team selected primary lists and reserve lists of prisoners to be invited to participate by using systematic sampling, stratified by wing and by ethnic group. Staff from the establishment approached the listed prisoners to invite them; they used the primary list first and then the reserve list as necessary until the target number had agreed to participate. The HMPPS MQPL Team monitored recruitment throughout the data

collection phase in order to detect any apparent bias in the approach to the prisoners or their uptake, and any issues were managed as they arose. Prisoners who provided informed consent to participate in the study were told that the purpose of the survey is to seek their views about the quality of life they are experiencing in their current prison. Participants were on average 36.15 years old (*SD*=12.77, Range = 18-91 years). 74.1% of participants were White and 25.9% of participants were Black, Asian or from a Minority Ethnic Group. On average, participants had spent between 3 and 5 years in prison throughout their lifetime. Ninety two percent of the sample were male prisoners, and only 8% were female prisoners (as 104 of the prisons are male establishments), which is representative of the current UK prison population (currently made up of 95% males, and 5% females; House of Commons, 2018).

Measures

The MQPL dataset includes items assessing the following relevant constructs, which we detail below:

(1) Items that measure social interactions amongst prisoners;

(2) A scale assessing the satisfaction of the psychological need of autonomy;

(3) A scale of well-being.

Apart from the measures listed below, the questionnaire included additional measures that were not relevant to our present hypotheses and so we do not report them further here (for more details see Liebling et al., 2011). All items were answered on a 1-5 (disagree- agree) scale.

Prisoner interactions. We measured more positive prisoner interactions using these items:

1. The best way to do your time here is to mind your own business and have as little to do with other prisoners as possible. (reverse coded)

2. I feel safe from being injured, bullied or threatened by other prisoners in here.

3. I can relax and be myself around other prisoners in this prison.

4. In this prison, I have to be wary of everyone around me. (reverse coded)

5. I have no difficulties with other prisoners in here.

We selected these items because they capture the respondent's subjective evaluation of their interactions with other prisoners. Although four of these items were initially designed to capture subjective feelings of safety, these particular items clearly assess the

quality of the social climate among prisoners. In line with this, Liebling and Arnold (2012) have argued that these items shed light on prisoner's social relationships, and are likely to be related to other social factors such as trust. Prisoners scoring high on these items are thus likely to have supportive interactions and a fulfilling social life within prison, and therefore it will likely be a positive predictor of well-being. All 5 items were combined into a unified measure of prisoner interactions by modelling them as a latent factor. Reliability was acceptable ($\alpha = .66$), with all items contributing to the reliability of the scale, but we further validate our measures in the Results section below.

Personal autonomy. The MQPL dataset includes a personal autonomy dimension (made up of items measuring prisoners' feelings of agency and self-determination) that was developed using a combination of conceptual and statistical methods (see Liebling et al., 2011). The items were:

1. I have no control over my day-to-day life in here. (reverse coded)
2. You can keep your personality in this prison.
3. The regime in this prison allows opportunities for me to think for myself.
4. Wherever you are in this prison I still feel confined. (reverse coded)

All 4 items were combined into a unified measure of personal autonomy by modelling them as a latent factor ($\alpha = .71$), with all items contributing to the reliability of the scale.

Well-being. The MQPL dataset includes a well-being dimension (made up of items measuring feelings of pain, punishment and tension experienced by prisoners) which is our primary outcome of interest. This too was developed using a combination of conceptual and statistical methods (see Liebling et al., 2011). The items were:

1. My experience in this prison is painful. (reverse coded)
2. I feel tense in this prison. (reverse coded)
3. My experience of imprisonment in this particular prison has been stressful. (reverse coded)
4. My time in this prison feels very much like a punishment. (reverse coded)

All 4 items were combined into a unified measure of well-being by modelling them as a latent factor ($\alpha = .82$), with all items contributing to the reliability of the scale.

Analysis plan: structural equation modelling (SEM)

The data are multilevel, with prisoners (N = 11880) nested within prisons (N = 113). We examined whether we needed to take account of this multilevel structure by computing intraclass correlations (ICC) to assess the variance of the variables between prisons: 9% of the variance in prisoner interactions, 16% of the variance in autonomy, and 13% of the variance in well-being, can be attributed to differences between prisons. These ICCs (ρ > .08) indicate that there is significant variation in all three measures both between and within prisons, so we controlled for this clustering using a common approach to the analysis of complex survey data in MPlus (Asparouhov, 2006): we specified TYPE = COMPLEX in the ANALYSIS command in conjunction with the CLUSTER option of the VARIABLE command. This sandwich estimator computes standard errors and a chi-square test of model fit that takes into account the multilevel structure of the data, producing unbiased estimates equivalent to those produced from multilevel modelling.

We first tested the factorial structure of the measures we selected by specifying a measurement model using confirmatory factor analysis (CFA) in MPlus. SEM was then used to evaluate our hypotheses.

Results

Descriptive statistics

Descriptive statistics and correlations of the key measures are presented in Table 3. In line with our hypothesizing, (positive) prisoner interactions, well-being, and autonomy were all positively correlated with each other.

Table 3. Descriptive statistics and correlations (prisoner level)

	M	SD	Correlations	
			1	2
1. Well-being	2.74	.94		
2. Positive relationships	3.08	.73	**.62**	
3. Autonomy	2.95	.81	**.68**	**.56**

N = 11880 (bold = p < .01)

CFA measurement model

We conducted CFA in MPlus to establish a suitable measurement model for the data. We tested whether a measurement model that included three covarying latent constructs of 'prisoner interactions', 'autonomy', and 'well-being' fitted the data well. This model produced acceptable fit indices (CFI = .94; SRMR = .04; RMSEA = .06; $\chi2$ = 2961.025, p <.001[xiv]; df = 62)[xv]. However, we followed modification indices and added three within-factor covariances (two covariances between the prisoner interactions items, and one covariance between the autonomy items). This respecified model provided an excellent fit to the data (CFI = .97; SRMR = .03; RMSEA = .05; $\chi2$ = 1873.139, p <.001; df = 59) with all standardized factor loadings > .5. We therefore used the respecified model as the basis for testing our hypotheses using structural equation modelling.

Evaluation of the hypotheses: structural model

We tested Hypotheses 1-4 using MPlus to specify a structural model that investigated direct and indirect pathways from the prisoner interactions factor to the autonomy satisfaction factor to the well-being factor. SEM accounts for measurement error by partitioning the variance of each factor into measurement error and true variance. The model included the (positive) prisoner interactions factor as the predictor variable, the personal autonomy factor as the mediating variable, and the well-being factor as the outcome variable. Age, ethnicity (White or Black and Minority Ethnic) and total time spent in prison over lifetime, which we know are going to be related to prisoners' psychological needs and well-being (Wolff & Shi, 2012), were controlled for by including these as covariates in the model.

The quantitative results are summarized in Figure 1. Each of the individual paths were significant in the hypothesized directions: Positive interactions with other prisoners was associated with enhanced well-being (β = .68 p <.001), confirming H1. Positive interactions with other prisoners was also associated with increased autonomy satisfaction (β = .93 p < .001), confirming H2. Autonomy satisfaction positively predicted prisoners' well-being (β = .26 p = .003), confirming H3. There was also a significant indirect effect of positive interactions with other prisoners on prisoners' well-being via autonomy satisfaction (*indirect* β = .24, p = .002), confirming H4: Autonomy satisfaction mediated the positive relationship between strong relations with

other prisoners and prisoners' well-being. The model explained 86% of the variance in autonomy (R^2 = .864), and 86% of the variance in well-being (R^2 = .859).
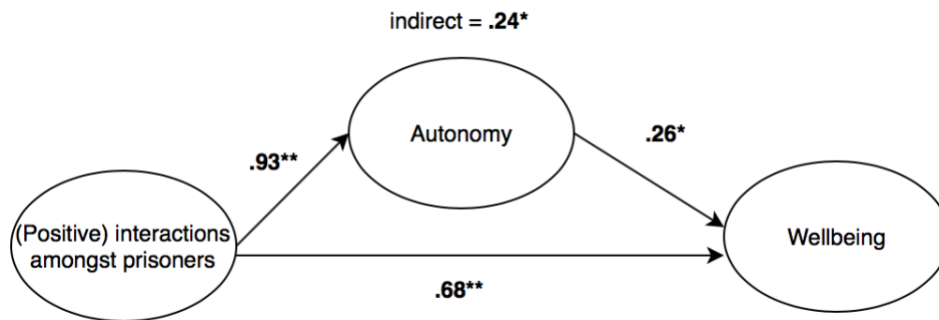
Figure 4. Summary of findings: standardised regression coefficients for the relationship between (positive) prisoner interactions and well-being as mediated by autonomy, controlling for age, ethnicity, and total time spent in prison over lifetime.
**p < .001.

Study 1 discussion

Study 1 showed that positive interactions amongst prisoners apparently benefitted their well-being via providing prisoners with an increased sense of autonomy. It is striking that the proportions of variance in autonomy satisfaction, and well-being, that the model explains are unusually high - both well above 80% - suggesting that this model has good explanatory power. This analysis allowed us to test our basic predictions among a large sample of prisoners situated in a range of different prisons, providing a convincing, albeit correlational, demonstration of the importance of social factors for prisoner well-being. However, no MQPL scale measures social *group* ties – and so the specific benefits of group affiliations remain ambiguous in this study. We address this limitation in study 2.

Study 2 – A local prison

In study 2 we build on study 1 using a purpose-designed study to test the social cure hypothesis amongst prisoners residing in one male UK prison. We examine the relationship between prisoners' multiple group memberships, psychological need satisfaction, and well-being; as well as group contact discrepancy - a variable that has been related to negative outcomes (Zheng & Berry, 1991), and a variable that we expect to be important among prisoners who face obvious barriers to social contact (SEU, 2002), and who are thus prohibited from seeing the people that they want to see. Five hypotheses were tested:

H1. Multiple group memberships will be associated with prisoners' well-being.

H2. Multiple group memberships will be associated with psychological need satisfaction.

H3. Psychological need satisfaction will be associated with prisoners' well-being.

H4. Psychological need satisfaction will mediate the relationship between multiple group memberships and well-being.

H5. The well-being benefits associated with having multiple groups will be more pronounced for those whose social contact reflects what they want it to be while in prison.

We predict that psychological need satisfaction will mediate the effect of multiple group memberships on well-being, and that group contact discrepancy will moderate the effect of multiple group memberships on well-being.

Method

Participants and Design

Prisoner participants (N = 157; 98% male[xvi]; M age = 37.46 (*SD* =14.46, Range = 18-81 years); M time spent in prison = 24 months (Range = 1- 313 months); M sentence length = 81 months (*SD*=73.35, Range = 3-312 months); most participants were category C prisoners[xvii]; nature of offence ranged from burglary, producing and supplying drugs, and assault, to rape and murder) were recruited on the prison wings of a male local prison solely on the basis of their willingness to participate. The establishment is a Category B, local resettlement prison. It holds a total of 655 prisoners, residing on 10 residential wings. We set out to achieve at least 150 participants, the minimum sample size recommended for multivariate path analysis (Asparouhov, 2006). A single questionnaire booklet that included items assessing prisoners' social groups, psychological needs, and well-being was distributed to prisoners on the prison wings. Prisoners completed the questionnaire while on the wing in their free time. The first author was present throughout the entire process, on the wing, and provided help or support as required.

The questionnaire booklet was made up of 3 sections: Section 1 used adapted versions of previous published and validated measures to assess prisoners' group memberships. Section 2 used previously published and validated measures that assess the extent to

which prisoners' groups satisfy prisoners' psychological needs of connectedness, self-worth, control, autonomy, and meaning, all of which have been found to be mechanisms through which the social cure effects operate. Section 3 used established measures of different facets of well-being. The questionnaire was finalized through discussions with the HMPPS ethics board. Informed consent was obtained from all participants.

Measures

Apart from the measures listed below, the questionnaire included additional measures that were not relevant to our present hypotheses and so we do not report them further here. All items were answered on a 1-5 (agree-disagree) scale unless otherwise indicated.

Multiple group memberships. Multiple group membership was assessed using the four items of the Exeter Identity Transition Scale (EXITS; C. Haslam et al., 2008). These were: "I belong to lots of different groups", "I am involved in the activities of lots of different groups", "I have friends who are in lots of different groups" and "I have strong ties with lots of different groups" (all items were reverse coded; α = .91; alpha if deleted <.91).

Well-being. Well-being was assessed using three distinct, albeit overlapping, constructs: positive experience (α = .95), depression, anxiety and stress (α = .93), and mental well-being (α = .93). Positive experience was measured using the scale of positive experience (SPANE; Diener et al., 2009). Participants rated to what extent in the past month they have felt 'positive', 'good', 'pleasant', 'happy', 'joyful', and 'content or satisfied'. Depression, anxiety and stress was measured using three items from the screening tool for psychological distress (STOP-D, Young, Ignaszewski, Fofonoff, & Kaan, 2007). Participants rated their levels of depression, anxiety, and stress over the last month: '...feeling down, sad, or uninterested in life' (depression), '...feeling anxious or nervous (anxiety), and '...feeling stressed' (stress). Mental well-being was measured using the Warwick and Edinburgh Mental Well-being Scale (WEMBS; Tennant, Hiller, Fishwick, Platt, & Joseph, 2007). Participants were asked to indicate to what extent in the last month they have been feeling/ have been 'optimistic about the future', 'useful', 'relaxed', 'dealing with problems well', 'thinking clearly', 'close to other people', and 'able to make up my own mind about things'. We reverse

coded the SPANE and WEMBS items and then combined the items from the three well-being measures into a highly reliable composite measure of well-being ($\alpha = .97$; alpha if deleted <.97).

Psychological need satisfaction. Psychological needs support, self-esteem, competence, relatedness, autonomy, control, and meaning were all measured using single items to reduce participant load: social support ('I have the support I need from other people'; adapted from items used in S.A. Haslam, et al., 2012), self-esteem ('I have high self-esteem'; single-item self-esteem scale; Robins et al., 2001), competence ('I am good at the things that I do'; adapted from the Basic Psychological Needs Scale (BPNS); Deci & Ryan, 2000), relatedness ('I have people that I am close and connected to'; adapted from the Basic Psychological Needs Scale (BPNS); Deci & Ryan, 2000), autonomy ('How I spend my time is my own choice'; adapted from the Basic Psychological Needs Scale (BPNS); Deci & Ryan, 2000), control ('I have control over important aspects of my life'; Greenaway et al., 2016), and meaning ('I feel that my life is meaningful'; adapted from items used in Baumeister, Vohs, Aaker, & Garbinsky, 2013). All items were reverse coded.

Group contact discrepancy. An adapted version of the Social Identity Mapping tool (SIM; Cruwys et al., 2016) was used to assess group contact discrepancy. The SIM tool is a psychometrically validated instrument designed to provide a comprehensive overview of a person's social world. Participants were instructed to list three social groups, and were told that it did not matter whether these groups are inside or outside the prison. Then, participants were asked to indicate how many days in the last month they spent time with each group, and how many days in the last month they would have liked to spend time with each group. Participant responses thus ranged from 0-30. Following actual- desired discrepancy research (e.g. N. Watson & Thrash, 2010), the absolute value of the discrepancy between these two items was computed to reflect how far removed prisoners' social contact is from what they wanted (i.e. higher scores indicate a *greater discrepancy)* per group, and the mean of the three values, corresponding to each group listed, was computed to serve as our measure of group contact discrepancy.

Results

Psychological needs: Exploratory factor analysis

Several of the proposed mediators are conceptually similar, particularly relatedness and social support, which both relate to the sense of connection and solidarity with others; and competence and self-esteem, which both relate to a sense of effectiveness and personal value (R.M. Ryan & Deci, 2000). Control, autonomy and meaning are also conceptually similar in that they all relate to a sense of agency (Pereboom, 2014). Indeed, all psychological needs were highly correlated with one another ($r > .60$; see Table 4). To determine whether it would be more parsimonious to collapse the needs into composites, we conducted an exploratory factor analysis using principal component analysis and direct oblimin rotation of three factors (based on an initial scree plot and eigenvalues > 1). Factor 1 contained the items measuring control, autonomy, and meaning and accounted for 67% of variance, with all factor loadings above .62 and no cross loadings above .30; Factor 2 was formed of the items measuring social support and relatedness, and accounted for 12% of variance, with both factor loadings above .92 and no cross loadings above .30; and Factor 3 contained the items measuring self-esteem and competence, and accounted for 10% of variance, with both factor loadings above .94 and no cross loadings above .30. We thus merged the self-esteem and competence items into a Self-Worth factor ($\alpha = .92$), the relatedness and support items into a Connectedness factor ($\alpha = .95$), and the control, autonomy and meaning items into a Volitional agency factor ($\alpha = .89$).

Table 4. Pearson correlations between each mediator

	Relatedness	Self-esteem	Competence	Autonomy	Control	Meaning
Support	**.90***	.55*	.57*	.53*	.48*	.54*
Relatedness		.61*	.63*	.51*	.54*	.62*
Self-esteem			**.85***	.55*	.60*	.58*
Competence				.58*	.59*	.57*
Autonomy					**.86***	**.64***
Control						**.66***

Note. Bold correlations indicate relationships between needs that were combined into composite measures. * $p < .01$.

Descriptive statistics

Descriptive statistics of and correlations among the key measures are presented in Table 5. Although group contact discrepancy was not significantly correlated with well-being, in line with our hypothesizing, well-being, multiple group memberships, and the needs of connectedness, self-worth, and volitional agency were all positively correlated with each other.

Table 5. Descriptive statistics and correlations

	M	SD	Correlations				
			1	2	3	4	5
1. Well-being	2.89	1.13					
2. Multiple group memberships	2.94	1.15	**.74**				
3. Connectedness	3.43	1.40	**.73**	**.67**			
4. Self-worth	3.40	1.23	**.73**	**.61**	**.63**		
5. Volitional agency	2.85	1.40	**.75**	**.60**	**.61**	**.66**	
6. Group contact discrepancy	13.69	8.85	-.15	-.14	**-.17**	-.05	-.13

N = 199 (bold = p < .05)

Evaluation of the hypotheses

We tested Hypotheses 1-5 by conducting moderated mediation analyses using PROCESS (2012, model 5). The model included multiple group memberships as the predictor variable, the psychological need composites of connectedness, self-worth, and volitional agency as the mediating variables, group contact discrepancy as the moderating variable, and well-being as the outcome variable (see Fig. 5).

The quantitative results are summarized in Figure 5. Each of the individual paths were significant, in the hypothesized directions: Multiple group memberships was associated with increased well-being $b = .27$ $p < .001$, CI [.15, .39], confirming H1. Multiple group memberships was associated with enhanced connectedness $b = .77$ $p < .001$, CI [.62, .92], self-worth $b = .65$ $p < .001$, CI [.50, .79], and volitional agency $b = .73$ $p < .001$, CI [.56, .90], confirming H2. The satisfaction of the needs of connectedness $b = .16$, $p = .002$, CI [.06, .26], self-worth $b = .22$, $p < .001$, CI [.10, .33], and volitional agency $b =$

.24, *p* < .001, CI [.14, .34] was positively associated with well-being, confirming H3. There was also a significant indirect effect of multiple group memberships on well-being via the satisfaction of the needs of connectedness *indirect* = .12, BC CIs [.04, .22], self-worth *indirect* = .14, BC CIs [.07, .24], and volitional agency *indirect* = .17, BC CIs [.10, .28], confirming H4.

Finally, the interaction between multiple group memberships and group contact discrepancy was significant (*b* = -.01. *t* = -2.19, *p* = .030, CI [-.02, -.01]), and the moderation operated as predicted by H5: among those who were below the mean in group contact discrepancy (i.e. whose social contact better reflects what they want it to be), there was a stronger relationship between multiple group memberships and well-being (*b* = .36, t = 4.88, *p* <.001, CI [.22, .51]), compared to those at the mean (*b* = .27, t = 4.52, *p* < .001, CI [.15, .39]) and above the mean (*b* = .18, t = 2.58, *p* = .011, CI [.04, .33]) on the measure of group contact discrepancy (i.e. whose social contact is further away from that they want it to be). This moderation is depicted in Figure 6. Therefore, confirming H5, the well-being benefits associated with having multiple groups were more pronounced for those whose social contact reflects what they want it to be (i.e. a greater match between reality and desire) while in prison.
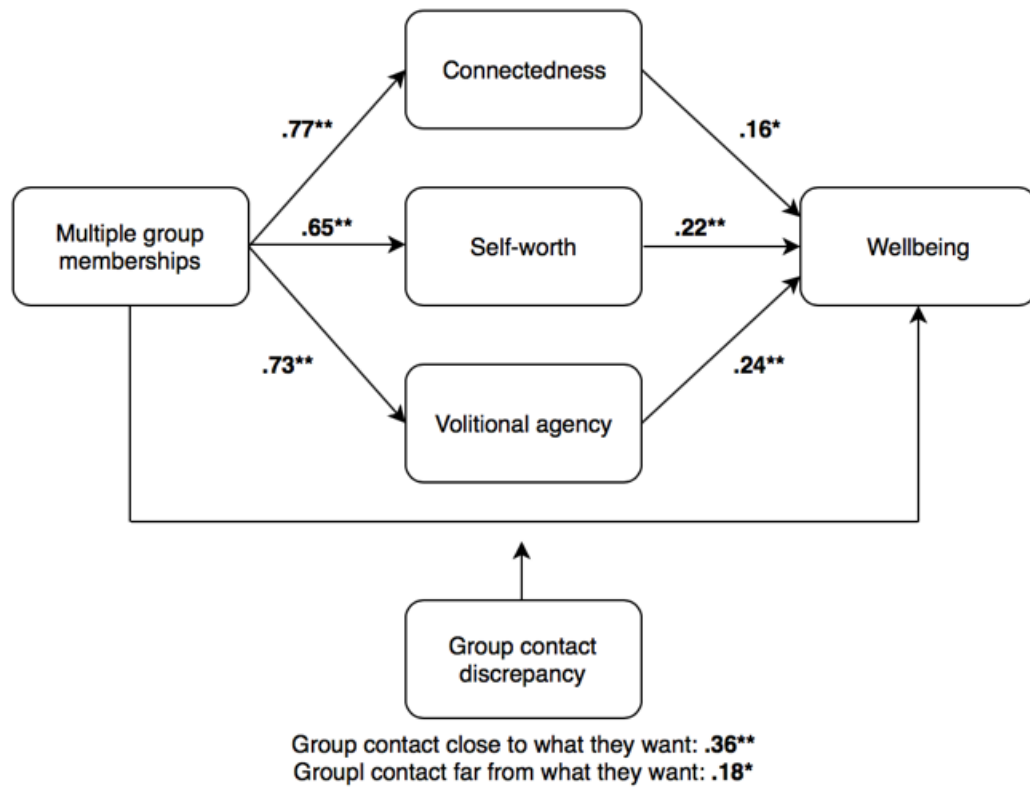
*Figure 5. Summary of findings: standardised regression coefficients for the relationship between multiple group memberships and well-being as mediated by connectedness, self-worth, and volitional agency, and as moderated by group contact discrepancy. *p* < .05; **p < .001. [xviii]*
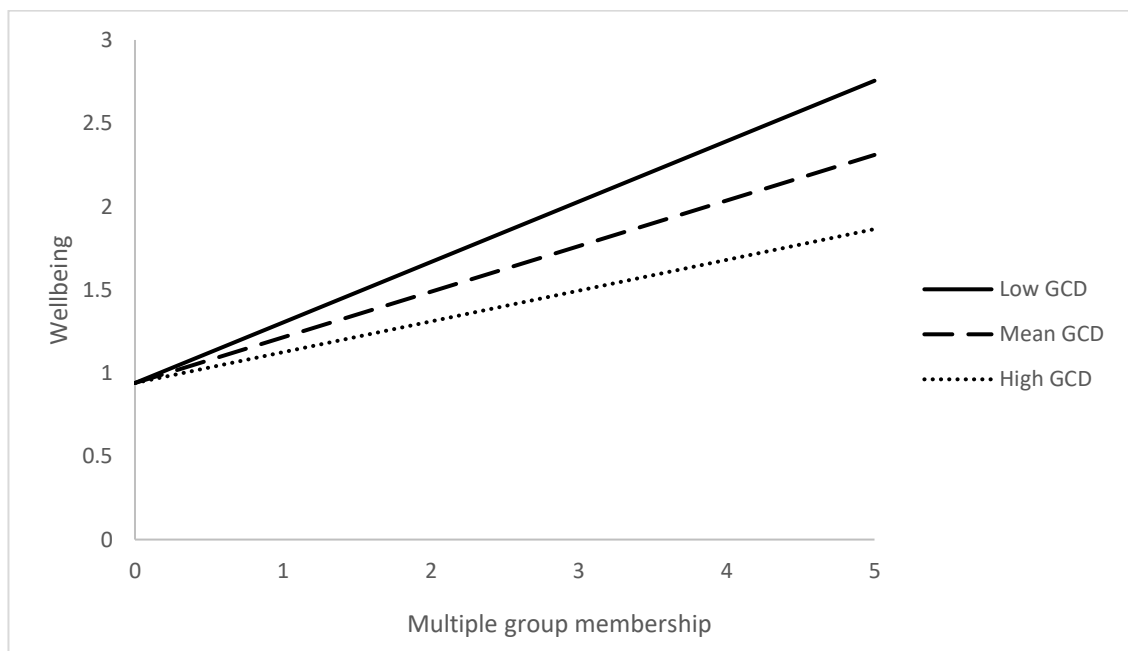
Figure 6. Well-being (y) by Multiple group membership (x) at different levels of the moderator group contact discrepancy (-1SD, mean, +1SD).

Study 2 discussion

The single local prison analysis (Study 2) showed that multiple group memberships benefit well-being via the satisfaction of the psychological needs of connectedness, self-worth, and volitional agency. Here we replicated the MQPL model but with *group* (rather than individual) ties, and more needs and psychologically robust measures, enabling us to conduct a specific test of the social cure framework's prediction within a specific context. Study 2 also showed, for the first time, that the well-being benefits associated with having multiple groups are more pronounced for those whose social contact reflects what they want it to be while in prison.

General discussion

Summary of findings

We found that a fulfilling social life in prison - strong prisoner ties and membership in groups, both inside and outside the prison - satisfy prisoners' psychological needs, and benefit prisoners' well-being. Study 1 showed that positive prisoner relations function to increase prisoners' well-being, partly due to the feelings of autonomy that these interactions provide. Study 2 showed that multiple group memberships benefit well-being via the satisfaction of the psychological needs of connectedness, self-worth, and volitional agency. Study 2 also showed that the well-being benefits associated with having multiple groups are more pronounced for those whose social contact reflects what they want it to be while in prison. These results provide support for all of our hypotheses and speak to the contribution that social factors – positive prisoner interactions and social groups – make to prisoners' well-being. This work therefore progresses the field by helping to unpack and harness the power of social connectedness as a psychological resource for prisoners.

The importance of individual and group ties for prisoner well-being

In Study 1 we provide quantitative evidence that demonstrates that social connectedness in prison is positively associated with well-being. This finding is in line with the qualitative sociological literature that exists (e.g. Harvey, 2007; Crewe, 2012) that demonstrates the importance of interpersonal ties in maintaining prisoners' well-being. This finding also corroborates the large US literature base (see Adams, 1992) that

focuses on the ways that connections to the outside world, and relationships inside prison walls, have special salience for inmates. Study 2 was the first to investigate the social cure amongst prisoners, and consequently the first to quantitatively demonstrate that the core associations proposed by the framework – those between multiple group membership, psychological needs, and well-being – are present within this population. Although research consistently shows this in non-offender groups (for review, see Jetten et al., 2017), no research has investigated its applicability to prisoners. We also build on sociological research on prisoners' social groups (e.g. Setty et al., 2014) in Study 2, demonstrating the well-being benefits associated with prisoners' group memberships. This finding is especially powerful because previous research has theorised (e.g. Jetten et al., 2017) and shown (Kyprianides, Easterbrook, & Cruwys, 2019) that, for stigmatized groups, there are boundary conditions under which the 'social cure' associated with multiple groups can transform into a 'social curse' – whereby having multiple groups may actually be harmful for well-being. We were however able to show that the beneficial effects of multiple group memberships are not jeopardised for this population.

Individual and group ties satisfy psychological needs

Seeking to explain *why* social relations and groups might be beneficial for prisoners, we also provide the first evidence that a fulfilling social life in prison fosters the psychological needs of connectedness (social support and relatedness), self-worth (self-esteem and competence), and volitional agency (autonomy, control, and meaning). Our mediation findings complement and extend previous work that has found that these psychological needs can account for social cure effects in non-offender populations (Kyprianides et al., under review: connectedness and self-worth; Koudenburg et al., 2017: autonomy; Greenaway et al., 2016: control and meaning), and provide a novel explanation of the beneficial effects of social relations and groups on *prisoner* well-being. It is worth noting that the capability of prisoner relations and prisoner groups to fulfil the need of autonomy was demonstrated in both studies 1 and 2. This is a powerful finding that speaks to the most 'painful' aspect of imprisonment – the deprivation of autonomy amongst prisoners that is borne out of the lack of independence, choice, self-determination, and control prisoners experience in the confined prison environment (Sykes, 1958; 2007).

The role of social contact discrepancy for prisoner well-being

Out of the many extant studies that show the benefits for health and well-being of social contact (for a review, see Holt-Lunstad et al., 2010), study 2 is the first study to consider social contact, and more specifically group contact *discrepancy* as a moderator of the association between multiple group memberships and well-being. Study 2 is consequently also the first to demonstrate that the well-being benefits associated with having multiple groups are more pronounced for those whose social contact reflects what they want it to be while in prison. This finding complements research on social contact discrepancy (Zheng & Berry, 1991), extends the very few extant studies that have shown that social contact with *group members* is a significant predictor of well-being (e.g. Sani et al., 2012; Cruwys et al., 2016), and provides a novel insight into the factors that may attenuate or exasperate the relationship between multiple group memberships and well-being for this particular population.

Practical implications

Our findings of the importance of individual and group ties for prisoner well-being attend to a gap in the literature – the need to better understand how to best support prisoners - which has potential significance for policy and practice, should future research demonstrate improved mental health or reductions in mental illness due to social interactions in prison. UK resettlement strategies pay much of their attention to the social reintegration of prisoners into the community and the reduction of the levels of recidivism. Resettlement strategies are consequently focused around accommodation, education, training, and employment, and maintaining family ties, with the objective of assisting prisoners return to normal life, get a home and job, and handle life without re-offending upon release (MOJ, 2016). What is lacking in ongoing practitioners' agendas, however, is a focus on helping prisoners to build *positive* group memberships that transcend prison walls, that they can interact with both in and, later, outside of prison, that go beyond maintaining only family ties. This will help this population maintain continuity, which is important for successful community reintegration.

Strategies to increase prisoners' social connectedness could take the form of cost-effective psychological interventions to help prisoners develop and manage a fulfilling social life in prison. For example, researchers have developed an intervention based on the social cure (Groups4Health; G4H; C. Haslam, Cruwys, Haslam, Dingle, & Chang,

2016b) that directly targets the psychological distress that results from loneliness and social isolation by scaffolding the development and maintenance of positive group memberships. Strategies could also utilise group-based programs provided by the third sector that promote social engagement and psychological well-being amongst prisoners (see Kyprianides & Easterbrook, 2019). G4H applications and evaluations of third sector prison programs suggest that the task of increasing social connectedness amongst prisoners is not simply a matter of more time out of cell, but rather of engaging in meaningful activities that produce the right kinds of relationships.

Limitations and future directions

Future research should examine whether our findings are generalizable to other countries such as the US, in which research has shown that, unlike UK prisoner groups, US prisoner groups take the form of highly structured hierarchical 'gangs' that are implicated in violence and misconduct in prison (Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002). Such findings point to the possibility that US prisoner groups may actually do more harm than good, as has been shown amongst groups whose norms proscribe harmful activities (see Jetten et al., 2017).

Future research should also address the limitations associated with these studies, although the two complimentary studies reduce the potential impact of each study's limitations. First, data for the local prison study was collected within a specific context that limits generalisability of the applicability of the social cure framework. However, the MQPL analysis allowed an investigation of our basic hypotheses in a generalizable way. Second, in study 1, we were unable to control for other relevant factors such as contact with individuals outside of prison. However, such information was not available in the MQPL dataset - a limitation associated with secondary data analysis (E. Smith, 2008), and a limitation that was accounted for in study 2 by measuring prisoners' group contact. Third, prisoners are a diverse population with very different legal and social circumstances, and it is therefore likely that this population experiences diverse kinds of socialising that differentially impact prisoners that we were not able to disentangle using our research design. For example, our measure of multiple group membership in study 2 includes groups both within and outside prison. It is however possible that inside, group interpersonal ties are more associated with the perception of fitting in and being safe (Biggam & Power, 1997; Maitland & Sluder, 1996); while connections

outside of the prison are more associated with rehabilitation and post-release adjustment (I. Smith & McCarthy, 2016; A.L. Solomon, 2004). In addition, one problem in the prison setting is that prisoners are integrated in networks that may not be conducive to successful integration in society upon release, such as prison gangs that have extensive connections and contacts but are highly problematic (Gaes et al., 2002); and the normative structure of the prison might be in disagreement with social norms on crime and behaviour.

Finally, further investigation is required to substantiate our findings – ideally in the form of experimental research that goes beyond the correlational design of the present studies. There are also other limitations that bear on the strength of conclusions that can be drawn on the basis of the present data. Notably, the cross-sectional design of these studies does not allow us to address the possibility of reverse causality, where, for example, prisoners with greater well-being may be more likely to seek out relationships with others. Indeed, the relationship between variables could be in other directions; however, we had clear theoretical predictions about these variables, grounded in the social cure approach.

Conclusion

This work is the first to show, across two studies conducted in the UK, that prisoner well-being can be boosted by social processes such as maintaining and creating positive relationships and supportive groups while in prison. This work is also the first to demonstrate that social interactions and multiple group memberships foster prisoner well-being through satisfying the psychological needs of connectedness, self-worth, and volitional agency. We are also the first to provide evidence that group contact *discrepancy* can reduce the positive consequences of multiple group memberships on well-being. New directions in mental healthcare in prisons should establish methods of empowering prisoners to increase their social connectedness by developing and maintaining a fulfilling, albeit not ideal, social life in prison.

Chapter 4: "I changed and hid my old ways": How social rejection and social identities shape well-being among ex-prisoners.

Abstract

Being a member of a rejected group negatively affects well-being but can also increase group identification, which can have positive effects on well-being. However, this *rejection-identification model* has never been investigated among the highly stigmatized group of ex-prisoners. Furthermore, the potential buffering role of multiple group memberships has never been investigated within the rejection-identification model. We conduct a novel investigation of a combined rejection-identification and social cure model of group-based rejection among ex-prisoners. A survey of 199 ex-prisoners found that experiencing group-based rejection was associated with poorer well-being and increased ex-prisoner identification. However, identification as an ex-prisoner magnified, rather than buffered, the relationship between rejection and reduced well-being. Furthermore, the negative relationship between rejection and well-being was particularly pronounced among ex-prisoners with a higher number of group memberships. Ex-prisoners with a greater number of group memberships experienced greater levels of rejection, suggesting group memberships increase their exposure to rejection. We therefore provide evidence of a boundary condition for the social cure properties of groups: Among members of strongly rejected social groups, multiple group memberships can be a social curse rather than social cure.

Introduction

Ex-prisoners[xix] are a rejected group in many societies; highly stigmatized and facing life-long discrimination. Members of the public have been found to hold stigmatizing attitudes about ex-prisoners, making community reintegration particularly challenging after a release from prison (Hirschfield & Piquero, 2010), and ex-prisoners face discriminatory restrictions to their rights to vote, work, and access affordable housing in many countries (e.g. the UK, and the US; Flake, 2015; House of Commons, 2017; Human Rights Watch, 2004). This rejection effectively extends the punishment of ex-prisoners and reduces their ability to function as normal citizens.

The aim of this study was to explore the impact of this rejection on the social self-concept and well-being of people who have spent time in prison and/or who have a criminal record. We do so by merging two theoretical perspectives: the rejection-identification model (RIM) and the Social Identity Model of Identity Change (SIMIC). Specifically, we examine the relationship between group-based rejection and well-being among a sample of ex-prisoners, the mediating role of ex-prisoner identification, and whether multiple group memberships buffers or exacerbates the rejection-well-being link. Before outlining our study, we first elaborate the rationale underlying our predictions.

Rejection and well-being amongst ex-prisoners

Although policies vary internationally, in many societies ex-prisoners are marginalized via short and often long term restrictions on employment, housing, voting rights, financial aid, and other facets of societal involvement (Pogorzelski, Wolff, Pan, & Blitz, 2005). For example, most US states temporarily forbid parolees from voting; in Virginia, Florida, and Kentucky ex-prisoners permanently lose their right to vote; and in nine other states ex-prisoners are restricted from voting for a minimum of two years (Uggen, Manza, & Thompson, 2006). Furthermore, most US states prohibit ex-prisoners to work in fields such as medicine, education, and law, and six states permanently ban ex-prisoners from holding any public employment (Cnaan et al., 2008). In addition, in the US, people with criminal records are frequently denied access to public housing (Human Rights Watch, 2004).

Furthermore, in many countries, this discrimination towards ex-prisoners is often seen

as legitimate. This is in stark contrast to discrimination on the basis of other group memberships such as race, gender, or disability, which are typically prohibited by law. For example, whereas an employees' race, gender, or disability cannot factor into recruitment decisions in the US, it is legal for employers to conduct a police check on potential employees and exclude anyone with a criminal record, no matter how minor or irrelevant to the job the infraction may be (US EEOC, 2017). In addition, former offenders endure a great deal of stigma (i.e., negative attitudes from community members). For example, a poll of 2,000 laypeople found that half agreed with stigmatizing statements about ex-prisoners, such as that they are dangerous and dishonest (Hirschfield & Piquero, 2010).

These high levels of stigma and discriminatory practices (which we refer to here using the umbrella term *rejection*, see Smart, Richman & Leary, 2009) are likely to have profound and detrimental impacts upon ex-prisoners' sense of self and well-being (LeBel, 2012; Moore, Stuewig, & Tangney 2013; Winnick & Bodkin, 2009). A plethora of research examining a wide range of disadvantaged groups demonstrates that group-based rejection negatively affects well-being (Kidd, 2007; for a meta-analytic review see Schmitt et al., 2014). More specifically, rejection can reduce social and cognitive functioning and lead to poor mental health, maladaptive behaviors, and struggle partaking in the community (Inzlicht, Tullett, & Gutsell, 2012). However, although these relationships have been consistently shown in *non-correctional* groups (Livingston & Boyd, 2010), little research has been undertaken on people that have spent time in prison or who have a criminal record.

The mainly qualitative research that has been conducted among ex-prisoners suggests that group-based rejection can have negative emotional, cognitive, and behavioral consequences, which can hamper community integration after release (Chui & Cheng, 2013; Moore et al., 2016a; Schneider & McKim, 2003). In a rare quantitative study among ex-prisoners, Moore and colleagues (2016a) used questionnaire measures of respondents' perceptions of stigma against convicts—assessed before their release from prison—to predict their community adjustment one-year post release. Their findings showed that offenders who perceived greater levels of stigma had seriously impaired functioning a year after their release, and struggled to participate as a valued member of their community, deemed an essential aspect of the reintegration process. This aligns

with the findings of interviews with 16 young men recently released from prison (Chui & Cheng, 2013), which found that men internalized stigmatizing attitudes towards criminal offenders into their own self-concepts and experienced low self-worth, shame, and embarrassment, which hindered their reintegration into society.

Based on this literature, our first hypothesis was that ex-prisoners' well-being will be negatively affected by the experience of group-based rejection **(H1)**.

Although past research clearly implies that there will be a negative relationship between group-based rejection and well-being, it is less apparent what factors may explain, attenuate, or exasperate this relationship among this particular population. These are important areas of investigation, as more than 640,000 people are released from prison every year in the US alone (Carson & Anderson, 2016), all of whom face the challenge of reintegrating into a society in which they are stigmatized and discriminated against, often through seemingly legitimate legal and political systems. We therefore need to better understand the processes through which group-based rejection affects well-being, and any potential factors that exasperate or dampen this relationship among this highly vulnerable population.

Ex-prisoner identification as a mediator

According to Social Identity Theory (Tajfel & Turner, 1979), a person's group memberships can become internalized into the self-concept as *social identities* which, when salient, serve as a basis for self-construal and shape people's attitudes, beliefs, and behaviors. An emerging research approach – dubbed the 'Social Cure' – claims that group memberships, and especially the social identities associated with them, are capable of promoting adjustment, coping, and well-being, especially for vulnerable individuals dealing with illness, injury, trauma, or stress (Cruwys et al., 2015; Gleibs et al., 2011; S.A. Haslam et al., 2009).

Researchers have also shown that people can react to group-based rejection with amplified social identification and cohesion with the rejected group (Branscombe et al., 1999). Known as the rejection-identification model (RIM; Branscombe et al., 1999), social identification can strengthen in response to rejection (i.e., stigma and group-based discrimination) because one's group membership becomes highly salient when a person

faces group-based rejection. In turn, enhanced social identification counteracts some of the negative consequences of rejection by satisfying psychological needs (Greenaway et al., 2016), widening the pool of potential sources of social support (S.A. Haslam et al., 2005), thus protecting well-being.

The research suggests, then, that identifying with a social group acts as a psychological resource that group members can draw on when facing stressors such as rejection (Branscombe et al., 1999). Indeed, studies have found support for RIM among ethnic minorities (Branscombe et al., 1999), and women (Schmitt, Branscombe, Kobrynowicz, & Owen, 2002), among other groups including, more recently, mental illness groups (Cruwys & Gunaseelan, 2016). However, RIM has not yet been investigated in the context of ex-prisoners.

An important caveat, however, is that there has been increasing acknowledgment that there are some contexts and/or situations in which social identification may do more harm than good, particularly when groups are highly stigmatized or when norms proscribe harmful activities (Cruwys et al., 2014b). Yet, there has been very little research that has directly investigated this. Two studies, one of people in recovery from substance misuse (Dingle et al, 2015) and one of people with clinical depression (Cruwys & Gunaseelan, 2016), are of particular relevance. Dingle and colleagues (2015) found that people in treatment for substance misuse had better outcomes to the extent that they *disidentified* with previous substance using identities. Cruwys and Gunaseelan (2016) found a direct negative relationship between social identification with a stigmatized group (people who have depression) and well-being (also see Crabtree, Haslam, Postmes, & Haslam, 2010; Walter, Jetten, Parsell, & Dingle, 2015; Kellezi, Bowe, Wakefield, McNamara, & Bosworth, 2018). Although not investigating ex-prisoner identity, these studies demonstrate that social identification, particularly in the context of stigmatized groups, may not always be beneficial for well-being.

We suspect that this negative relationship between identification and well-being will be apparent among ex-prisoners because a) ex-prisoners' low-status is perceived as *stable* and *legitimate* by most members of the community, and b) the boundary between 'ex-offender' and 'non-offender' identities is *impermeable* (ex-prisoners cannot change their past and the identity that comes with this), and yet it is a *concealable* group

membership. These conditions are likely to motivate ex-prisoners to attempt to use a strategy of *individual mobility,* by distancing themselves from their past and concealing their ex-prisoner identity (Goffman, 1963). However, because ex-prisoners face such strong rejection and are often forced to reveal their group membership, individual mobility is likely to be unsuccessful and their efforts to maintain a positive self-concept likely to fail, with detrimental effects on well-being (Barreto & Ellemers, 2009).

In line with RIM, then, we predict that, among ex-prisoners, group-based rejection will positively predict social identification as an ex-prisoner **(H2)**; but, following our expectation that the rejected ex-prisoner identity will be corrosive because of the extent of group-based rejection, we predict that social identification as an ex-prisoner will, in turn, be associated with reduced well-being **(H3)**; such that social identification as an ex-prisoner will mediate the negative effect of group-based rejection on well-being **(H4)**.

The role of multiple group memberships (moderator)

Recent work emerging out of the social cure tradition has shown that identifying with *multiple groups* (typically those that are not subject to stigma or discrimination) is associated with better well-being for those facing life stressors. For instance, C. Haslam et al. (2008) found that stroke patients reported greater well-being if they were able to maintain membership in multiple groups after their stroke. More generally, the benefits of multiple group memberships on well-being is supported by a large body of evidence linking multiple group identification and heightened well-being (C. Haslam et al., 2014a; Iyer et al., 2009; Ysseldyk, Haslam, & Haslam, 2013).

There are a number of reasons why multiple group memberships might offer a 'social cure' that can enhance well-being and health (C. Haslam et al., 2018a). First, if social identification with a single group provides psychological resources that protect and enhance individual well-being, it follows that the more group memberships an individual has, the more resources they have at their disposal and the better protected they will be (Jetten et al., 2014). Second, the more groups that an individual belongs to, the less reliant they are on any single group to provide psychological resources; something which is likely to be particularly important for resilience during times of transition and stress (Jetten et al., 2014). Multiple group memberships also enable

greater flexibility in dealing with stressors, because they increase the prospect that one can consult a suitable group when facing a particular stressor.

Multiple group memberships have been found to be especially beneficial for people undergoing life transitions. Life transitions, like being released from prison, typically involve changes in a person's social identity—prisoners, for example, transition from being a prisoner to being an ex-prisoner—and even transitions that may seem positive have long been known to be a risk factor for stress and reduced well-being (e.g. Praharso, Tear, & Cruwys, 2017). However, the Social Identity Model of Identity Change (SIMIC) shows that risks to well-being can be reduced by certain social factors. Iyer and colleagues (2009), for instance, found multiple group memberships provided the resources necessary for new university students to go out and form new, positive social identities in their new context, which helped to buffer them from the negative well-being consequences of the transition to university. Cruwys et al. (2014c) found that multiple group memberships scaffolded the development of new group memberships for socially isolated individuals, which led to better mental health outcomes. In fact, having the ability to take on new group memberships following a life changing transition can be a way of protecting oneself from the harmful effects of identity change (Jetten et al., 2012). Dingle, Cruwys and Frings (2016) found that this was the case for people recovering from addiction. We argue that successfully making the transition to "post prison life" will also involve the formation of new, positive, alternative group memberships.

Although past research has shown that identifying with multiple groups can protect people from the health hazards associated with important life changes, it remains to be seen, in any population, whether multiple groups can buffer against the negative consequences of group-based rejection on well-being. We merged the RIM and SIMIC perspectives and assessed whether such strategies protect the well-being of people who have spent time in prison or who have a criminal record, and predict that multiple identities will buffer well-being against the negative effects of group-based rejection in ex-prisoners **(H5).**

The present study

This study, informed by the social identity approach to health, aimed to investigate the relationships between perceived group-based rejection among ex-prisoners, ex-prisoner identity, multiple group memberships, and well-being among people that have spent time in prison or who have a criminal record. Data was collected in the US via an online survey. We also included an open ended question about rejection in order to gain insight into ex-prisoners' actual experiences and thus allowing us to take a mixed-methods approach.
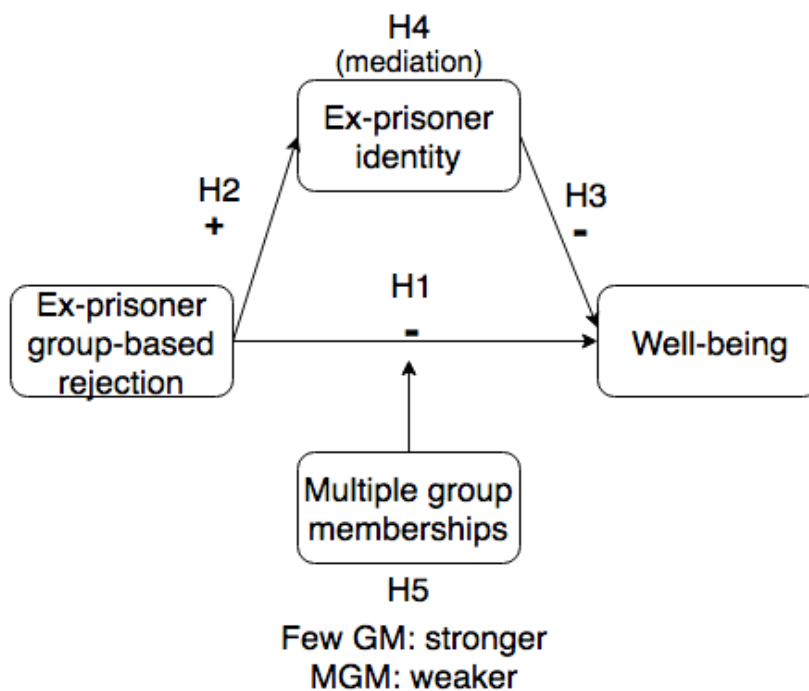
Figure 7. Hypothesized model of the relationship between ex-prisoner group-based rejection, ex-prisoner identity, multiple group memberships, and well-being.

As shown in Figure 7, we predict that ex-prisoner identification will mediate the effect of ex-prisoner rejection on well-being, and that multiple group memberships will buffer the effect of ex-prisoner rejection on well-being.

Method

Participants and design

US ex-prisoners (N = 199) were recruited to complete an online questionnaire via MTurk. Apart from the measures listed below, the questionnaire included additional

measures from the social identity mapping tool and a self-stigma scale. These were not relevant to our present hypotheses and so we do not report them further here. The study took approximately 20-30 minutes and participants received $1.53 compensation for their time.

The research was approved by the ethical review board at the University of Sussex (ER/SK341/8). The online survey included the information and consent form at the beginning, and the debrief sheet at the end – which revealed the aim of the study to participants, and contained references to support organisations.

Recruitment procedure

We followed Chandler and Paolacci's (2017) advice on how to minimize participant fraud for specific populations on MTurk: First, we put pre-screening criteria in place and set constraints so that participants could only take the survey once. Second, we launched a stand-alone screener survey that paid $0.03 and included five questions, three distractor questions and two target questions: ''Do you have a criminal record? i.e. convicted of a felony which is recorded against your name.''; ''Have you ever been incarcerated? i.e. spent at least 24 hours in a jail, or a prison, or correctional facility.'' Answering either of these questions in the affirmative indicated eligibility. Upon completion of the screener, eligible participants were invited to participate in the main study that paid $1.50, while ineligible participants were directed to the 'end of survey message'. To further improve data quality, participants were asked at the end of the main survey whether or not we should include their responses in our research, specifying that they will receive payment for their participation regardless of their answer to this question ("Do you think we should include your responses in our research? Please select no if you weren't honest in the study, weren't paying attention, or if there is any other reason the data you have provided shouldn't be used.").

3,825 participants completed the screener survey; 331 of whom (8.6%) were eligible to complete the main survey and clicked through to the main survey. Of these, 204 participants completed the main survey from start to finish. Five participants ticked 'don't include me' and were excluded from the analysis. Therefore, our final sample was 199 participants.

The fact that 8.6% of participants in the screener were eligible for the full study increased our confidence that we recruited a sample of ex-prisoners with minimal participant fraud because the proportion is similar to US criminal population statistics: In 2016, it was estimated that between 3.2-3.6% of the adult US population were ex-prisoners and 7-8% had a criminal record (Bucknor & Barber, 2016). However, it is important to note that not all people who have spent time in prison have a criminal record, and vice versa. For example, people who are convicted of a crime may not receive jail time, and in many US states people can be incarcerated in local prisons for a significant period before being charged or released with no charges (Wagner & Rabuy, 2017).

Measures

Given the diversity of the sample and the fact that terminology is contested and often stigmatizing, participants were asked to select the group name that best described them from a list of seven options ("ex-prisoners", "ex-cons", "ex-felons", "ex-inmates", "ex-offenders", "people with a criminal record", "people who have been incarcerated"). Their choice was then subsequently piped into items throughout the questionnaire as indicated by square brackets (the largest group was 'people who have been incarcerated', which was chosen by 50.3% of the sample).

Rejection

As our literature review demonstrated, research has tended to use measures of perceived discrimination and stigma interchangeably, and both tend to show similar detrimental consequences. We therefore took a broad approach to measuring rejection and included measures of both perceived discrimination and stigma towards ex-prisoners. We measured perceived discrimination using an adapted version of the Perceptions of Discrimination Scale (Schmitt & Branscombe, 2002; 9 items used in Cruwys & Gunaseelan, 2016; $\alpha = .91$), and measured perceived stigma using the 8-item subscale from the Self-Stigma of Individuals with Criminal Records scale (SSICR; Moore, Tangney, & Stuewig 2016; $\alpha = .94$). The discrimination scale assesses personal experiences and perceptions of discrimination, whereas the stigma scale assesses perceptions of the attitudes underlying discriminatory behavior. The Perceptions of Discrimination Scale included items such as "I regularly encounter discrimination against [people who have been incarcerated]" rated on a seven-point scale from

"Strongly disagree" to "Strongly agree" ($\alpha = .91$). The SSICR uses a distinct clause to capture perceived stigma ("The public thinks most people with a criminal record or people that have been incarcerated are..."), followed by eight statements such as "cannot be trusted" or "are dangerous". This phrasing was used because everyone in this sample had either been convicted of a crime or had spent time in prison, and thus this phrasing applied to all participants. Responses ranged from "1" Strongly Disagree to "7" Strongly Agree. Items from both scales were combined into a unified measure of rejection ($\alpha = .91$), with all items contributing to the reliability of the scale ('Cronbach's alpha if item deleted' $< .91$). Participants were also given the opportunity to provide an optional open-ended response to the question ''Is there anything you would like to add about ex-prisoners/people with a criminal record and stigma?''

Ex-prisoner identification

We followed Leach et al.'s (2008) recommendations and measured all five dimensions of ex-prisoner identification using their identification scale. Participants responded to 11 items (11 items used by Cruwys & Gunaseelan, 2016) such as "I feel a bond with other [people who have been incarcerated]", and "Being [a person who has been incarcerated] gives me a good feeling" on a seven-point scale from "Strongly Disagree" to "Strongly Agree". Although these social identification subscales tend to be highly associated for many groups (Postmes, Haslam & Jans, 2013), research has found that people in stigmatized groups tend to rate the satisfaction facet differently (Jetten, Spears & Manstead, 1997; Kuppens, Easterbrook, Spears, & Manstead, 2015). Therefore, we first followed Cruwys and Gunaseelan (2016) by analyzing the relationships of the separate facets to rejection and well-being, expecting identity satisfaction to show different relationships compared to the other dimensions. Indeed, all facets ($p < .01$) bar identity satisfaction ($p > .07$) were significantly associated with rejection and well-being. We therefore dropped identity satisfaction from the composite measure, which produced a highly reliable scale ($\alpha = .91$), with all items contributing to the internal consistency ('Cronbach's alpha if item deleted' $< .91$).

Well-being

Well-being was assessed using four distinct, albeit overlapping, constructs: depression ($\alpha = .94$), anxiety ($\alpha = .88$), stress ($\alpha = .87$), and life satisfaction ($\alpha = .92$). The Depression Anxiety Stress Scales – 21 items (DASS-21) is a well-validated short form

of the Depression Anxiety Stress Scales (DASS; Lovibond & Lovibond, 1995). The measure includes three seven-item subscales, assessing depression, anxiety, and stress symptoms respectively. The DASS has excellent validity in both clinical and non-clinical samples and reliability of at least $\alpha = .88$ (Crawford et al., 2009; Henry & Crawford, 2005). Life satisfaction was measured using the well-validated Satisfaction with Life Scale (SWLS; Diener et al., 1985). Participants rated five items such as "If I could live my life over, I would change almost nothing" on a seven-point scale from "Strong Disagree" to "Strong Agree". We reverse coded the DASS items and then, following Praharso and colleagues (2017), combined the items from the four well-being measures into a highly reliable composite measure of well-being ($\alpha = .94$ with all items worthy of retention). To confirm the validity of our composite measure, we conducted sensitivity analyses investigating whether the results of our main analyses were robust across all separate well-being scales. The results and conclusions did not change depending on whether we used any of the four subscales or the overall composite, suggesting the composite was the most parsimonious way of analyzing these data.

Multiple group memberships

An online version of the Social Identity Mapping tool (SIM; Cruwys et al., 2016; Bentley et al., 2018) was embedded into the survey, and was used to assess multiple group memberships. The SIM tool is a psychometrically validated instrument designed to provide a comprehensive overview of a person's social world. Participants were given detailed instructions of how to 'draw their social map', which included identifying and naming all of the social groups they considered themselves a part of. We took the total number of groups participants identified as our measure of multiple group membership. We also explicitly asked participants to include their ex-prisoner identity as one of their social groups.

Demographics

Participants were asked to enter their age (in digits), and to specify their gender (male/ female/ other), nationality, and ethnicity (white; black; Hispanic/Latino; native American; Asian; other). They were also asked to indicate their annual household income (on a twelve-point scale; under $10,000 = 1; over $150,000 = 12), level of education (on an eleven-point scale; no schooling completed = 1; doctorate degree = 11), and employment status (employed for wages; self-employed; out of work and

looking for work; out of work but not currently looking for work; a homemaker; a student; retired; unable to work).

Incarceration/ criminal record details

Participants specified whether they had been incarcerated (yes/no to ''Have you ever been incarcerated? i.e. spent at least 24 hours in a jail, or a prison, or correctional facility.'') and then provided incarceration details, including the year of incarceration ("When were you incarcerated in prison or jail or in a correctional facility? If you have been incarcerated multiple times, or for multiple years, then specify the most recent year you spent in prison or jail or in a correctional facility"), duration of incarceration ("for how long were you incarcerated in prison or jail or in a correctional facility? If you have been incarcerated multiple times or for multiple years, then specify the total amount of time spent in prison/ jail/ correctional facility." on a seven-point scale where less than a week = 1 and 3 years + = 7), and specified whether they had a criminal record against their name (yes/ no to "Do you have a criminal record? i.e. convicted of a felony which is recorded against your name").

Results

Descriptive statistics

Participants were on average 36.32 years old (SD=9.59, Range = 20-70 years) and White (81% of the sample stated their ethnic group was 'White', 9% Black, 8% Hispanic/ Latino, 2% Native American, and 2% Asian respectively) and American (100% of valid responses stated American nationality). Although our sample is not representative of the prison population, our sample does include ex-prisoners from all major ethnicities and reveals a similar distribution to that revealed by the most recent US prison population statistics (58.2% White (of which 32.2% are Hispanic/ Latino); 38.1% Black; 2.2% Native American; and 1.5%Asian; BOP, 2018). 54% of participants were male, which is not representative of the US prison population (currently made up of 93% males, and only 7% females; BOP, 2018). However, we did not find significant differences across gender groups for each of our key variables (Perceived rejection: $F(1, 197) = .067$, $p = .796$; ex-prisoner identification: $F(1, 197) = .078$, $p = .780$; well-being: $F(1, 197) = .239$, $p = .625$).

The median household income was $30,000 - $39,999, which is two income groups below the median in the US (Semega, Fontenot, & Kollar 2017); the median level of education was 'Some college credit, no degree'; and the modal employment status was 'employed for wages' (55%).

The modal year of incarceration was 2016 and the modal duration of incarceration was less than a week (54.8%). 85% of participants had been incarcerated, 44% of participants held a criminal record, and 29% of participants had both jail time and a criminal record. Given this, it seems as if a significant proportion of the sample fall into the US-specific (illegal in many other countries) category of being incarcerated for a significant period and then released without charge (Subramanian, Delaney, Roberts, Fishman, & McGarry, 2015).

Descriptive statistics and correlations of the key measures are presented in Table 6. In line with our hypothesizing, well-being was negatively correlated with ex-prisoner identification (r = -.31) and perceived rejection (r = -.29); and perceived rejection was positively correlated with ex-prisoner identification (r =.38) and multiple group memberships (r = .16). It is also important to note that the mean of ex-prisoner identification was low (M = 2.86).

Table 6. Descriptive statistics and correlations

	M	SD	*Correlations*		
			1	2	3
1. Well-being	3.33	0.78			
2. Ex-prisoner identification	2.86	1.33	**-0.31**		
3. Multiple group memberships	4.31	2.48	0.06	-0.06	
4. Perceived rejection	4.52	1.49	**-0.29**	**0.38**	**0.16**

† *N = 199 (bold = p < .05)*

Qualitative responses

Of those who completed the online survey, 137 participants (69%) chose to provide comments in response to the open-ended optional question *"Is there anything you would like to add about ex-prisoners and stigma?"* We examined these responses to

gain insight into ex-prisoners' actual experiences of rejection. To do this, we undertook a thematic analysis – a qualitative method used for 'identifying, analyzing and reporting patterns (themes) within data' (Braun & Clarke, 2006). Following Braun and Clark's (2006) suggestions, we coded all participants' responses and used the whole sample to generate themes, updating and refining these along the way. The following is structured in terms of the main themes which emerged from the responses.

25% of participants' responses emphasized the *severity of rejection,* stating that ex-prisoners do indeed face a lot of discrimination and stigma from the public, and reported feeling rejected and marginalized by society:

Many laws and stigmas make it very difficult for ex-prisoners to lead a normal life when they are released, even if their attitude has changed. Even if they have received education in prison it is hard to find people to hire them and they feel as if they have to lie about their past in a lot of situations in order to function in society and to get along with people they meet. This causes a lot of stress and anger.
(Female, 68)

Participants explained that the group-based rejection that ex-prisoners face often results in recidivism, because, often, the only way to cope with such profound group-based rejection is to return to crime to survive. For example:

As an ex offender, it has caused multiple hurdles and difficulties in my life. My question is this: if the desire is to reduce the rate of crime, why make it hard for ex-offenders to obtain employment? I believe it's that stigma that leads many people to re-offend.
(Male, 35)

Others (20% of participants) characterized *America as an unforgiving society* whose system makes it very difficult for people to turn their lives around, but argued that people *can* change and rehabilitate, and that ex-prisoners should be given a second chance. Responses demonstrate that group boundaries are impermeable, in that the 'ex-prisoner' label sticks with people despite attempts to move on. One example is:

We do understand that what we did was wrong, I went to prison because I made a bad

choice, if one of the reasons for prison is rehabilitation then why after I get out I'm still not treated as if I've been rehabilitated, I did something wrong, I was rightfully punished, but in America society thinks we should be punished for life, other than murder and rape everybody deserves a second chance.
(Female, 42)

35% of participants expressed strong collective identification and *solidarity between ex-prisoners*, and rejected the negative stereotype of the 'ex-prisoner'. For example:

Just because you're an ex- prisoner doesn't mean what everyone says, we made a mistake, we shouldn't be continually shamed for it over and over. We did our time, now we should be given a chance.
(Female, 39)

Contrary to this view, a smaller group of participants (11% of participants) acknowledged the ex-prisoner stereotype but purposefully distanced themselves from it. For example:

I have known ex-prisoners that stay the same. I have had to cut all ties with them even with them being my best friend. After the fact you see that the person has robbed the men's warehouse ran down the street and jacked a car by knife, living under bridges and preaching about how the system holds him down. I think the public feels he is very dangerous, but I changed and hid my old ways and reintegrated into society.
(Male, 34)

This participant is a rare example of someone who successfully engaged in *individual mobility* by distancing himself from his past and concealing his ex-prisoner identity. The respondent acknowledges that the identity is still his, but that he has to hide it.

Finally, 4% of participants expressed *regret* (e.g. *It's a bad deal wish I never did it* (Male, 28)) and a need for help and change (e.g. *We need opportunities too. We have families and kids and we need jobs too* (Female, 22)).

In sum, participants' responses suggest that ex-prisoners do indeed face a lot of

discrimination from society and stigma from the public, particularly in America which they characterised as an unforgiving society that hinders reintegration. Some participants suggested that this group-based rejection often results in recidivism. Most participants endorsed the notion that people *can* change and rehabilitate, and that ex-prisoners should be given a second chance, and expressed strong solidarity with ex-prisoners; while a smaller minority endorsed the ex-prisoner stereotype and distanced themselves from this.

Evaluation of the hypotheses

Hypotheses 1-5 were tested using PROCESS (2012, model 5). The model included perceived ex-prisoner group-based rejection as the predictor variable, ex-prisoner identification as the mediating variable, multiple group memberships as the moderating variable, and well-being as the outcome variable. The quantitative results are summarized in Figure 8. Each of the individual paths were significant: The experience of rejection as an ex-prisoner was associated with poorer well-being b = -.17, t = -3.19, p = .002, CI [-.28, -.07], confirming H1. The experience of rejection as an ex-prisoner was associated with stronger identification as an ex-prisoner b = .44, t = 5.59, p < .001, CI [.28, .59], confirming H2. Ex-prisoner identification negatively predicted well-being b = -.14, t = -3.04, p = .003, CI [-.22, -.05], confirming H3: identification as an ex-prisoner was associated with poorer well-being. There was also a significant indirect effect of rejection on well-being via ex-prisoner identification, *indirect* = -.06, Bias Corrected CIs [-.11, -.02], confirming H4: Identification as an ex-prisoner mediated the negative relationship between rejection and well-being. The model explained 15% of the variance in ex-prisoner identification (R^2 = .15), and 17% of the variance in well-being (R^2 = .17).

In line with the social cure approach, multiple group memberships had a positive effect on well-being (b = .05, t = 2.58, p = .011, CI [.01, .08]) in our final model; and the interaction between rejection and multiple group memberships in predicting well-being was significant (b = -.05. t = -2.54, p = .011, CI [-.09, -.01]). However, this interaction was in the *opposite* direction to that predicted by H5. Specifically, among those who were below the mean in total number of groups, there was a weak, non-significant relationship between rejection and well-being (b = -.05, t = -.70, p = .489, CI [-.20, .09]). That is, people who had few group memberships were less affected by

experiences of rejection. Among those at the mean (b = -.17, t = -3.19, p = .002, CI [-.28, -.07]) and above the mean (b = -.30, t = -4.11, p <.001, CI [-.45, -.16]) on the measure of multiple group memberships, however, there was a significant negative relationship between rejection and well-being. Therefore, and in opposition to H5, multiple group memberships moderated the effect of ex-prisoner rejection on well-being such that there was a negative relationship between ex-prisoner rejection and well-being *only* among those with multiple social identities. These findings suggest that multiple group memberships are both good and bad for ex-prisoners: they are good in that they provide direct benefits for well-being, however they also appear to make people more vulnerable to the negative effects of group-based rejection for well-being.
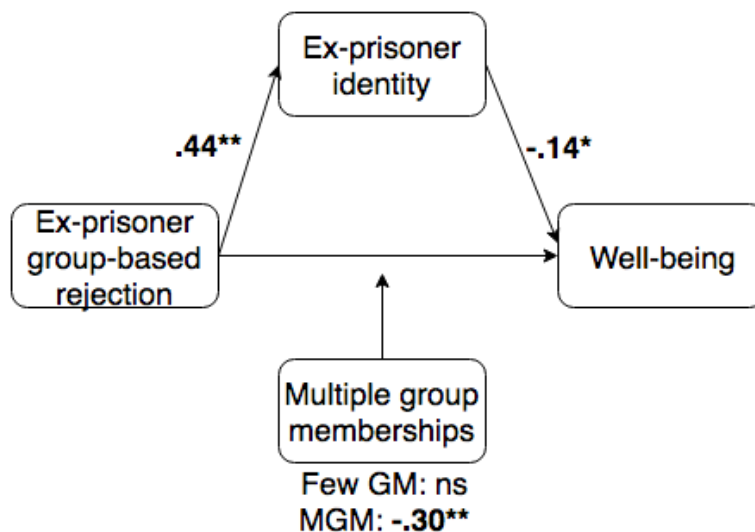
Figure 8. Summary of findings: Regression coefficients for the relationship between ex-prisoner group-based rejection and well-being as mediated by ex-prisoner identity and as moderated by multiple group memberships. [xx]

We reasoned that one explanation for this unexpected finding – a negative relationship between ex-prisoner rejection and well-being that is more pronounced among those with multiple social identities – is that it is an exposure phenomenon: people with more groups perceive more stigma and discrimination towards their ex-prisoner identity because they have a wider social network from whom such negativity might originate. To explore this possibility, we conducted an exploratory post hoc analysis. We used PROCESS (2012, model 4) to specify a mediation model whereby multiple group membership was associated with lower well-being via increased group-based rejection. The model included multiple group memberships as the predictor variable, perceived rejection as the mediating variable, and well-being as the outcome variable. In line with

our explanation, multiple group memberships positively predicted rejection (b = .07, t = 2.83, p = .005, CI [.02, .12]), and rejection negatively predicted well-being (b = -.21, t = -4.02, p <.001, CI [-.31, -.11]). Critically, multiple group memberships negatively predicted well-being *only indirectly* via perceived rejection (*direct* = .04, p = .210, CI [-.02, .09]; *indirect* = -.05, Bias Corrected CI [-.09, -.02]). We also tested alternative models that included ex-prisoner identity as a moderator of this indirect effect, but did not find evidence of moderation, suggesting that discrimination is not dependent on whether respondents self-identify as an ex-prisoner or not. Given the correlational nature of the data we cannot make claims about the direction of causality, and the post-hoc nature of this analysis limits the strength of our conclusions, but these results tentatively suggest that the more group memberships ex-prisoners have, the more likely they may be to encounter harmful rejection.

Results of a second post-hoc analysis suggest that another factor that might explain these results is the incompatibility between the ex-prisoner identity and participants' other identities. 94 participants listed the ex-prisoner group in their social map (47.2% of the sample). A one-way ANOVA showed that those that listed the ex-prisoner group in their social map had a higher proportion of incompatible groups (N = 94; M = .21, SD = .25), compared to those who did not list their ex-prisoner identity as part of their social world (N = 105; M = .14, SD = .23): $F(1,197)$ = 4.14, p = .043. These participants also experienced more rejection: a one-way ANOVA showed that those that listed the ex-prisoner group in their social map reported a greater experience of rejection (N = 94; M = 5.01, SD = 1.08), compared to those who did not list their ex-prisoner identity as part of their social world (N = 105; M = 4.60, SD = .12): $F(1,197)$ = 6.08, p = .015.

Discussion

Summary of findings

This study was the first to test the rejection identification model in the context of ex-prisoner identity, and the first to directly merge SIMIC theorizing with the rejection-identification model by examining whether multiple groups can buffer against the negative consequences of rejection on well-being. We found that experiencing group-based rejection as an ex-prisoner was associated with poorer well-being. This was also

borne out of the qualitative responses that depicted America as an unforgiving society whose system makes it very difficult for people to turn their lives around. Importantly, we found that ex-prisoner identification was the mechanism underlying the relationship between group-based rejection and poor well-being, and that multiple group memberships moderated this relationship such that there was a negative relationship between rejection and well-being only among those with multiple group memberships. Our data suggested two possible explanations for this finding: first, people with more groups perceive more rejection on the basis of their ex-prisoner identity because they have a wider social network from which such stigma and discrimination might surface. Second, people experience an incompatibility between their ex-prisoner identity and their multiple identities.

A new perspective on RIM

This study is the first to investigate RIM in the context of ex-prisoner identity, and consequently the first study to quantitatively demonstrate that social identification as an ex-prisoner is associated with the experience of group-based rejection and *poorer* well-being. Furthermore, out of dozens of extant studies of social identity and well-being (for review, see Jetten et al. (2014)), very few have found a direct negative relationship between social identification with a stigmatized group and well-being. In line with research that has theorized (e.g. Cruwys et al., 2014b) and demonstrated (e.g. Cruwys & Gunaseelan, 2016) that social identification, particularly in the context of stigmatized groups, is not always advantageous for well-being, we provide further evidence for *boundary conditions* for the social cure properties of groups – rather than disconfirmation of the rejection identification model – and build on work identifying the circumstances under which groups and social identification can become toxic to health. It is worth noting that the proportions of variance in identification and well-being that our model explains are large in comparison to other papers investigating RIM (e.g. Cruwys & Gunaseelan, 2016), which increases our confidence about the implications that we can draw from our findings.

A new perspective on multiple group memberships

Out of the many extant studies that show that being a member of multiple groups can protect well-being (for review, see Jetten et al., 2014), this is the first to investigate whether multiple groups can buffer against the negative consequences of discrimination

on well-being. Consequently, this study is also the first to demonstrate that multiple groups can *hinder* the well-being of people who have spent time in prison or who have a criminal record. We also offered and tested an explanation for this: people with more groups are exposed to more negativity in their network about their ex-prisoner identity; and people with more identities experience more incompatibility between their ex-prisoner identity and these other identities. It has been theorized (Jetten et al., 2017), however, and shown (Sønderlund, Morton & Ryan, 2017), that there are conditions under which multiple group memberships could compromise well-being, specifically in the context of holding multiple, devalued and visible group memberships; and existing work has linked group incompatibility with poorer well-being (e.g. Iyer et al., 2009; Cruwys et al., 2016). Therefore, rather than being a disconfirmation of the social cure, we see these results as providing evidence for *boundary conditions* under which the 'social cure' associated with multiple groups can transform into a 'social curse'.

Practical implications

This study also provides the much-needed quantitative evidence to demonstrate that discrimination negatively affects the well-being of ex-prisoners. Although research has consistently shown this in *non-offender* groups (for a review, see Livingston & Boyd (2010)), very few studies have been conducted on people that have spent time in prison or who have a criminal record (see Moore et al., 2016a for a notable exception). We found that ex-prisoners experienced high levels of group-based rejection despite our sample's modal duration of incarceration being less than a week.

Although the negative relationship between group-based rejection and well-being that we found was expected, what was less clear from prior research was the factors that might underlie or moderate this relationship for this particular population. We found that ex-prisoner identification was a mechanism underlying the relationship between group-based rejection and well-being, and that multiple group memberships was a moderating mechanism of this relationship. These findings have important practical implications. The US, with 2.2 million people currently in its jails and prison – a 500% increase over the past forty years – is the world's leader in incarceration (Kaeble & Glaze, 2016); and more than 640,000 people are being released from these prisons every year (Carson & Anderson, 2016). These people are being released into a challenging reality characterized by tremendous discrimination and stigma that is legitimized by the

legal and political systems (see e.g. Hirschfield & Piquero, 2010; Pogorzelski, Wolff, Pan, & Blitz, 2005). This was also borne out by the qualitative results, where participants characterised America as a very difficult place for people to make changes in their lives once they had been to prison or had a criminal record, indicating that structural change is likely to be needed in order to tackle discrimination and ex-prisoner ill-being.

Our data, which provides an understanding of who among this highly vulnerable population is more and less resilient, contributes to the need to better understand how to best support ex-prisoners. US crime prevention strategies pay much of their attention to the social reintegration of ex-prisoners into the community and reducing recidivism. Resettlement and reintegration strategies are consequently focused around employment, education, housing, mental health, and maintaining family ties, with the objective of assisting prisoners return to normal life, get a home and job, and handle life without re-offending (US Department of Justice, 2017). What is lacking from recent and ongoing reforms, however, is a focus on the group-based rejection of ex-prisoners from society. Our findings indicate that the help provided to ex-prisoners should include strategies to manage the hard reality of discrimination and stigma, such as psychological interventions to develop a positive self-identity and manage how they will be perceived in daily interactions.

Limitations and future directions

These data are the first to show a direct negative relationship between social identification with ex-prisoners and well-being, which we theorized was due to the impermeable nature of the ex-prisoner group and its legitimized and stable low status. Our qualitative findings lend support for this proposition, but future research could quantitatively examine identity management strategies in criminal offenders. These data are also the first to provide evidence that multiple groups can accentuate the negative consequences of group-based rejection on well-being, and our post-hoc analyses suggested this was because ex-prisoners with more groups were exposed to more negativity from their wider social network. Future research should directly investigate these novel findings among ex-prisoners and other stigmatized populations. Future research should also examine whether our findings are generalizable to more collectivist cultures where multiple group memberships may not provide the same benefits (Chang,

Jetten, Cruwys, & Haslam, 2016).

Although our study had several strengths, like all research it was also subject to several limitations. First, we provided correlational data and therefore we cannot claim causality. Second, ex-prisoners are a diverse population with very different legal circumstances, and it is therefore likely that this population experiences diverse kinds of discrimination that we were not able to disentangle using our research design. Third, our findings may not be generalizable to other countries because the US approach to criminal justice and incarceration is relatively unique.

Conclusion

In sum, our findings provide a new perspective on RIM, multiple group memberships, and discrimination that has important practical implications for successful community integration and ex-prisoner well-being. Using a large US sample of people who have spent time in prison or who have a criminal record, this study was the first to show that the experience of rejection as an ex-prisoner leads to poorer well-being, but with heightened identification with ex-prisoners. These data are also the first to provide evidence that multiple groups can accentuate the negative consequences of group-based rejection on well-being. We provided suggestive evidence that this is because those with wider social networks are exposed to more rejection and struggle with group incompatibility. New directions in resettlement strategies should ideally establish methods of empowering people to disidentify with their past criminal self, and combat the stigma and discrimination they are likely to experience in their social networks about their ex-prisoner identity.

Chapter 5: "Finding Rhythms made me find my rhythm in prison": the role of a music program in promoting social engagement and psychological well-being amongst prisoners.

Abstract

This article presents a mixed method evaluation of the Finding Rhythms (FR) charity music program in UK prisons. Results across two studies (pre-post program questionnaires; interviews) indicate that FR group activities and the development of a shared FR identity lead to positive well-being outcomes; and that FR involvement dissolves rivalries between prisoners and provides them with a sense of purpose, that transcends into prison life and beyond. We provide evidence for the social cure properties of the FR group and the music program that promotes social engagement and psychological well-being amongst prisoners.

Introduction

Prisoners, for whom mental health problems are very common (NAO, 2017), are at high risk of social isolation and suffer as a result of minimal social contacts and supports. To empower vulnerable individuals, it has been argued that it is important to increase their social connectedness because people's social life can have a profound impact upon their mental health and well-being. Research known collectively as the 'social cure' has found that group-based activities can profoundly benefit group members' well-being (Cruwys et al., 2015; S.A. Haslam et al., 2009). Importantly, though, these benefits are only found if the group members come to personally value or identify with the group, partly because this can satisfy psychological needs (Greenaway et al., 2016).

In this paper we adopt a mixed method approach to evaluate the 'social cure' properties of the activities of Finding Rhythms (FR); a charity that run music projects over a 6-week period in UK prisons. We designed questionnaires and interview schedules based on existing research (outlined below) to evaluate the social and well-being aspects of the FR program, and provide a robust and comprehensive evaluation of the impact of FR activities that includes a quantitative analysis and a parallel qualitative component.

Social disconnection and ill-being amongst prisoners in the UK

Social disconnection arises for many reasons but arguably the most extreme reason is imprisonment. Threats to social connectedness have been shown to be detrimental to survival, and reduced social contact has negative effects on physical and mental health, and raises the risk of ill-health and mortality (Holt-Lunstad et al., 2010). Governmental research on prisons in the UK has shown that the negative mental health effects of social isolation are particularly pronounced for people who are incarcerated (e.g. NAO, 2017). This is partly because social isolation is often coupled with complex personal issues such as substance misuse or trauma, and social issues such as a history of unemployment, which are common among the prison population (NAO, 2017).

In contrast, there is now considerable amount of evidence which highlights the range of positive consequences for health that stem from social interaction and engagement (for review see Holt-Lunstad et al., 2010). In particular, the association between perceived social support and better physical and psychological health is one of the most robust in health psychology (Beals, Peplau, & Gable, 2009). Findings from the few (qualitative)

studies that have been conducted with people in prison show that social interaction and relations have positive effects on well-being. Although it is clear that prison social life is complex, with some negative aspects to it such as bullying and coercion (Liebling & Arnold, 2012), research in this area points to the importance of supportive interpersonal ties – inside and outside the prison – in maintaining prisoners' well-being by facilitating survival and adaptation to life inside (Harvey, 2007; Crewe 2012).

Seeking to develop this line of research, this paper considers the role of the third sector, and in particular, the FR charity, in promoting social engagement and psychological well-being amongst prisoners. The role of the third sector in the resettlement of offenders has become a prominent one (MOJ, 2008) – especially in light of the recent challenging operational context of significant staff reductions and unremitting pressure on the prison estate as a whole (NAO, 2017). However, the Third Sector Research Centre (TSRC, 2018) has identified an evidence gap regarding the role and impact of third sector organizations in the resettlement of offenders. We address this gap by offering a theoretical framework to understand – and an evaluation of – the psychological impact for prisoners of engaging in the group activities organized by third-sector organizations, such as FR.

This is an important area of investigation because 84,255 people are currently incarcerated in the UK alone (Official Statistics, 2018), all of whom are at risk of poor mental health (NAO, 2017). We therefore need to better understand what services are capable of promoting the well-being of prisoners, and the processes through which these efforts affect prisoner well-being.

The social identity approach

Although the above evidence shows a positive association between social engagement and well-being, it says very little about the mechanisms through which prisoners gain social support. We believe that the social identity approach (Tajfel & Turner, 1979), and, more specifically, the social identity approach to health (see S.A. Haslam et al., 2009), offers the theoretical framework needed to address this gap in the prisoner well-being literature. The key premise is that social group memberships become internalized into the self-concept as social identities which, when salient, serve as a basis for self-construal – shaping people's attitudes, beliefs and behaviors – and for connecting with

others who share the identity – laying the foundation for health-enhancing social support.

Research has found that group-based activities, similar to those run by FR, which provide group members with a positive social identity, can help tackle social isolation and enhance adjustment, coping, and well-being. The benefits of social identification and group memberships—dubbed the "social cure"—are well established (for review see Jetten et al., 2014); and suggest that the beneficial consequences of groups are especially strong for those who are stigmatized or suffering. Two studies demonstrate that disadvantaged adults (participants living with a chronic mental illness or disability (Dingle et al., 2013); and adults at risk of homelessness (Dingle, Cruwys, Jetten, Johnstone, & Walter, 2014)) – a similar population to prisoners, who tend to participate less frequently in social interactions and to have fewer social contacts and supports – benefit from engaging in group activities. Forming a new and valued group identity as a choir member (Dingle et al., 2013) and participation in recreational group activities (Dingle et al., 2014) presented participants with an opportunity to engage in meaningful activity and build their social connectedness, which facilitated the development of a shared identity. This, in turn, was associated with well-being benefits – much like we anticipate the FR program will do for prisoners.

Only very recently has one study (Kyprianides & Easterbrook, under review) investigated whether the social cure properties of groups are present in prisoners' groups. This found that multiple group memberships benefit prisoner well-being via the satisfaction of psychological needs. Psychological need satisfaction is the proposed mechanism through which social identification positively affects well-being (Jetten et al., 2014). For example, Greenaway and colleagues (2016) found that social identities promote well-being amongst non-offender populations (students and adults) because they satisfy global psychological needs; and Kyprianides and Easterbrook (under review) found that prisoners' multiple group memberships were beneficial because they satisfied the psychological needs of connectedness (relatedness and support), self-worth (self-esteem and competence), and volitional agency (control, autonomy and meaning). Research has thus found that group-based activities, such as FR, can profoundly benefit group members' well-being. Importantly, though, these benefits are only found if the group members come to personally value or identify with the group, which we know

satisfies particular psychological needs. We base our FR evaluation design on this existing line of research, in the ways outlined below.

The present studies

FR is a charity that run intensive, 36-hour music projects over a 6-week period in prisons, led by some of the UK's top touring artists. Groups of prisoners work closely with the FR team to create a professionally produced album of new music. FR graduates earn the Edexcel accredited BTEC certificate, *'Supporting Employability and Personal Effectiveness'* ('SEPE') that demonstrates that the skills used in the context of writing, producing and delivering a project such as this are transferrable to many areas of work and life (FR, 2018).

We adopted a mixed method approach to evaluate the FR program, using interviews and questionnaire data. Following best practices for mixed methods research, we employed a 'simultaneous' combination of quantitative and qualitative approaches (D. Whitehead & Schneider, 2012) because there is a quantitative foundation to our research – testing the social cure hypothesis in our evaluation of FR - and we used qualitative methods to provide complementary information that explore these processes and capture prisoners' experiences of the FR program.

Study 1, informed by the social identity approach to health, aimed to determine how FR affects FR group identification, psychological need satisfaction, and well-being among prisoners who took part in the program, as well as the relationships between these variables. Data was collected in 13 UK prisons via a pre-FR program and post-FR program questionnaire. Following best practice techniques (Sackett & Mullen, 1993), given our lack of access to a relevant control group, we used a pre-post design to effectively assess change. We predict that prisoners will report increased FR group identification, psychological need satisfaction, and well-being, upon completion of the program compared to the commencement of the program (H1). In addition, we predict that FR identification will benefit prisoner well-being by satisfying psychological needs over time (H2). Study 2 aimed to gain insight into the role of emergent social identities and group processes during the FR workshops by capturing prisoners' experiences of the program. Data was collected in two UK prisons via semi-structured interviews upon completion of the program. We disclose the existence of all variables that were part of

the studies by putting the raw data file, full questionnaire/ interview schedule, and analysis outline on a restricted OSF site.

Study 1

Method

Participants and design

The study employed a pre- and post-intervention repeated measures, within-subject design. Two questionnaires were completed by FR participants (N = 104; 13 prisons). The questionnaires were distributed by FR staff to all participants at the very beginning of the program, during the first workshop in week 1 (Time 1; T1), and, later, upon completion during the final workshop in week 6 (Time 2; T2). These included measures of identification with the FR group, psychological need satisfaction, and well-being. Each questionnaire took approximately 5 minutes to complete. We were somewhat restricted in the number of items we could use because we wanted to reduce the burden on participants and avoid overload, but also because the FR team required a one-page questionnaire. Informed consent was obtained from all participants.

Measures

All items used a 5-point scale ranging from 1 *Strongly disagree* to 5 *Strongly agree*.

Finding Rhythms group identification

Participants responded to three items: 'I feel a bond with FR; 'I feel committed to FR'; 'I identify with FR' (adapted from Doosje, Spears & Ellemers, 1995). We combined all the items into a highly reliable composite measure of FR group identification with all items contributing to the reliability of the scales (T1: α = .97; T2: α = .88).

Psychological need satisfaction

Seven psychological needs were measured at both T1 and T2 using single items to reduce participant load: social support ('I have the support I need from other people'; adapted from items used in S.A. Haslam et al., 2012), self-esteem ('I have high self-esteem'; single-item self-esteem scale; Robins, Hendin, & Trzesniewski, 2001), competence ('I am good at the things that I do'; adapted from the Basic Psychological Needs Scale (BPNS); Deci & Ryan, 2000), relatedness ('I am close and connected to

other people'; adapted from the BPNS), autonomy ('How I spend my time is my own choice'; adapted from the BPNS), control ('I have control over my life'; Greenaway et al., 2016), and meaning ('My life has meaning'; adapted from items used in Baumeister et al., 2013). An exploratory factor analysis indicated that all items loaded onto 1 factor, so we combined all the items into a highly reliable composite measure of psychological need satisfaction with all items contributing to the reliability of the scales (T1: α = .96; T2: α = .84).

Well-being

Well-being was assessed using two distinct, albeit overlapping, constructs: psychological distress – measured at both T1 (α = .85) and T2 (α = .89), and positive experience – also measured at both T1 (α = .93) and T2 (α = .86). Psychological distress was measured using three items from the screening tool for psychological distress (STOP-D, Young et al., 2007). Participants rated their levels of depression, anxiety, and stress over the last month: '...feeling down, sad, or uninterested in life' (depression), '...feeling anxious or nervous' (anxiety), and '...feeling stressed' (stress). Positive experience was measured using three items from the scale of positive experience (SPANE; Diener et al., 2010). Participants rated to what extent in the past month they have felt 'happy', 'positive', and 'good'. We reverse coded the STOP-D items and then combined the items from the two well-being measures into a highly reliable composite measure of well-being with all items contributing to the reliability of the scales (T1: α = .92; T2: α = .86).

Questionnaire results

Assessment of members' engagement and appreciation of the FR Program
Summary statistics pertaining to participants' personal development in the FR workshops are presented in Table 7. Although these measures do not directly relate to our hypotheses, they do shed light on the effectiveness of the FR program, and they quantify participants' interview responses about their overall FR experience. One-sample t-tests showed that, on every measure, responses were above the scale midpoint of 3, and in all cases significantly so – indicating that participants had positive responses to both the learning and practical components of FR.

Table 7. Participants' mean self-reported experience of the FR program.

Finding rhythms has helped me:	*M*	*SD*
Learn how to work with other people	4.46**	.80
Express myself	4.47**	.72
Learn about working in a professional environment	4.37**	.86
Control my language and behaviour	4.09**	1.16
Feel more confident about what I can achieve in future	4.38**	.91
Develop skills I will use outside the project	4.46**	.87
Change my opinion of education	3.81**	1.32
The staff on the project have:		
Listened to me	4.76**	.46
Helped me to think differently about myself	4.43**	.86
I am proud of what we have achieved	4.72**	.51

Notes. **one-sample *t* versus scale midpoint of 3, p < .001.

Correlations between measures

Table 8 presents the intercorrelations between variables at T1 and T2. In line with our hypothesizing about the relationship between FR group identification, psychological need satisfaction, and well-being, these variables were all highly correlated, in the hypothesized directions.

Table 8. Intercorrelations between variables at T1 and T2.

	1	2	3	4	5
Variables at T1					
1. FR identification					
2. Psychological need satisfaction	.82**				
3. Well-being	.52**	.66**			
Variables at T2					
4. FR identification	-.05				
5. Psychological need satisfaction		-.08		.50**	
6. Well-being			.28*	.31**	.53**

Notes. **$p < .001$.

Assessment of the impact of participation in the FR program

We conducted within-subjects *t*-tests to compare participants' FR group identification, psychological need satisfaction, and well-being before and after participation in FR. A

Bonferroni correction was applied to account for multiple tests (changing the probability threshold to $p < .01$). Results are presented in Figure 9. From these results it can be seen that participants' self-reported FR identification (T1 M (SD): 3.38 (1.56); T2 M (SD): 4.54 (.58); $t = -5.99**$, Cohen's $d = .99$), psychological need satisfaction (T1 M (SD): 3.31 (1.46); T2 M (SD): 4.36 (.59); $t = -5.78**$, Cohen's $d = .94$), and well-being (T1 M (SD): 3.28 (1.20); T2 M (SD): 3.78 (.91); $t = -3.46**$, Cohen's $d =. .47$) was higher after participation in the program than before, and all effects were large.
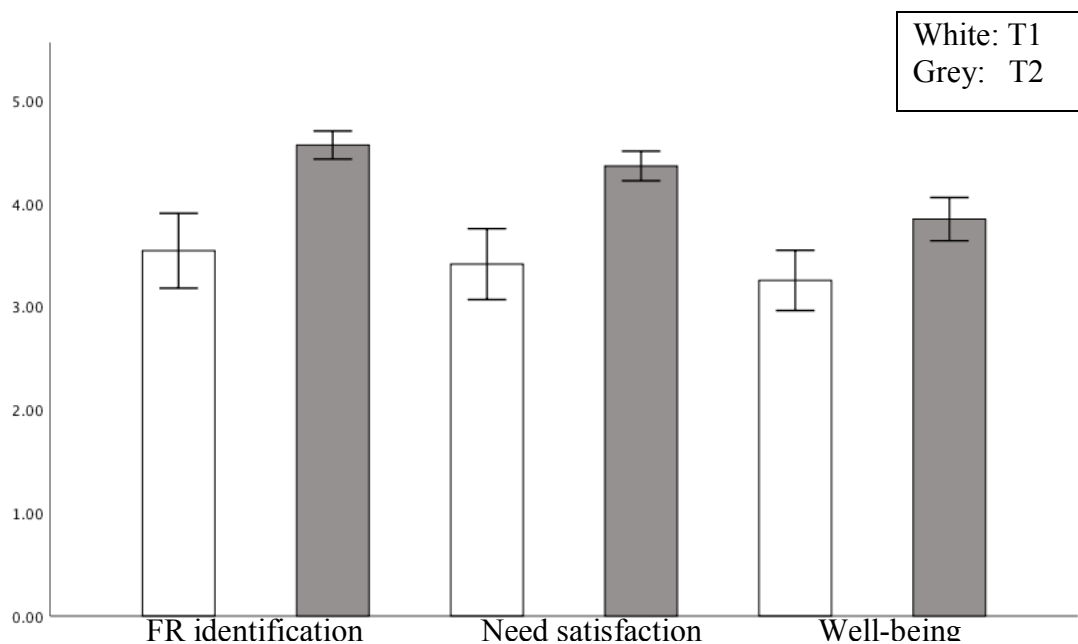
Figure 9. Longitudinal tests of FR impact.
Notes. When examined separately, all psychological needs and the positive experience measure were significantly higher post program; and the psychological distress measure was significantly lower post program ($p < .001$).

Assessment of how FR program participation positively impacts prisoner well-being

Tests for evidence of mediation were conducted using path analysis in Mplus (Version 8; Muthèn & Muthèn, 2015). We created pre vs. post FR program difference scores – to keep the number of variables to a minimum considering our low sample size for path analysis and to investigate change directly - for the following variables: FR identification, psychological need satisfaction, and well-being. We first calculated the reliability of each difference score used in the analysis – because difference scores allegedly suffer from reliability problems (Trafimow, 2015) - using the standalone

Macintosh program *Reliability of Difference Scores* (version 2.0). The program yielded the following difference score reliability values: .92 for FR identification, .89 for psychological need satisfaction, and .85 for well-being, indicating that all measures used in our mediation analysis are reliable. The model thus included the difference in FR identification scores across the two time points as the predictor variable, the difference in psychological need satisfaction scores as the mediating variable, and the difference in well-being scores as the outcome variable.

The data are multilevel, with prisoners (N = 104) nested within prisons (N = 13). We examined whether we needed to take account of this multilevel structure by computing intraclass correlations (ICC) to assess the variance of the variables between prisons. The ICCs (Δ FR identification ρ = .50; Δ psychological need satisfaction ρ = .50; Δ well-being ρ = .33; thus all ρ > .08) indicate that there is significant variation in all three measures both between and within prisons, so we controlled for this clustering using a common approach to the analysis of complex survey data in MPlus (Asparouhov, 2006): we specified TYPE = COMPLEX in the ANALYSIS command in conjunction with the CLUSTER option of the VARIABLE command. First the model was estimated using Maximum Likelihood Robust (MLR) estimation to account for non-normality in variable distributions. Secondly, the standard errors and bias-corrected confidence intervals for indirect effects were estimated using bootstrapping with 5,000 sample replicates and Maximum Likelihood (ML) estimation.

The quantitative results are summarized in Figure 10. Each of the individual paths were significant, in the hypothesized directions: Δ FR identification was positively associated with Δ psychological need satisfaction b = .85, p < .001, 95% CIs [.78, .92], and Δ psychological need satisfaction positively predicted Δ well-being b = .54, p < .001, 95% CIs [.38, .71]. Finally, there was a significant indirect effect of Δ FR identification on Δ well-being via Δ psychological need satisfaction, *indirect* = .46, p < .001, 95% Bias Corrected CIs [.32, .60]; but the direct effect of Δ FR identification on Δ well-being was not significant (direct = .07, p = .393, 95% CIs [-.06, .19]). These results suggest that FR identification benefits prisoner well-being by satisfying psychological needs.
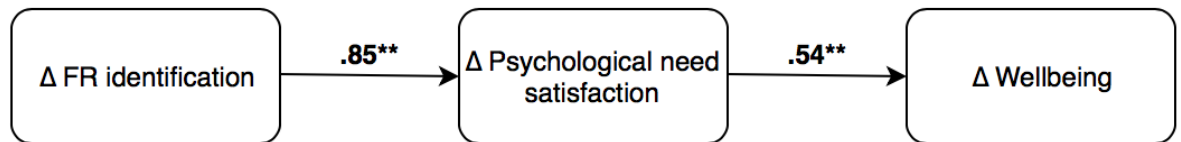
Figure 10. Standardized regression coefficients for the relationship between Δ FR identification and Δ well-being as mediated by Δ psychological need satisfaction.
**p < .001.

Study 1 discussion

Study 1 supported our hypotheses using a pre-post design that allowed us to effectively evaluate the impact of the FR program longitudinally despite the absence of a control group: prisoners reported increased FR group identification, psychological need satisfaction, and well-being, upon completion of the program compared to the commencement of the program (H1); and, an increase in FR identification led to an increase in prisoner well-being via an increase in psychological need satisfaction over time (H2).

Study 2

In study 2 we conduct interviews to capture prisoners' experiences of the program, to gain insight into the role of emergent social identities and group processes during the FR workshops.

Method: Interviews

We carried out 15 interviews with 15 FR participants upon completion of the program in two prisons. Participants were an opportunity sample, interviewed on the basis of their willingness to share their FR experiences. The same participants also took part in two group discussions – one at each prison respectively. Informed consent was obtained from all participants.

In line with the aims and scope of thematic analysis (see below *Analytic procedure* section), the interview questions were partly exploratory but also theoretically driven, reflecting our interest in the role of emergent social identities and group processes during the FR workshops. Participants were asked about: their experience of the FR program (Q1), support and well-being (Q2), continuity of the skills learnt and feelings experienced during FR upon completion of the program (Q3), shared identity and

intergroup relations (Q4, Q5), and their prisoner identity (Q6). At the end of the interview, participants were asked if there is anything else that they would like to say about FR (Q7).

Our sample consisted of 8 female and 7 male prisoners who took part in the FR program. All participants were over 18 years old. Each interview lasted between 4 and 10 minutes. The interviews were fully transcribed; and their mean duration was 5.5min (total = 68.01min). A group discussion, guided by an FR staff member, also took place at the end of the program, in which FR participants discussed their experience of the program. The two group discussions, one at each of the two establishments, were also recorded and fully transcribed - informed consent was obtained from all participants, and their mean duration was 14.22min (total = 28.44min).

Analytic procedure

We employed thematic analysis (Braun & Clarke, 2006) using NVivo (version 11.4.3). First, we read and reread the interview transcripts. Second, we created and assigned codes to extracts with similar content (e.g., references to the program's impact on well-being). Third, we organized them into distinct and coherent themes that formed a rough thematic structure. Finally, we returned to our data to check that the themes were appropriate across individual responses, and all themes were amended to incorporate any instances that did not fit the general pattern observed across the data; and a final thematic structure was produced. Our analysis was guided by theoretically driven questions (e.g., was there reference to shared identity?), but we were also open to and identified unexpected themes (e.g., prisoner rivalries dissolve). Thematic analysis thus enabled us to investigate our theoretical research questions whilst being flexible enough to enable new insights.

Interview results

In line with our quantitative findings, our qualitative results show that FR creates a shared identity, satisfies psychological needs, and benefits well-being. However, our interview findings indicate that the benefits of the FR group occur not only during and within the group itself. The results are organised into two sections - based on FR group activities and a shared FR identity (section 1), and positive outcomes that transcend the FR group boundaries (section 2) - that tell a temporal story: FR group activities and the

development of a shared FR identity lead to positive well-being outcomes, which later transcend into prison life.

Section 1: FR group and FR identity

A first set of themes discernible in the data pertain to psychological processes that occur within the FR group workshops. Prisoners seemed to become absorbed in FR activities, which created an identity that dissolved differences and promoted positive intragroup relations.

Prisoners described how the FR activities encouraged the participants to become engaged in the shared goal of creating music, which appeared to be a key factor that led to the emergence of a shared identity (in line with social identity theorizing; Hogg & Reid, 2006). The extract below is typical of accounts of how the focus on the process of making music was absorbing:

P6B: It is a very comfortable environment – and you know that obviously that when you have to go back, you have to go back to your cells and that – but while we're here - it's just here - there is just nothing else that is going on, it's just thinking about making music.

P6B describes her deep involvement in the group's activities, and that the process of making music was so absorbing that it made her feel that '*there is just nothing else that is going on*'. The activities were behaviorally and cognitively absorbing, suggesting that the group was highly salient (Reicher, 2000) and informing participants' interactions and behavior. Indeed, *P7B* explains how the FR activities brought together and bonded the diverse group of people by providing a shared purpose and collective identity:

P7B: It's been a really really great experience of bringing people together – people who you wouldn't usually really chat to or associate with, it just brought us together…We've all got a bond now... I think we're all different, I think we're all unique in our own way, we've all got our talents, but obviously the one thing that joins us is the music so yeah we're sort of one loud speaker…

P7B discusses how the previous boundaries between prisoners were dissolved (*'people who you wouldn't usually really chat to or associate with'*) and that they become united (*'a really really great experience of bringing people together'*) through the FR experience (*'it just brought us together'*). These perceptions of similarity are based on prisoners' shared interests and their feelings of relatedness through music, which strengthens the shared FR identity.

This is further explained by *P5F,* who explains that, while there is usually tension between prisoners, this seems to dissipate within the FR group. The positivity, shared goals and work, and the evidence of the group's effectiveness and efficacy bridges the differences between people. Below is an illustrative quote of the ways in which FR helps to bridge differences between prisoners:

P5F: It's crazy cos obviously there's people from other wings innit… Just to bond with them so quickly it was just like "wow" cos usually there would be tension in the room like say what area are you from or whatever, but it wasn't even like that it was like let's all make music. Yeah its wicked…regardless if you're from that end or that end yeah like it's always all about making music forget about the post code war let's just make music and do something with ourselves.
Interviewer: What's the post-code war?
P5F: Yeah like the post code beef. There was none of that it was strictly to make music. Cos I'm not here for that, I didn't come here to do that, I came here to make music…

In the above account, *P5F* describes how FR bridges social identity boundaries between groups of people with different backgrounds – using the example of area. *P5F* is shocked (*'crazy', 'wow'*) by the power of FR to affect the intergroup relations between prisoners that come from different areas. The 'post-code' identity, a pre-exiting source of potential conflict, is set aside, and, instead, the FR identity is made salient, with strong norms of collaboration and music-making (*'forget about the post code war… I didn't come here to do that, I came here to make music'*). FR seems to build a bridge between prisoners by creating a foundation for collaboration (music) and a common, shared identity.

Some prisoners attributed the shared collective identity among the prisoners to the goals the participants of the FR program shared: creating a high-quality music album. Below, a female prisoner at HMP Bronzefield talks about her experience of contributing to the FR group CD:

P2B: You know what it is…We just come together… you see how different we are from each other, but at the same time we work and we mix and blend very well… so we have some nice tracks we have made that show that just because we are different doesn't mean that our music is not tight… It's the bouncing in and out of certain things, like certain songs or tracks, you've got something very tropical… a tropical sort of vibe… and then you have something very funky… it's that drastic difference but... that's how I can explain it… so different yet we come together very well.

P2B explains that in order to achieve the shared goal of producing the tracks for the CD, FR participants embraced the group's differences – indicated here by metaphors such as 'tropical' vs. 'funky' – and came together to work effectively as a group. Indeed, *P2B* talks of the FR group CD as the material embodiment of the groupness (*…nice tracks we have made that show…*), and that this brings the diverse group of people together into a successful group ('*we mix and blend very well*'), which is described using collective terms (*we, us*). Thus, the goal shared by the participants helped to develop a collective identity among them, which in turn helped the group effectively collaborate.

The FR experience also produced positive emotions among members, which were directed at themselves, the group as a whole, and the other members. *P4B* describes her experience:

P4B: I'm really really proud of the girls... and I'm really proud of myself as well because at one stage I thought you know what maybe it is not good enough or maybe people won't be interested. But the reaction I got from everyone like it gave me the confidence to work more… And these guys – Ben and their team - have made us feel really really comfortable… I feel like when you have like a good team that you're working with, people that are good are coming together, and it all goes to plan. It runs smoothly. We have fun but we respect one another at the same time. So yeah, it worked well.

P4B explains how the experience of being part of a constructive team (*'a good team'*), a comforting atmosphere, and having positive interactions with the members (*'We have fun but we respect one another at the same time'*) produced a positive working environment (*'it worked well'*) and feelings of pride directed at herself and her fellow group members. Like *P4B*, most participants were inspired by the group's talent, and said that they were proud of other members and what they have achieved as a group. This is in line with social identity theory, which suggests that positive social identities provide their members with self-esteem (Tajfel & Turner, 1979).

Section 2: Positive outcomes that transcend into prison life
A second set of themes discernible in the data pertain to the positive outcomes associated with the FR group that transcend into prison life.

Participants referred to FR's capability to increase their confidence, both within the FR group boundaries but also in prison more generally. Below is an illustrative example of this:

P4B: It's given me the confidence to go back and write more and perform more to people as well because I remember the first time I read my spoken word actually was to Tania, one of the people here… and I was so nervous at the time doing it but now it's just like jump on the mic and get on with it…and it's been fun especially like in this environment, in a prison, you don't have a lot of opportunities to do things that are different, so for the girls in here having these types of courses it really helps them build their confidence in here. Because your confidence is kind of put down a little bit you know?

P4B explains that FR group members' encouragement increased her confidence and commitment to perform in front of other people. Critically, however, *P4B* goes on to talk about the ways in which FR increased participants' confidence beyond the FR group. *P4B* describes how FR helped prisoners become more resilient to the prison's restricting environment (*'your confidence is kind of put down'*) by providing prisoners with a purposeful and meaningful *collective* activity to engage in, which builds up their confidence in prison (*'it really helps them build their confidence in here'*).

Others also described how FR provided a sense of purpose within prison, which seemed to have a powerful positive effect on their well-being. One female prisoner at HMP Bronzefield described FR as a substantial part of prison life:

P3B: It makes it, eem, a little easier because I have something to focus on – something on my mind all the time - because when I am not here I am in my room writing and thinking about what I am going to do when I am here. So it is a big part of my life here… It's given me something to look forward to on the weekends, it's actually boosted moral I think with everyone like –I think coming here has actually given us something to remind us of our talent and, so I think, yeah, it's been great.

We can see that it is not just FR activities, but also the associated FR identity, that engages prisoners outside of the group ('*I have something to focus on – something on my mind all the time*'). This finding ties to social cure theorizing that posits that a shared social identity focuses members' energies and imbues them with a sense of meaning, purpose, and worth (Jetten et al., 2017). These effects appear to buffer the threatened well-being of prisoners, and also help prisoners cope with the negative consequences of being a member of the devalued prisoner group, and so prison life becomes easier ('*it makes it a little easier*').

Participants also talked about the ways in which FR has helped them manage their emotions and deal with their prison-related depression and anxiety. Here are two notable examples:

P7F: It's definitely a bit of a healer, you know going through a bit of a rough time a bit of depression or just the whole world of being in prison, I think this is a great way to take you out of your mind and to take you out of that state of mind innit and put you in a good one…Cos it helps man. It does, it does. And music is a good feeling. Just a stress reliever as well and well, it works man.

P4B: It definitely takes your mind off of where you are and the environment that you are in. You kind of zone out for like the sessions, and you don't have to think about what's going on in the house-blocks or you know the stress that you're going through

elsewhere in life...or you know the stresses at home – like – you tend to miss your family a lot in here so when you have opportunities like this it kind of gives you time away from stressing about the lonely anxiety that you feel so like – yeah – it helped a lot.

Both participants describe prison life as depressing, but, in line with research showing that social identity reduces depression by fostering positive attributions (Cruwys et al., 2015), FR alleviated feelings of depression and low mood by acting as a 'a healer' and 'a stress reliever' that helped prisoners manage their emotions. Specifically, FR helped to buffer against the main factors that lead to anxiety and depression in prison: it allowed prisoners to escape the confined prison space (*'the whole world of being in prison'*, *'the environment that you are in'*), it helped prisoners deal with the loneliness that stems from isolation from their loved ones (*'you tend to miss your family a lot in here'*), and it allowed them to distance themselves from other situations that may arouse feelings of insecurity and fear (*'you don't have to think about what's going on in the house-blocks'*).

Prisoners also indicated that FR gives people an identity that enables them to connect with others who they otherwise wouldn't, which makes prisoner life more manageable. For example:

P2F: Finding Rhythms has helped me because I didn't really chat to anyone, and now I chat to everyone, so yeah its helped me a lot. Like before, obviously before this I was just sitting in my cell all day being bored and that, and not really chatting to no one and that but like now - obviously I'm gonna hate prison everyone hates prison - because of Finding Rhythms it's made me get to know people, so when I'm out on the wing, I can chat to other people because I know them. So if it weren't for that – if it weren't for Finding Rhythms – I would probably still be sitting in my cell not chatting to no one, so they have brought out the confidence in me.

P2F explains that, before FR, prison life was characterized by social isolation (*'sitting in my cell all day not chatting to no one'*) and that he perceived the prisoners on his prison wing as strangers. However, the shared identity created by participating in FR shifted his perception of the other FR members, who then became supportive in-group members (*'if it weren't for Finding Rhythms'*). This was echoed by other prisoners: '...

[the FR members who] live on my house block - we've known each other and that but we didn't really talk much but now we talk like every day' (*P5B*). The shared FR experience and identity thus appears to facilitate positive social interactions among the FR members in prison. This finding coheres with research demonstrating that people who share a social identity are more likely to be positively orientated towards each other (Jetten et al., 2017).

FR also seems to reduce the salience of the negative prisoner identity for prisoners. Participants do not think of themselves as prisoners during these workshops, which fosters a sense of autonomy in this otherwise restricting environment. All 15 participants reported that FR changes the way they feel about being a prisoner. Below is an illustrative quote explaining how FR functions to conceal the prisoner identity:

P5F: From when Finding Rhythms came here like, I didn't feel like I was in jail for a second I actually thought I was in a studio. Like even though when I go back to my cell I feel like I'm in jail, I realise when I go back to my cell like I'm always rapping I'm not forgetting about what happened in Finding Rhythms cos I always have little flashbacks of what happened. Like say for instance I'll make a tune here, but I'll take the music to my cell and start listening to what I was listening to but all in my head innit, but like I feel like I'm on the actual outside world, I don't feel like I'm in jail no more, I feel like I'm with a group of guys making music, and even after this I'm gonna feel like I'm still making music in my cell and like I'm a free man and it makes my sentence go quicker… yeah I feel like I'm not a prisoner when I'm in Finding Rhythms, I feel alive, I feel open.

P5F explains that his emerging FR identity functioned to overshadow his prisoner identity ('*from when Finding Rhythms came here, I didn't feel like I was in jail for a second*'). In other words, prisoners experienced a shift in identity salience whereby the FR identity became the more prominent, significant, and important identity to prisoners. Although *P5F* says that the feeling of imprisonment returns when the prisoners go back to their cells, the FR identity does not remain situationally bounded because there is a sense of continuity and transcendence that softens the negative effect of leaving FR ('*I'm not forgetting about what happened in Finding Rhythms*'). In the above account we can see the effect that FR has on prisoners' sense of autonomy: prisoners are bereft of autonomy back on the prison wing, but not during the FR workshops where they are

provided with a stronger self-definition that strengthens the experience of their decisions as autonomous ('*I'm a free man… I feel like I'm not a prisoner when I'm in Finding Rhythms, I feel alive, I feel open*'), and a platform to interact with fellow group members, making them aware of the ways in which they can uniquely contribute to the group ('*I'm with a group of guys making music*').

The (wider) musician identity that FR reinforces resulted in additional positive outcomes. All 15 participants reported that they will carry on with music once FR finishes and/or upon release.

For some participants, FR reinforced a positive musician identity by providing them with the opportunity to continue their pre-existing musician identity. Below are two examples:

P6B: I was working towards music on the outside and music was literally everything in terms of opening like a studio. So when I did come in here I felt like everything I was working towards was sort of gone downhill – but yeah they've actually helped me they've allowed me to – I am happy that I can put music out there, from in here, and people will still be able to hear me.

P7B: It's given me more confidence to make me then get back into pursuing the music career… I put a lot of energy into music and I lost it all, I lost touch with my musical side and it just reminded me actually, everyone, with everyone's help, they reminded me how talented I actually am and I do need to get into it, whether I make money of it or to just make myself happy in general.

In the above extracts, FR can be interpreted as a means of re-affirming a positive identity that was being eroded through prison life. Music used to be a big part of these participants' lives but was lost upon imprisonment ('*everything I was working towards gone downhill*', '*I lost touch with my musical side*'). Those with pre-existing music identities experience FR as affirming and as strengthening their musician identity ('*I can put music out there, from in here, and people will still be able to hear me*'). This leads to positive feelings and reignites their passion and confidence in their music ability ('*I am happy*', '*how talented I actually am*').

For others, FR created a new musician identity that they wanted to continue after the FR program:

P5F: I won't lie, I don't want it to stop. Like literally I want Finding Rhythms to keep continuing... Yeah cos like, do you know what it is, it's a bit crazy being in your cell all the time just doing nothing just watching TV, but as soon as I found out about Finding Rhythms I was like 'I wanna go like I wanna go'. I feel more energetic, cos in my cell I'm not myself but when I'm here I'm just like a whole different person, like more open so it's like Finding Rhythms made me find my rhythms. Like yeaaaah, it made me find my rhythms... I'm making music, I'm doing my thing right now - this is me now you know. When I get released or whatever, when I'm free, I wanna get involved properly. I didn't used to want to do music, I used to see it as a hobby, but now like I wanna take it as a career.

In the above extract we can see that FR allows prisoners to cling on to the positive FR identity and move away from the negative one of prisoner ('*cos in my cell I'm not myself but when I'm here I'm just like a whole different person*', '*this is me now*') to feel a sense of purpose that transcends prison walls and reconnects them to the outside world ('*When I get released I wanna take it as a career*'). *P5F* explains that FR helped him to find himself underneath all of his anger, conditionings, frustrations, and insecurities that come hand in hand with prison life, and taught him how to have a stronger and more positive sense of self (*'Finding Rhythms made me find my rhythms'*). Here *P5F* uses the metaphor 'rhythm' to highlight the impact that FR has had on his life and how he will use the FR experience to guide how he acts in the future.

In sum, FR created a shared identity among the participants that dissolved the boundaries between prisoners and facilitated supportive and positive interactions among them. This lead to a range of positive emotional and well-being outcomes that prisoners experienced both within and outside FR. The FR workshops reduced the salience of the negative prisoner identity, and created or reinforced a positive musician identity that inspired participants to pursue music in and outside of prison.

Discussion

The present studies were designed to investigate the potential benefits for well-being of participating in FR for prisoners residing in UK prisons. Longitudinal questionnaire findings (Study 1) and interview findings (Study 2) provided evidence for the social cure properties of the FR group. Both studies demonstrated that FR creates a shared identity amongst prisoners that satisfies psychological needs and benefits well-being. Study 2 also showed that these positive well-being outcomes later transcend into prison life, making it easier and more manageable. We show that while decreasing well-being tends to be the norm in prison, building new social group memberships can counteract this decline.

This study provides the much-needed quantitative evidence to demonstrate that social interaction and engagement positively impacts the well-being of prisoners. We found that participation in FR made members feel good and also helped to resolve negative emotional states and problems associated with being imprisoned. These findings are consistent with previous research on the emotional function of music (P.G. Hunter & Schellenberg, 2010).

We also add to the social cure literature by applying the social identity approach to health to prisoners, and demonstrating the curative properties of the FR group. Of the most prominent findings, across studies 1 and 2, was that the FR group fosters social support. This finding is in line with social cure theorizing (Jetten et al., 2017) that posits that when people define themselves in terms of a shared identity, they expect to give each other support, actually give each other support and construe the support they receive more positively. Our qualitative results also highlighted the importance of behavioral involvement, a finding also in line with social cure theorizing (Jetten et al., 2017) that posits that people who define themselves in terms of a given social identity will enact—or at least strive to enact—the norms and values associated with that identity. The novelty in our findings lies in the population being studied as existing research has found these patterns to exist only among *non-offender* populations.

Our qualitative findings also revealed that the shared FR identity was capable of eroding intergroup hostilities within prison wings. This finding extends research on prejudice reduction that has found, amongst *non-offender* populations, that emphasizing shared

identity and sameness may result in positive intergroup attitudes (T.N. Brown, Sellers, Brown, & Jackson, 1999). Finally, our qualitative work showed that, beyond affording an FR identity, the FR group developed or strengthened a *musician* identity amongst members that transcends prison walls. These much-needed positive identities are capable of helping this population maintain continuity, and avoid the negative effects of stigma (as has been the case for stigmatized individuals, see Shih, 2004), which are important for successful community reintegration.

Future research should address the limitations associated with this study. First, although our analyses capture change over time, and qualitative research methods can be used to identify causal relationships and develop causal explanations (Maxwell, 2004), we provided correlational data in our quantitative analysis, and therefore we cannot claim causality. Second, we were somewhat restricted in the number of items we could use in our quantitative enquiry, given our concern to reduce burden on participants, and given the strict space limits set by FR. Finally, future avenues for research would be to quantitatively follow up some of our novel qualitative findings.

Despite these limitations, our findings have important practical implications. Our findings suggest that third sector organisations can provide social programs, like FR, that can benefit the lives of offenders, which could inform decisions about which prisoner services receive funding. Commissioning processes which ensure that small and medium-sized charities – such as FR – are able to compete for tenders and contracts (argued not to be the case currently: Lloyds Bank Foundation, 2015) may benefit prisoner well-being.

There is currently a great emphasis on managing the well-being and rehabilitation of prisoners residing in UK establishments. This work encourages practitioners to welcome creative projects that improve social life in prison and opportunities upon release, but more research on activities for prisoners and their effects on psychological well-being is warranted.

Chapter 6: Discussion

In this thesis I have attempted to both progress social cure theory and advance its applications. In this final chapter I summarise my findings, discuss the theoretical and practical implications of my findings, the limitations of my studies, and discuss avenues for future research. I conclude with a reflection on the new psychology of health.

Summary of findings

In what follows I discuss my findings as they relate to the specific research objectives I outlined in Chapter 1.

My first research objective was to advance Social Cure theory to understand how groups benefit health and well-being. In Chapter 1, my review of the literature gave rise to two questions relating to research objective 1: first, why do group ties, relative to individual ties, ensure better well-being, and, second, what are the mechanisms through which these additional benefits are realized? questions that were explored in the studies reported in Chapter 2 (Kyprianides et al., under review). I progress the social identity approach to health by demonstrating that groups provide benefits beyond relationships and that the identities they provide satisfy needs. Three experiments conducted on young millennials, both online and offline, demonstrated that priming groups restores and enhances well-being more so than priming relationships; that this was due to feelings of connectedness and self-worth groups provided; and that the additional benefit to well-being associated with groups was driven by the collective identities they provide. There was also a qualitative component to my investigation that involved undertaking a thematic analysis of participants' descriptions of their groups and relationships, that confirmed my quantitative findings.

My findings replicate previous studies (e.g. C. Haslam et al., 2014a; C. Haslam et al., 2016a) that challenge the assumption that the beneficial effects of social ties generalize across relationship type, and instead show that social group ties are better predictors of well-being than individual ties with a significant other. The studies reported in Chapter 2 (Kyprianides et al., under review) also extend this line of research by (a) being the first studies to provide experimental evidence to support the contention that group ties are more beneficial than individual ties; (b) demonstrating that group memberships,

relative to relationships, influence well-being via the satisfaction of a greater array of psychological needs, beyond merely offering members greater levels of social support; and (c) demonstrating that group ties are especially beneficial for wellbeing because they promote, and are internalized as part of, a person's social identity.

My second research objective was to advance social cure applications to improve the health and well-being of vulnerable populations. In Chapter 1, my review of the literature gave rise to two questions relating to research objective 2: first, moving away from the emphasis on one-on-one relationships as an important source of support for offenders, can the application of the social cure theoretical approach shed light on the effects that *group* ties have on imprisonment and resettlement adjustment?; and, second, can the application of a social cure approach help us understand how these other ways of connecting to people might improve prisoner and ex-prisoner well-being? questions that were explored in the studies reported in Chapters 3, 4 and 5.

In Chapters 3 and 4, I investigated the social determinants of health amongst prisoners (Chapter 3: Kyprianides & Easterbrook, under review) and ex-prisoners (Chapter 4: Kyprianides et al., 2019). The online study reported in Chapter 4, with this hard-to-reach population, yielded both quantitative and qualitative data, and demonstrated that some groups – in this case, ex-prisoners - have social stigma attached to them, and this can have negative consequences. In Chapters 3 and 5, however, I demonstrated that, even in the case of stigmatized groups – in this case, prisoners - if the 'right' identities (e.g. positive identities like FR that reduce the salience of the negative prisoner identity) are part of these individuals' social worlds, groups can be curative. In Chapter 3 (Kyprianides & Easterbrook, under review) I relied on a secondary analysis of a large and relevant dataset, and on a primary paper-and-pencil study in a prison. I then used the social cure approach to evaluate a music intervention with prisoners to better understand how social connectedness and social identity processes can play an important role in improving prisoner well-being (Chapter 5: Kyprianides & Easterbrook, 2019). The studies reported in Chapter 5 (Kyprianides & Easterbrook, 2019) used a mixed method approach, comprised of pre and post program questionnaires, and on semi-structured interviews with prisoners, and demonstrated that the music activities brought together and bonded this diverse group of people by providing them with a shared purpose and collective identity. My findings fit well

within the substantial body of evidence that supports the beneficial role of social networks and groups in the well-being, health, and life outcomes of individuals from vulnerable populations (see C. Haslam et al., 2018a). Importantly, however, my studies are the first to explore the social cure model amongst *offender* populations.

Theoretical implications

The novelty of the work presented in this thesis lies in its utilisation of the social identity approach to health to (1) experimentally demonstrate the especially beneficial effects for well-being of group ties, relative to individual ties, and (2) understand the impact of group ties on the well-being of people confined in prisons, and later released back into the community.

As discussed in Chapter 1, the existing literature base does not include experimental evidence to support the claim that group ties are more beneficial than individual ties. The critical advance that the present experimental research provides, then, is that it substantiates existing correlational research that has shown that group ties have an especially important role to play in protecting well-being compared to individual ties (e.g. C. Haslam et al., 2014a; C. Haslam et al., 2016a). In doing so, the present research overcomes the limitations that affect the strength of conclusions that can be drawn on the basis of these existing cross-sectional designs alone; such that we can now be more confident about causality – that is, that belonging to groups, relative to having relationships, leads to increased well-being. Furthermore, and following this first point, as discussed in Chapter 1, no experimental work exists to support the proposition that group memberships influence well-being, more so than relationships, by offering members greater levels of social support (C. Haslam et al., 2014a). My studies are the first to *experimentally* demonstrate that group ties are more beneficial than individual ties due to greater levels of social support *and* more general social connectedness (including feelings of relatedness) as well as feelings of self-worth (competence and self-esteem) – thus providing a causal examination of the proposed mechanisms that underpin the association between group ties, relative to individual ties, and well-being, and developing the knowledge base about *how* group memberships influence well-being. This latter finding complements and extends previous work on the psychological resources that groups provide (e.g., Greenaway et al., 2016; also see C. Haslam et al.,

2018a, p. 27), and provides a novel explanation of the potential additional well-being that groups, relative to relationships, can provide, beyond offering members greater levels of social support.

Importantly, as I argued in Chapter 1, and demonstrated in Chapter 2 (Kyprianides et al., under review), these additional benefits to well-being associated with groups were driven by the social identities they provide their members with. This finding is in line with the social identity approach to health that helps us to understand the importance of group membership for health (S.A. Haslam et al., 2009; C. Haslam et al., 2018a; Jetten et al., 2012; Jetten et al., 2017), and with the evidence that credits social identification the role of the critical element that leads to health-related benefits (e.g. Cruwys et al., 2014b; Steffens et al., 2017). As extensively argued in Chapter 1, social identification and self-categorisation occur when we internalize our social groups and see members of these groups as an important part of who we are (e.g. defining ourselves as members of the University of Sussex). When our social groups become part of the self in this way, then we become more able to influence group members and be influenced by group members. That is, we are more able to provide, and accept, support, and more able to boost others' and our own feelings of relatedness, competence, and self-esteem; that come about via defining ourselves in this way, and interacting with fellow group members. Social identification and self-categorisation, then, make the psychological resources that stem from group ties all the more powerful because in positively influencing a fellow group member (e.g. another member of the University of Sussex), we are also shaping ourselves ('us'). Theoretically, then, as C. Haslam and colleagues (2016a) explain, the magnitude of psychological impact that we experience from our individual ties may not surmount to this, because the way we connect with others in terms of a shared social identity (e.g. as members of the University of Sussex) does not equate to the way one individual (e.g. Arabella) connects to another individual (e.g. Matt) in terms of two separate personal identities.

This 'social cure' pathway is recognised in psychological research where group membership has been shown to be a critical basis for psychological need satisfaction that promotes well-being amongst non-offender groups (C. Haslam et al., 2018a). What is more, this body of research recognises the capacity of social networks and groups to promote better adjustment, health, and engagement with life amongst *vulnerable*

populations (see C. Haslam et al., 2018a). Specifically, groups have been shown to be particularly beneficial for those going through transitions and stressful times, and for vulnerable populations who may be suffering from isolation; yet the social identity approach to health has never been investigated in the context of offenders. As discussed in Chapter 1, current accounts of social antecedents to prisoner and ex-prisoner well-being have suggested that well-being is improved as a consequence of individual relationships with a significant other that provide interpersonal closeness and support (for prisoners see e.g. review by Poehlmann et al., 2010; for ex-prisoners see e.g. review by Petersilia, 2003). Yet, such accounts are incomplete in failing to examine the impact *group ties* might have on imprisonment and resettlement adjustment. Indeed, few studies have suggested that prisoner (e.g. Crewe, 2012) and ex-prisoner (e.g. Yeager, 2012) well-being is improved as a consequence of wider social ties and engagement. Yet, these accounts are also incomplete in failing to explain the origins of support and engagement. The critical advance that the present research provides, then, is to demonstrate the curative properties of groups for offender populations, and the mechanisms through which group ties influence offender well-being in prison, and, later, upon release.

In line with the social identity approach to health, the studies reported in Chapter 3 (Kyprianides & Easterbrook, under review) showed that although individual ties are certainly important for prisoner well-being, membership in groups satisfy prisoners' psychological needs of connectedness, self-worth and volitional agency, and, by doing so, benefit prisoners' well-being. Considering that for young people (Chapter 2: Kyprianides et al., under review), for the elderly (C. Haslam et al., 2016a), and for people from all over the world (Jetten et al., 2015), group ties are more beneficial than individual ties, an interesting avenue for future research would be to compare the beneficial effects of group ties to individual ties amongst offender populations. This is important especially because, as outlined above, there is a large body of research supporting the benefits associated with the latter, and only a small body of research, including my own studies, supporting the benefits associated with the former. My findings also extend the very few extant studies that have shown that social contact with *group members* is a significant predictor of well-being (e.g. Sani et al., 2012; Cruwys et al., 2016), and provides a novel insight into the factors that may attenuate or exasperate

the relationship between multiple group memberships and well-being for this particular population.

Due to the stigmatized nature of the prisoner identity I was also interested in investigating how these processes interact with the rejection – structural discrimination (Flake, 2015; House of Commons, 2017; Human Rights Watch, 2004) and social stigma (Hirschfield & Piquero, 2010) - that prisoners face upon release from prison; especially because, as discussed in Chapter 1, studies have shown that group membership can be harmful for highly stigmatized groups that face discrimination, whose norms often prescribe harmful activities (e.g. Cruwys & Gunaseelan, 2016; Dingle et al., 2015; Kellezi & Reicher, 2012; Schmitt et al., 2014). In this regard, the study reported in Chapter 4 (Kyprianides et al., 2019) is the first to investigate whether multiple groups can buffer against the negative consequences of rejection on well-being. Interestingly, I found that, not only did multiple group membership *not* protect well-being against rejection, but membership in multiple groups *strengthened* the negative effect of rejection on well-being. Why? My data suggested two possible explanations for this finding: people with more groups are exposed to more negativity in their network about their ex-prisoner identity; and people with more identities experience more incompatibility between their ex-prisoner identity and these other identities. I therefore contribute to the evidence of a boundary condition for the social cure properties of groups - among members of strongly rejected social groups, multiple group memberships can be a social curse rather than social cure – and show that this appears to be the case for ex-prisoners.

In Chapter 5 (Kyprianides & Easterbrook, 2019), however, I demonstrated that, even in the case of stigmatized groups – in this case, prisoners - if the 'right' identities are part of these individuals' social worlds, groups can be curative. In particular, I showed that, while decreasing well-being tends to be the norm in prison (Crewe et al., 2017; NAO, 2017), building new social group memberships such as FR – a music program that engages prisoners in various music related activities – can counteract this decline. Chapter 5 (Kyprianides & Easterbrook, 2019) demonstrated that FR group participation created a shared identity amongst prisoners that led to positive well-being outcomes, which later transcended into prison life, making it more bearable. The novelty in my findings lies in the population being studied as existing research has found these

patterns and social identity processes to exist only among *non-offender* populations that engage in arts-based work (e.g. E. Williams et al., 2018).

Taken together, Chapters 4 and 5 highlighted the power of a *single* but clear and strong identity – both positive (FR identity), and negative (ex-prisoner identity). We observed how one exceptionally negative group can sully other groups, and how one particularly positive group can really help to overcome stigma. Although Chapter 4 (Kyprianides et al., 2019) showed that ex-prisoners suffer stigma and being a member of more groups exposes them to more stigma, Chapter 5 (Kyprianides & Easterbrook, 2019) showed that a group made of prisoners, but formed around a valued and positive activity, has exceptional benefits. It would be valuable for future research to investigate this possibility amongst ex-prisoners, examining whether a group made of ex-prisoners, but formed around a similarly positive activity, also has such benefits.

Finally, some parallels can be drawn between my work on prisoners and findings of the BBC Prison Study (2019). The BBC Prison Study revealed that improvement in well-being was closely linked to increases in the sense of shared identity among prisoners (S.A. Haslam & Reicher, 2006; Reicher & Haslam 2006b). Specifically, as prisoners' sense of shared identity increased they provided each other with more social support and effectively resisted the adverse effects of situational stressors (S.A. Haslam & Reicher, 2006). In Chapter 5 (Kyprianides & Easterbrook, 2019) we, too, demonstrated that prisoners' well-being was inextricably linked to the shared FR identity. The shared FR identity promoted positive intragroup relations, similar to the kind described in the BBC Prison Study, that helped prisoners to cope with the pains of imprisonment. Both the BBC Prison Study's findings, and mine, speak to social psychological realities that are often overlooked (e.g., in Zimbardoesque narratives about prison life; see S.A. Haslam & Reicher, 2012). Prison life is habitually understood in the terms set by two classic studies conducted in the 1960s and 1970s: Milgram's research on obedience to authority (1963) and Zimbardo's Stanford Prison Experiment (Haney, Banks & Zimbardo, 2004). That is, that prisoners conform passively to roles and instructions, however malicious these may be. However, work produced by the BBC Prison Study (2019), informed by social identity theorising, instead suggests that identification with the authority in question and the related perception that the authority is right, might determine prisoners' readiness to follow authorities.

Practical implications and future directions

We know that social connection improves health, well-being and longevity (Holt-Lunstad et al., 2010; Holt-Lunstad et al., 2015). Hitherto, key advice given by social theorists has been for people to foster, nurture and build social connections with other people (Seppala, 2012). But knowing that group ties are generally more successful at protecting and promoting well-being provides us with essential bearing for intervention. In particular, we should work on helping people to develop their relationships with *groups of others*.

Importantly, my findings – and others' (e.g. body of work presented in C. Haslam et al, 2018a) - imply that simply advising people to join more groups is not enough. To prove beneficial, people have to identify with, and internalize, their group memberships. The present research suggests that this has distinctive benefits for well-being because, as a source of social identification, groups are an especially powerful basis for social support and feelings of relatedness, competence, and self-esteem.

There is indeed a body of applied work that has harnessed the beneficial effects of social identification in interventions to improve well-being (e.g. C. Haslam et al., 2010; 2014b; 2016b). Perhaps the most convincing example is an intervention developed by researchers at the University of Queensland based on the social cure (*Groups4Health*; *G4H* website, 2017), which leads people through a series of activities designed to highlight and foster their group memberships. The *G4H* intervention directly targets the psychological distress that results from loneliness and social isolation by providing people with the skills, knowledge, and confidence to increase their social connectedness and their group-based social identifications, with the aim of improving general health and life satisfaction. The intervention has proved to be successful, enhancing well-being and mental health in vulnerable populations (C. Haslam et al., 2016b). Since the success of the *G4H* programme, researchers have adapted it to other populations, including those underperforming in education (*Groups for Education*), isolated retirees (*Groups for Retirement*), people in recovery from substance misuse (*Groups for Addiction Recovery*), and vulnerable young people (*Groups for Young People*).

A possibility for future research in this direction is one I find particularly exciting. As discussed more extensively in Chapters 3 and 5, my findings suggest that what is

lacking in ongoing practitioners' agendas *behind bars* is a focus on helping prisoners to build *positive* group memberships that transcend prison walls, that they can interact with both in and, later, outside of prison, that go beyond maintaining only family ties. My findings have demonstrated that social connectedness and especially multiple group membership are indeed important for *prisoner* well-being, which suggests that an intervention based on *G4H* will be successful at enhancing prisoners' mental health and well-being. While decreasing well-being tends to be the norm in prison (NAO, 2017), I showed that building new group memberships can benefit prisoner well-being, which provides a framework upon which to develop a cost-effective intervention, similar to *G4H,* to enhance prisoner mental health and well-being, improve social life in prison, and increase opportunities upon release. Taken together, G4H applications and evaluations of third sector prison programs (TSRC, 2018), including my own, suggest that the task of increasing social connectedness amongst prisoners is not simply a matter of more time out of cell, but rather of engaging in meaningful activities that produce the right kinds of relationships.

As discussed more extensively in Chapter 4 (Kyprianides et al., 2019), what is lacking in ongoing practitioners' agendas *beyond bars* is a focus on helping ex-prisoners prepare for, and manage, the hard reality of discrimination and stigma that awaits them upon release, by helping them to develop a positive self-identity that will protect them from how they will be perceived in daily interactions. In this regard, another fascinating avenue for future research would be to further explore the role of social groups in adjusting back into the community after being released from prison; especially because my findings were somewhat controversial in showing that multiple group memberships can be a social curse rather than social cure in this context, and because the scope of this research did not allow me to undertake research into existing efforts to foster social connectedness amongst ex-prisoners.

Despite all the planning behind bars, people do not adjust well to life after prison, finding it stressful and experiencing a marked reduction in well-being; which often results in recidivism (Prison Reform Trust, 2018). The proven reoffending rate for adult and juvenile offenders who were released from custody in 2016 in England and Wales was 29.4% (MOJ, 2018) – meaning that almost a third of people being released from prison are likely to reoffend. At the most direct level, the formerly incarcerated

individual (and, if there was one, the victim of the crime for which they were imprisoned) has the greatest stake in recidivism. More broadly, however, recidivism affects all of us. Crime is a problem in every community around the world (though some more so than others), and anyone can be a victim. Victimisation comes in many forms—from being physically injured in a violent crime, to being psychologically affected as result of living in an area where crime exists. Furthermore, the economic costs of crime are endured by all taxpayers. Tackling recidivism therefore has the capacity to reduce crime rates and costs to the economy as well as improve the life of the formerly incarcerated individual. Research into recidivism (e.g. Gendreau et al., 1996; Bonta, Law, & Hanson, 1998; Makarios, Steiner & Travis, 2010; Stahler et al., 2013; Fu et al., 2013) has paid attention to how social factors (e.g. discrimination and stigmatisation, lack of reintegration support programmes, peer influence) affect recidivism rates, and I think that the social identity approach to health has the potential to be incredibly relevant to understanding how to best support newly released prisoners.

As discussed in chapter 1, recent research has begun to focus on the role of social factors in facilitating life transitions (e.g. retirement, or recovery from substance misuse), given the upheaval that significant life change imposes on people's social networks. Supporting this development are emerging data (mine included) showing that people who have multiple group memberships before the transition, and who hold on to their group memberships, and/or join new groups after the transition, have better well-being outcomes (Social Identity Model of Identity Change; SIMIC; Jetten et al., 2009). When it comes to transitioning *out of* a challenging life period, research has described how social group *changes* influence these trajectories. For example, for people undergoing treatment for addiction, the process of social identity change – from using groups to recovery and other non-substance-using groups - sustains ongoing recovery (Social Identity Model of Recovery; SIMOR; Best et al., 2015). However, the SIMIC and SIMOR theoretical frameworks have not yet been investigated in the context of resettlement. So, what role do social groups play in adjusting back into the community after being released from prison? Do social group networks promote health and well-being in the resettlement transition? If so, what is it about these social group networks that makes them so therapeutic? And, can resettlement be conceptualized as a process of social identity change? These are key questions that I would like to address in future research examining the extent to which changes in ex-prisoners' social group

relationships as they reintegrate back into the community affects resettlement. Understanding the nature and size of that influence can lead to more effective management of that social change with a view to optimizing adjustment and well-being as prisoners integrate back into our society. The SIMIC and SIMOR provide a framework to investigate these issues as they specify mechanisms that can buffer the effects of social group change in life transitions. They have yet to be interrogated in the resettlement context and I think that there is scope for theoretical advancement in the field to develop a Social Identity Model of Resettlement which would most definitely have important policy and practical implications.

Limitations and future research

The studies that comprise this thesis are not without limitations, some of which I suggest can be addressed through future research.

Regarding the ultimate issue of experimentally disentangling the effects of group ties from individual ties inherent in the studies reported in Chapter 2 (Kyprianides et al., under review), and considering that I am the first to attempt this empirical challenge, future research should try to come up with alternative methodological designs to compare group ties to individual ties. I primed different types and features of groups to attempt to disentangle identity effects from other collateral effects of groups and relationships. But future experiments could, for example, manipulate identity and interaction, and observe effects on participants' ability on a task. This could involve inducing a sense of shared identity in one group of participants (in a similar way to Reicher, Templeton, Neville, Ferrari, & Drury, 2016) and getting them to complete an experimental task in groups, compared to inducing participants' personal identity (in a similar way to Reicher et al., 2016) in another group of participants and getting them to complete the same task in dyads.

There are also limitations inherent in the applied work reported in Chapters 3, 4, and 5. Rather than reiterate the particular limitations associated with each study individually, as I do at the end of each chapter respectively, I would like to point out four key limitations that this collection of studies share.

First, although one of my studies (Chapter 3: Kyprianides & Easterbrook, under review; Study 1) used a very large dataset, and two studies utilized a longitudinal mixed-method design and demonstrated the social cure approach amongst offenders in an intervention (studies reported in Chapter 5: Kyprianides & Easterbrook, 2019), further examination is essential to substantiate my findings – ideally in the form of experimental research that goes beyond the correlational and longitudinal designs of the present studies, and that directly investigates causality. This will almost certainly be a challenge. In the prison context, barriers to research exist related to key issues such as recruitment, attrition, sampling, and assessment techniques; and these issues are exacerbated by the tightly regulated environment of prisons, and the heightened scrutiny from institutional review boards for researching this especially vulnerable population (NIJ, 2012). Thus in correctional settings researchers have been forced to rely on weaker, quasi-experimental designs with not completely comparable groups of prisoners (NIJ, 2012; e.g. Gaes & Camp, 2009). Nevertheless, it is a challenge worth pursuing and a challenge that can be overcome if researchers plan for higher resourcing costs, operate via community partnerships, acknowledge extended timeframes (Bonevski et al., 2014), and balance rigor against the inherent draw-backs of investigating hard-to-reach populations (Crosby, Salazar, DiClemente, & Lang, 2010).

Second, my findings that shed light on the social determinants of offender well-being in the Western criminal justice context may not be generalizable to other countries that experience more collectivist cultures. In a similar way to Lam and colleagues (2018), who demonstrated that multiple group belonging positively predicted retirees' health and well-being, in both Western and non-Western cultural contexts, but that the effect was stronger in individualistic cultures, future research should investigate the contribution that group membership and identification make to supporting offenders' well-being across cultures, to examine whether the effects of multiple group membership hold in non-Western prison cultures.

Third, the difficulties associated with studying offender populations forced me to rely on opportunity samples of participants. I can therefore not eliminate the possibility that those willing to participate in my studies who reported higher levels of socialization could have been more social and extraverted in character at the offset.

Finally, although my studies yielded interesting findings about offenders' groups, the nature of these groups remains unexamined. Looking into the nature of prisoners' and ex-prisoners' group memberships can provide novel insight into offenders' social worlds. I have some additional data yielded by the SIM tool I used in the study reported in Chapter 4 (Kyprianides et al., 2019) that can speak to some of this point. It appears that the kinds of groups ex-prisoners' are part of reflect those of non-criminal populations. A large proportion of these groups were either family, professional, friendship, or recreational groups. But ex-prisoners' social maps also included criminal groups, anti-social groups, and rehab groups; and the majority of ex-prisoners' groups did not appear to encourage productivity. Finally, ex-prisoners reported having very few important groups, and ratings of group compatibilities reflected a rather disorganised ex-prisoner social world. On a more positive note, ex-prisoners positively viewed their group memberships, considered themselves representative of their groups, and felt that they understand their groups; and ex-prisoners reported a healthy amount of group participation. These findings suggest that people's identities in offender populations are more likely to be negative, stigmatized, and incompatible, as well as relatively few in number. Future research could investigate this proposition, as well as examine whether inside group ties are associated more strongly with the perception of fitting in and being safe, as research suggests (Biggam & Powers, 1997; Maitland & Sluder, 1996), while connections outside of the prison are associated more strongly with rehabilitation and post-release adjustment (I. Smith & McCarthy, 2016; A.L. Solomon et al., 2004).

Conclusion

Through a series of studies, this thesis has (1) progressed social cure theory by experimentally demonstrating that group ties benefit well-being more so than individual ties; and (2) advanced social cure applications by demonstrating the applicability of the approach amongst offenders. In particular, it highlights the importance of differentiating between different types of social ties, and it has opened up some interesting avenues for future research on offender populations. I hope that I can continue to work towards realizing these possibilities in the future.

To conclude, I would like to refer back to Professor S.A. Haslam's 'list for life' (2018), from which I began my thesis, that compiles the lessons learned from research applying

the social identity approach to health. My analyses revealed that being a member of multiple groups, and acquiring membership in a new group, profoundly protected prisoners' well-being, suggest that these lessons apply to the prison context. But more research is needed to confidently make this statement, and I hope that my work will inspire researchers to pursue this agenda.

All in all, this new psychology of health needs to be taken seriously. Recent data coming from a twenty-billion-dollar failed initiative (Henriques, 2017), adopting a biomedical framework, to improve the lives of people with mental health problems is proof; the conclusion very clear. It is time to see the social as the driving force that it is, and promote a socio-psycho-biological model of health and well-being. It is encouraging to hear from Stephen Reicher that a new book, 'Social Scaffolding' (R. Williams et al., 2019) - arising out of a series of seminars by the Royal College of Psychiatrists - due out this year, is offering precisely such a perspective. All evidence (mine included) points to the enormous impact of group processes of connectedness on both physical and mental health.

References

Adams, K. (1992). Adjusting to Prison Life. In M. Tonry (Eds.), *Crime and Justice: A Review of Research* (pp. 275-359). Chicago: University of Chicago Press.

Adams, K., Bennett, K. J., Flanagan, T. J., Marquart, J. W., Cuvelier, S. J., Fritsch, E., . . . Burton, V. S. (1994). A large-scale multidimensional test of the effect of prison education programs on offenders' behavior. *The Prison Journal*, *74*, 433-449.

Alnabulsi, H., & Drury, J. (2014). Social identification moderates the effect of crowd density on safety at the Hajj. *Proceedings of the National Academy of Sciences of the United States of America, 111*, 9091–9096.

Andrews, D.A., Bonta, J., Hoge, R.D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior*, *17*, 19–52.

Asparouhov, T. (2006). General Multi-Level Modeling with Sampling Weights. *Communications in Statistics - Theory and Methods*, *35*, 439-460.

Avanzi, L., Schuh, S. C., Fraccaroli, F., & van Dick, R. (2015). Why does organizational identification relate to reduced employee burnout? The mediating influence of social support and collective efficacy. *Work & Stress,29*, 1-10.

Bailey, B. A., & Davidson, J. W. (2005). Effects of group singing and per- formance for marginalized and middle-class singers. *Psychology of Music*, *33*, 269–303.

Baillargeon, J., Hoge, S.K., & Penn, J.V. (2010). Addressing the challenge of community reentry among released inmates with serious mental illness. *American Journal of Community Psychology*, *46*, 361–375.

Barnao, M., Robertson, P., & Ward, T. (2010). Good lives model applied to a forensice population. *Psychiatry, psychology and law*, *17*, 202–217.

Barnes, L. L., Mendes de Leon, C. F., Wilson, R. S., Bienias, J. L., & Evans, D. A. (2004). Social resources and cognitive decline in a population of older African Americans and whites. *Neurology*, *63*, 2322-2326.

Barreto, M., & Ellemers, N. (2009). Multiple identities and the paradox of social inclusion. In F. Butera & J.M. Levine (Eds.), *Coping with Minority Status: Responses to Exclusion and Inclusion* (pp. 269–292). New York, NY: Cambridge University Press.

Bassuk, S., Glass, T. A., & Berkman, L. F. (1999). Social disengagement and incident cognitive decline in community-dwelling elderly persons. *Annals of Internal Medicine*, *131*, 165-173.

Baumeister, R.F., Vohs, K., Aaker, J., & Garbinsky, E. (2013). Some key differences between a happy life and a meaningful life. *The Journal of Positive Psychology*, *8*, 505-516.

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal social attachments as fundamental human motivation. *Psychological Bulletin*, *117*, 497-529.

Baybutt, M., & Chemlal, K. (2015). Health-promoting prisons: Theory to practice. *Global Health Promotion, 23*, 66-74.

Bazemore, G., Nissen, L.B., & Dooley, M. (2000). Mobilizing social support and building relationships: Broadening correctional and rehabilitative agendas. *Corrections Management Quarterly*, *4*, 10-21.

BBC Prison Study. (2019). *Home | The BBC Prison Study*. [online] Available at: http://www.bbcprisonstudy.org/index.php

Beals, K., Peplau, L., Gable, S. (2009). Stigma Management and Well-Being: The Role of Perceived Social Support, Emotional Processing, and Suppression. *Personality and Social Psychology Bulletin*, *35*, 867-879.

Becker, M., Vignoles, V. L., Owe, E., Easterbrook, M. J., Brown, R., Smith, P. B., et al. (2014). Cultural bases for self-evaluation: seeing oneself positively in different cultural contexts. *Personality and Social Psychology Bulletin, 40,* 657-675.

Bentley, S. V., Greenaway, K. H, Haslam, S. A., Cruwys, T., Steffens, N. K., Haslam, C. & Cull, B. (2018). Social identity mapping online. The University of Queensland, forthcoming.

Berkman, L. F., & Syme, S. L. (1979). Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, *109*, 186-204.

Best, D., Beckwith, M., Haslam, C., Alexander Haslam, S., Jetten, J., Mawson, E., & Lubman, D. I. (2016). Overcoming alcohol and other drug addiction as a process of social identity transition: The social identity model of recovery (SIMOR). *Addiction Research & Theory*, *24*, 111–123.

Best, D., Beckwith, M., Haslam, C., Haslam, S. A., Jetten, J., Mawson, E. & Lubman, D. I. (2015). Overcoming alcohol and other drug addiction as a process of social identity transition: The social identity model of recovery (SIMOR). *Addiction Research & Theory, 24*, 111-123.

Bettencourt, B.A., & Sheldon, K.M. (2001). Social roles as mechanisms for psychological need satisfaction within social groups. *Journal of Personality and Social Psychology, 81*, 1131-1143.

Bettencourt, B.A., Charlton, K., Eubanks, J., Kernahan, C., & Fuller, B. (1999). Development of collective self-esteem among students: Predicting adjustment to college. *Basic & Applied Social Psychology*, *21*, 213-222.

Biggam, F. H., & Power, K. G. (1997). Social support and psychological distress in a group of incarcerated young offenders. *International Journal of Offender Therapy and Comparative Criminology*, *41*, 213-230.

Bizumic, B., Reynolds, K. J., Turner, J. C., Bromhead, D., & Subasic, E. (2009). The role of the group in individual functioning: School identification and the psychological well-being of staff and students. *Applied Psychology: An International Review, 58*, 171-192.

Bobowik, M., Martinovic, B., Basabe, N., Barsties, L. S., & Wachter, G. (2017). 'Healthy' identities? Revisiting rejection-identification and rejection-disidentification models among voluntary and forced immigrants. *European Journal of Social Psychology*, *47*, 818-831.

Bonanno, G.A., Wortman, C.B., & Nesse, R.M. (2004). Prospective patterns of resilience and maladjustment during widowhood. *Psychology and Aging*, *19*, 260-271.

Bonevski, B., Randell, M., Paul, C., Chapman, K., Twyman, L., Bryant, J., Brozek, I., … Hughes, C. (2014). Reaching the hard-to-reach: a systematic review of strategies for improving health and medical research with socially disadvantaged groups. *BMC medical research methodology*, *14*, 42.

Bonta, J., & Gendreau, P. (1991). Coping with prison. In P. Suedfeld and P.E. Tetlock (Eds.), *Psychology and social policy*. New York: Hemisphere.

Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. *Psychological Bulletin*, *123*, 123–142.

Boyes, A. (2015). *The anxiety toolkit: strategies for fine-tuning your mind and moving past your stuck points*. Perigee: Penguin Random House.

Branscombe, N.R., Schmitt, M.T., & Harvey, R.D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology*, *77*, 135–149.

Braun, V., & Clarke, V. (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*, 77-101.

Breese, J., Khaz, R., & Grant, K. (2000). No place like home: A qualitative investigation of social support and its effects on recidivism. *Sociological Practice: A Journal of Clinical and Applied Research, 2*, 1-21.

Brewer, M. B., Hong, Y.-Y., & Li, Q. (2004). Dynamic entitativity: Perceiving groups as actors. In V. Yzerbyt, C. M. Judd, & O. Corneille (Eds.), *The psychology of group perception: Perceived variability, entitativity, and essentialism* (pp. 25–38). New York: Psychology Press.

Brown, R. (2000). *Group processes: dynamics within and between groups, 2ⁿᵈ Edition*. NY: Wiley-Blackwell.

Brown, T. N., Sellers, S. L., Brown, K. T., Jackson, J. (1999). Race, ethnicity, and culture in the sociology of mental health. *Handbook of the sociology of mental health*. New York: Plenum Publishers.

Brunton-Smith, I. & Hopkins, K. (2013) *The factors associated with proven re-offending following release from prison: findings from Waves 1 to 3 of SPCR. Results from the Surveying Prisoner Crime Reduction (SPCR) longitudinal cohort study of prisoners*. London: Ministry of Justice.

Bucknor, C., & Barber, A. (2016). *The price we pay: Economic costs of barriers to employment for former prisoners and people convicted of felonies*. Center for Economic and Policy Research.

Cacioppo, J. T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. New York: Norton & Company.

Cacioppo, J.T., & Cacioppo, S. (2014). Older adults reporting social isolation or loneliness show poorer cognitive function 4 years later. *Evidence-Based Nursing, 17*, 59–60.

Campbell, J. D., Chew, B., & Scratchley, L. S. (1991). Cognitive and emotional reactions to daily events: The effects of self-esteem and self-complexity. *Journal of Personality, 59*, 473-505.

Campbell, M. A., French, S., & Gendreau, P. (2009). The prediction of violence in adult offenders: A meta-analytic comparison of instruments and methods of assessment. *Criminal Justice and Behavior, 36*, 567-590.

Carlson, B. E., & Cervera, N. (1991). Inmates and their Families: Conjugal Visits, Family Contact, and Family Functioning. *Criminal Justice and Behavior, 18*, 318–331.

Carson, E.A., & Anderson, E. (2016). *Prisoners in 2015. U.S.* Department of Justice, Bureau of Justice Statistics.

Chandler, J., & Paolacci, G. (2017). Lie for a Dime: When most prescreening responses are honest but most study participants are impostors. *Social Psychological and Personality Science, 8*, 500-508.

Chang, M.X.L, Jetten, J., Cruwys, T., Haslam, C., & Praharso, N. (2016) The more (social group memberships), the merrier: Is this the case for Asians? *Frontiers in Psychology*, *7*, 1-17.

Chapman, A. L., Specht, M. W., & Cellucci, T. (2005). Factors associated with suicide attempts in female inmates. *Suicide and Life-Threatening Behavior*, *35*, 558–569.

Charles, S.T., Piazza, J.R., Mogle, J., Sliwinski, M.J., & Almeida, D.M. (2013). The wear-and-tear of daily stressors on mental health. *Psychological Science, 24*, 733-741.

Christakis, N.A., Fowler, J.H. (2007) The spread of obesity in a large social network over 32 years. *The New England Journal of Medicine*, *4*, 357-370.

Christakis, N.A., Fowler, J.H. (2008) The collective dynamics of smoking in a large social network. *The New England Journal of Medicine*, *21*, 2249–58.

Chui, W.H., & Cheng, K.K. (2013). The mark of an ex-prisoner: Perceived discrimination and self-stigma of young men after prison in Hong Kong. *Deviant Behavior*, *34*, 671–684.

Clark, L., Iversen, S., & Goodwin, G. (2001). The influence of positive and negative mood states on risk taking, verbal fluency, and salivary cortisol. *Journal of Affective Disorders, 63*, 179-187.

Clear, T. R., & Sumter, M. T. (2002). Prisoners, prison, and religion: Religion and adjustment to prison. *Journal of Offender Rehabilitation*, *35*, 125-126.

Clift, S., & Morrison, I. (2011). Group singing fosters mental health and well-being: Findings from the East Kent "singing for health" network project. *Mental Health and Social Inclusion*, *15*, 88–97.

Clift, S., Manship, S., & Stephens, L. (2017). Further evidence that singing fosters mental health and well-being: The West Kent and Medway project. *Mental Health and Social Inclusion*, *21*, 53–62.

Cnaan, R. A., Draine, J. N., Frazier, B., & Sinha, J. W. (2008). The limits of citizenship: Rights of prisoners and ex-prisoners in USA. *Journal of Policy Practice*, *7*, 178-198.

Cochran, J. C. (2012). The ties that bind or the ties that break: Examining the relationship between visitation and prisoner misconduct. *Journal of Criminal Justice,40*, 433-440.

Cohen, E., Ejsmond-Frey, R., Knight, N. & Dunbar, R. (2010). Rowers' high: Elevated endorphin release under conditions of active behavioural synchrony. *Biology Letters*, *6*, 106-108.

Cohen, S. (2004). Social relationships and health. *American Psychologist*, *59*, 676-684.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin,98*, 310-357.

Cohen, S., Doyle, W.J., Skoner, D.P., Rabin, B.S., Gwaltney, J.M. (1997). Social Ties and Susceptibility to the Common Cold. *The Journal of the American Medical Association*, *277*, 1940-1944.

Colsher, P. L., Wallace, R. B., Loeffelholz, P. L., & Sales, M. (1992). Health status of older male prisoners: A comprehensive survey. *American Journal of Public Health,82*, 881-884.

Cooley, C.H. (1902). *Human nature and the social order*. New York: C Scribner's sons.

Cooper, C., & Berwick, S. (2001). Factors affecting psychological well-being of three groups of suicide-prone prisoners. Current Psychology, *20,* 169-182.

Cooper, K., Smith, L. G. E., & Russell, A. (2017). Social identity, self-esteem, and mental health in autism. *European Journal of Social Psychology, 47*, 844–854.

Corrigan, P. W., Markowitz, F. E., & Watson, A. C. (2004). Structural levels of mental illness stigma and discrimination. *Schizophrenia Bulletin*, *30*, 481–491.

Crabtree, J.W., Haslam, S., Postmes, T., & Halsam, C. (2010). Mental health support groups, stigma, and self-esteem: Positive and negative implications of group identification. *Journal of Social Issues*, *66*, 553-569.

Crawford, J.R., Garthwaite, PH., Lawrie, C.J., Henry, J.D., MacDonald, M.A., Sutherland, J., & Sinha P. (2009). A convenient method of obtaining percentile norms and accompanying interval estimates for self-report mood scales (DASS, DASS-21, HADS, PANAS, and sAD). *British Journal of Clinical Psychology, 48*, 163–180.

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles, London, New Delhi, Singapore, Washington DC: Sage Publications.

Crewe, B. (2012). *The prisoner society*. Oxford: Oxford University Press.

Crewe, B., Hulley, S., Wright, S. (2017). The Gendered Pains of Life Imprisonment. *The British Journal of Criminology*, *57*, 1359–1378.

Crone, D. M., Sumner, R. C., Baker, C. M., Loughren, E. A., Hughes, S., & James, D. V. (2018). 'Artlift' arts-on-referral intervention in UK primary care: Updated findings from an ongoing observational study. *European Journal of Public Health*, *28*, 404–409.

Crosby, R.A., Salazar, L.F., DiClemente, R.J., & Lang, D.L. (2010). Balancing rigor against the inherent limitations of investigating hard-to-reach populations. *Health Education Research*, *25*, 1–5.

Cruwys, T., & Gunaseelan, S. (2016). "Depression is who I am": Mental illness identity, stigma and well-being. *Journal of Affective Disorders*, *189*, 36-42.

Cruwys, T., Haslam, S.A., Dingle, G., Jetten, J., Hornsey, M., Chong, E.D., & Oei, T. (2014a). Feeling connected again: Interventions that increase social identification reduce depression symptoms in community and clinical settings. *Journal of Affective Disorders*, *159*, 139-146.

Cruwys, T., Dingle, G., Haslam, S.A., Haslam, C., Jetten, J., & Morton, T.A. (2013). Social group memberships protect against future depression, alleviate depression symptoms and prevent depression relapse. *Social Science and Medicine, 98*, 179-186.

Cruwys, T., Dingle, G., Hornsey, M.J., & Walter, Z. (2014c). Social isolation schema responds to positive social experiences: Longitudinal evidence from vulnerable populations. *British Journal of Clinical Psychology*, *53*, 265-280.

Cruwys, T., Haslam, S.A., Dingle, G., Haslam, C., & Jetten, J. (2014b). Depression and social identity: An integrative review. *Personality and Social Psychology Review, 18*, 215-238.

Cruwys, T., South, E.I., Greenaway, K.H., & Haslam, S.A. (2015). Social identity reduces depression by fostering positive attributions. *Social Psychological and Personality Science*, *6*, 65-64.

Cruwys, T., Steffens, N., Haslam, S., Haslam, C., Jetten, J. and Dingle, G. (2016). Social Identity Mapping: A procedure for visual representation and assessment of subjective multiple group memberships. *British Journal of Social Psychology*, *55,* 613-642.

Cullen, F. T. (1994). Social support as an organizing concept for criminology: Presidential address to the academy of criminal justice sciences. *Justice Quarterly,11*, 527-559.

Cutcher, Z, Degenhardt, L, Alati, R, & Kinner, S. (2014). Poor health and social outcomes for ex-prisoners with a history of mental disorder: a longitudinal study. *Australian and New Zealand Journal of Public Health*, *38*, 424–429.

Dawans, B. V., Kirschbaum, C., & Heinrichs, M. (2011). The Trier Social Stress Test for Groups (TSST-G): A new research tool for controlled simultaneous social stress exposure in a group format. *Psychoneuroendocrinology,36*, 514-522.

De Claire, K. & Dixon, L. (2015). The effects of prison visits from family members on prisoners' well-being, prison rule breaking, and recidivism: A review of research since 1991. *Trauma, Violence & Abuse, 18*, 1-15.

De Viggiani, N. (2006). Surviving Prison: Exploring prison social life as a determinant of health. *International Journal of Prisoner Health*, *2*, 71-89.

De Viggiani, N. (2007). Unhealthy prisons: Exploring structural determinants of prison health. *Sociology of Health & Illness, 29*, 115-135.

Deaux, K., & Martin, D. (2003). Interpersonal networks and social categories: Specifying levels of context in identity processes. *Social Psychology Quarterly, 66*, 101-117.

Deci, E.L., & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.

DeLisi, M., Berg, M. T., & Hochstetler, A. (2004). Gang members, career criminals and prison violence: Further specification of the importation model of inmate behavior. *Criminal Justice Studies, 17*, 369-383.

DeLisi, M., Trulson, C. R., Marquart, J. W., Drury, A. J., & Kosloski, A. E. (2011). Inside the prison black box: Toward a life course importation model of inmate behavior. *International Journal of Offender Therapy and Comparative Criminology, 55*, 1186-1207.

DeRosia, V. R. (1998). *Living inside prison walls: Adjustment behavior*. Westport, Conn: Praeger.

Desmond, A.M. (1991). The relationship between loneliness and social interaction in women prisoners. *Journal of Psychosocial Nursing, 29*, 5-10.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542-575.

Diener, E., & Emmons, R.A. (1984). The independence of positive and negative affect. *Journal of Personality and Social Psychology, 47*, 1105-117.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75.

Diener, E., Oishi, S., & Lucas, R.E. (2002). Subjective well-being: The science of happiness and life satisfaction. In C.R. Snyder and S.J. Lopez (Eds.), *Handbook of Positive Psychology*. Oxford and New York: Oxford University Press.

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S. and Biswas-Diener, R. (2009). New Well-being Measures: Short Scales to Assess Flourishing and Positive and Negative Feelings. *Social Indicators Research, 97*, 143-156.

Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., Biswas-Diener, R. (2010). New Well-being Measures: Short Scales to Assess Flourishing and Positive and Negative Feelings. *Social Indicators Research, 97*, 143-156.

DiMatteo, M.R. (2004a). Social support and patient adherence to medical treatment: A meta-analysis. *Health Psychology, 23*, 207–218.

DiMatteo, M.R. (2004b). Variations in patients' adherence to medical recommendations: A quantitative review of 50 years of research. *Medical Care, 42*, 200–209.

Dingle, G., Brander, C., Ballantyne, J., & Baker, F. A. (2013). 'To be heard': The social and mental health benefits of choir singing for disadvantaged adults. *Psychology of Music*, *41*, 405–421.

Dingle, G., Cruwys, T., & Frings, D. (2016). Social Identities as Pathways into and out of Addiction. *Frontiers in Psychology*, *6*, 1795.

Dingle, G., Cruwys, T., Jetten, J., Johnstone, M., Walter, Z. (2014). The benefits of participation in recreational group activities for adults at risk of homelessness. *Parity*, *27*, 18-19.

Dingle, G., Stark, C., Cruwys, T., & Best, D. (2015). Breaking good: Breaking ties with social groups may be good for recovery from substance misuse. *British Journal of Social Psychology*, *54*, 236-254.

Doosje, B., Ellemers, N., & Spears, R. (1995). Perceived Intragroup Variability as a Function of Group Status and Identification. *Journal of Experimental Social Psychology*, *31*, 410-436.

Dowden, C., & Brown, S. (2002). The role of substance abuse factors in predicting recidivism: a meta-analysis. *Psychology Crime and Law*, *8*, 243–264.

Drury, J., & Reicher, S. (2005). Explaining enduring empowerment: A comparative study of collective action and psychological outcomes. *European Journal of Social Psychology,35*, 35-58.

Drury, J., Brown, R., González, R., & Miranda, D. (2015). Emergent social identity and observing social support predict social support provided by survivors in a disaster: Solidarity in the 2010 Chile earthquake. *European Journal of Social Psychology, 46,* 209-223.

Drury, J., Cocking, C., & Reicher, S. (2009b). Everyone for themselves? A comparative study of crowd solidarity among emergency survivors. *British Journal of Social Psychology*, *48*, 487-506.

Drury, J., Cocking, C., & Reicher, S. D. (2009a). The nature of collective resilience: Survivor reactions to the 2005 London bombings. *International Journal of Mass Emergencies and Disasters*, *27*, 66-95.

Durkheim, E. (1897). *Suicide: A Study in Sociology*. Glencoe, Ill: Free Press.

Durnescu, I. (2011). Pains of Probation: Effective Practice and Human Rights. *International Journal of Offender Therapy and Comparative Criminology*, *55*, 530–545.

Duthie, R. (2005). *Transitional Justice and Social Reintegration*. Stockholm: Swedish Ministry for Foreign Affairs.

Dye, M. H. (2010). Deprivation, importation, and prison suicide: Combined effects of institutional conditions and inmate composition. *Journal of Criminal Justice*, *38*, 796-806.

Earle R., & Phillips C. (2015) Prison Ethnography at the Threshold of Race, Reflexivity and Difference. In: Drake D.H., Earle R., Sloan J. (Eds.), *The Palgrave Handbook of Prison Ethnography. Palgrave Studies in Prisons and Penology*. London: Palgrave Macmillan.

Easterbrook, M., & Vignoles, V. L. (2012). Different Groups, Different Motives. *Personality and Social Psychology Bulletin,38*, 1066-1080.

Easterbrook, M., & Vignoles, V. (2013) What does it mean to belong? Interpersonal bonds and intragroup similarities as predictors of felt belonging in different types of groups. *European Journal of Social Psychology*, *43*, 455-462.

Ertel, K. A., Glymour, M. M., & Berkman, L. F. (2008). Effects of social integration on preserving memory function in a nationally representative US elderly population. *American Journal of Public Health*, *98*, 1215-1220.

Fabrigoule, C., Letenneur, L., Dartigues, J. F., Zarrouk, M., Commenges, D., & Barberger-Gateau, P. (1995). Social and leisure activities and risk of dementia: A prospective longitudinal study. *Journal of the American Geriatrics Society*, *43*, 485-490.

Fagan, J. (1989). The social organization of drug use and drug dealing among urban gangs. *Criminology*, *27,* 633-670.

Farrant, F., & Levenson, J. (2002). *Barred citizens: Volunteering and active citizenship by prisoners*. London: Prison Reform Trust.

Fazel, S, & Danesh, J. (2002). Serious mental disorder in 23 000 prisoners: a systematic review of 62 surveys. *The Lancet*, *359*, 545–550.

Fazel, S, & Yu, R. (2011). Psychotic disorders and repeat offending: systematic review and meta-analysis. *Schizophrenia Bulletin*, *37*, 800–810.

Fazel, S., Hayes, A. J., Bartellas, K., Clerici, M., & Trestman, R. (2016). Mental health of prisoners: prevalence, adverse outcomes, and interventions. *Lancet Psychiatry*, *3*, 871-81.

Federal Bureau of Prisons (BOP; 2018). *Inmate statistics*. US: Federal Bureau of Prisons.

Finding Rhythms. (FR; 2018). *Home | Finding Rhythms*. [online] Available at: http://www.finding-rhythms.co.uk

Fishbach, A., & Labroo, A.A. (2007). Be better or be merry: How mood affects self-control. *Journal of Personality and Social Psychology, 93*, 158-173.

Flake, D. (2015). When any sentence is a life sentence: employment discrimination against ex-offenders. *Washington University Law Review*, *93*, 46-102.

Flanagan, T.J. (1980). The pains of long-term imprisonment: A comparison of British and American perspectives. *The British Journal of Criminology*, *20*, 148–156.

Fogel, C. I., & Martin, S. L. (1992). The Mental Health of Incarcerated Women. *Western Journal of Nursing Research*, *14*, 30–47.

Foss, C., & Ellefsen, B. (2002). The value of combining qualitative and quantitative approaches in nursing research by means of triangulation. *Journal of Advanced Nursing*, *40*, 242-248.

Foster, H. (2012). The strains of maternal imprisonment: Importation and deprivation stressors for women and children. *Journal of Criminal Justice*, *40*, 221–229.

Fox, N.J. (2008). Post-positivism. In L.M. Given (Eds.), *The SAGE Encyclopaedia of qualitative research methods.* London: Sage.

Fratiglioni, L., Wang, H., Ericsson, K., Maytan, M., & Windblad, B. (2000). Influence of social network on occurrence of dementia: A community-based longitudinal study. *The Lancet*, *355*, 1315-1319.

Freudenberg, N., Daniels, J., Crum, M., Perkins, T., & Richie, B.E. (2005). Coming home from jail: the social and health consequences of community reentry for women, male adolescents, and their families and communities. *American Journal of Public Health*, *95*, 1725–1736.

Fu, J. J., Herme, M., Wickersham, J. A., Zelenev, A., Althoff, A., Zaller, N. D., . . . Altice, F. L. (2013). Understanding the Revolving Door: Individual and Structural-Level Predictors of Recidivism Among Individuals with HIV Leaving Jail. *AIDS and Behavior,17*, 145-155.

Gabb, J., Klett-Davies, M., Fink, J., & Thomae, M. (2013). Enduring love? Couple relationships in the 21st century, *Survey Findings Report*, The Open University, Milton Keynes.

Gadon, L., Johnstone, L., & Cooke, D. (2006). Situational variables and institutional violence: A systematic review of the literature. *Clinical Psychology Review,26*, 515-534.

Gaes, G. G., & Camp, S. D. (2009). Unintended consequences: Experimental evidence for the criminogenic effect of prison security level placement on post-release recidivism. *Journal of Experimental Criminology, 5*, 139-162.

Gaes, G. G., & McGuire, W. J. (1985). Prison violence: The contribution of crowding versus other determinants of prison assault rates. *Journal of Research in Crime and Delinquency*, *22*, 41–65.

Gaes, G.G., Wallace, S., Gilman, E., Klein-Saffran, J. & Suppa, S. (2002). The influence of prison gang affiliation on violence and other prison misconduct. *The Prison Journal*, *82*, 359-385.

Garstka, T. A., Schmitt, M. T., Branscombe, N. R., & Hummert, M. L. (2004). How young and older adults differ in their responses to perceived age discrimination. *Psychology and Aging, 19*, 326-335.

Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: what works! *Criminology*, *34*, 575–607.

Gendreau, P., Goggin, C. E., & Law, M. A. (1997). Predicting Prison Misconducts. *Criminal Justice and Behavior*, *24*, 414–431.

George, L.K., Blazer, D.G., Hughes, D.C. & Fowler, N. (1989). Social Support and the Outcome of Major Depression. *British Journal of Psychiatry*, *154*, 478-485.

Giamo L. S., Schmitt M. T., & Outten H. R. (2012). Perceived discrimination, group identification, and life satisfaction among multiracial people: a test of the rejection-identification model. *Cultural Diversity and Ethnic Minority Psychology, 18*, 319–328.

Glei, D. A., Landau, D. A., Goldman, N., Chuang, Y.-L., Rodriguez, G., & Weinstein, M. (2005). Participating in social activities helps to preserve cognitive function: An analysis of a longitudinal, population-based study of the elderly. *International Journal of Epidemiology*, *34*, 864-871.

Gleibs, I.H., Haslam, C., Jones, J.M., Haslam, S.A., McNeill, J., & Conolly, H. (2011). No country for old men? The role of a 'Gentlemen's Club' in promoting social engagement and psychological well-being in residential care. *Aging & Mental Health*, *15*, 456-466.

Global Council on Brain Health (2017). *The brain and social connectedness: GCBH recommendations on social engagement and brain health*. Retrieved from www.GlobalCouncilOnBrainHealth.org.

Glymour, M. M., Weuve, J., Fay, M. E., Glass, T., & Berkman, L. F. (2008). Social ties and cognitive recovery after stroke: Does social integration promote cognitive resilience? *Neuroepidemiology*, *31*, 10-20.

Goffman, E. (1963). *Stigma*. London: Penguin.

Gonçalves, L. C., Gonçalves, R. A., Martins, C., & Dirkzwager, A. J. E. (2014). Predicting infractions and health care utilization in prison. *Criminal Justice and Behavior, 41*, 921-942.

Greenaway, K.H., Cruwys, T., Haslam, S. and Jetten, J. (2016). Social identities promote well-being because they satisfy global psychological needs. *European Journal of Social Psychology, 46*, 294-307.

Greenaway, K.H., Haslam, S.A., Cruwys, T., Branscombe, N.R., & Ysseldyk, R. (2015). From "we" to "me": Group identification enhances perceived personal control with consequences for health and well-being. *Journal of Personality and Social Psychology, 109*, 53-74.

Grocke, D., Bloch, S., Castle, D., Thompson, G., Newton, R., Stewart, S., & Gold, C. (2014). Group music therapy for severe mental illness: A randomized embedded-experimental mixed methods study. *Acta Psychiatrica Scandinavica, 130*, 144–153.

Groups4Health. (2017). *Home | Groups4Health*. [online] Available at: http://www.groups4health.com/

Guinote, A., Brown, M., & Fiske, S. T. (2006). Minority decreases sense of control and increases interpretive processing. *Social Cognition, 24*,169–186.

Gullone, E., Jones, T. & Cummins, R. (2000) Coping styles and prison experience as predictors of psychological well-being in male prisoners. *Psychiatry, Psychology and Law, 7*, 170-181.

Guy, L. S., Edens, J. F., Anthony, C., & Douglas, K. S. (2005). Does psychopathy predict institutional misconduct among adults? A meta-analytic investigation. *Journal of Consulting and Clinical Psychology,73*, 1056-1064.

Hadden, B.W., Smith, C.V., & Lee, C.R. (2013). The way I make you feel: How relatedness and compassionate goals promote partner's relationship satisfaction. *Journal of Positive Psychology, 9*, 155-162.

Haines, K. (1990). *After-care services for released prisoners: A review of the literature*. Cambridge: Institute of Criminology.

Hairston, C.F. (1991). Family ties during imprisonment: Important to whom and for what? *The Journal of Sociology and Social Welfare, 18*, 787-104.

Haney, C., Banks, C., & Zimbardo, P. (2004). A study of prisoners and guards in a simulated prison. *Theatre in prison: Theory and practice, 9*, 19-32.

Harding, T., & Zimmermann, E. (1989). Psychiatric Symptoms, Cognitive Stress and Vulnerability Factors. *British Journal of Psychiatry,155*, 36-43.

Harvey, J. (2007). *Young men in prison*. Cullompton, Devon, UK: Willan Publishing.

Haslam, C., Cruwys, T., & Haslam, S.A. (2014a). 'The we's have it': Evidence for the distinctive benefits of social ties in enhancing cognitive health in ageing. *Social Science and Medicine, 120*, 57-66.

Haslam, C., Cruwys, T., Haslam, S., Dingle, G. & Chang, M. (2016b). Groups 4 Health: Evidence that a social-identity intervention that builds and strengthens social group membership improves mental health. *Journal of Affective Disorders, 194*, 188-195.

Haslam, C., Cruwys, T., Milne, M., Kan, C.H., & Haslam, S.A. (2016a). Group ties protect cognitive health by promoting social identification and social support. *Journal of Aging and Health, 28*, 244-266.

Haslam, C., Haslam, S. A., Jetten, J., Bevins, A., Ravenscroft, S., & Tonks, J. (2010). The social treatment: Benefits of group reminiscence and group activity for the cognitive performance and well-being of older adults in residential care. *Psychology and Aging, 25*, 157-167.

Haslam, C., Haslam, S. A., Knight, C., Gleibs, I., Ysseldyk, R., McCloskey, L.-G. (2014b). We can work it out: Group decision-making builds social identity and enhances the cognitive performance of care home residents. *British Journal of Psychology, 105*, 17-34.

Haslam, C., Holme, A., Haslam, S.A., Iyer, A., Jetten, J., & Williams, W.H. (2008). Maintaining group memberships: Social identity continuity predicts well-being after stroke. *Neuropsychological Rehabilitation, 18*, 671-691.

Haslam, C., Jetten, J., Cruwys, C., Dingle, G., Haslam, S.A. (2018a). *The New Psychology of Health: Unlocking the social cure*. London: Routledge.

Haslam, C., Steffens, N.K., Branscombe, N.R., Haslam, S.A., Cruwys, T., Lam, B.C.P., Pachana, N.A., Yang, J. (2018b). The importance of social groups for retirement adjustment: Evidence, application, and policy implications of the social identity model of identity change. *Social Issues and Policy Review*, 0, 1-32.

Haslam, S. A. (2001). *Psychology in organizations: The social identity approach*. London, England: Sage.

Haslam, S.A. (2004). *Psychology in organizations: The social identity approach* (2nd ed.). London: Sage.

Haslam, S.A. (2018). Unlocking the social cure. *The Psychologist, 31*, 28-31.

Haslam, S. A., Mcmahon, C., Cruwys, T., Haslam, C., Jetten, J., & Steffens, N. K. (2018). Social cure, what social cure? The propensity to underestimate the importance of social

factors for health. *Social Science & Medicine,198*, 14-21. Haslam, S. A. & Reicher, S. D. (2006). Stressing the group: Social identity and the unfolding dynamics of stress. *Journal of Applied Psychology, 91*, 1037–1052.

Haslam, S. A., & Reicher, S. D. (2012). Contesting the 'nature' of conformity: What Milgram and Zimbardo's studies really show. *PLoS Biology*, 10(11), e1001426.

Haslam, S.A, Reicher, S.D., and Levine, M. (2012). When other people are heaven, when other people are hell: How social identity determines the nature and impact of social support. In J. Jetten, C. Haslam, & S.A. Halsam (Eds.), *The social cure: Identity, health and well-being.* Hove & New York: Psychology Press.Haslam, S.A., Jetten, J., Postmes, T., & Haslam, C. (2009). Social identity, health and well-being: An emerging agenda for applied psychology. *Applied Psychology: An International Review, 58*, 1–23.

Haslam, S.A., O'Brien, A., Jetten, J., Vormedal, K., & Penna, S. (2005). Taking the strain: Social identity, social support, and the experience of stress. *British Journal of Social Psychology, 44*, 355–370.

Haslam, S.A., Reicher, S.D., Koppel, G. & Mirsky, N. (2006). *The experiment: The transcript.* London: BBC Active and Pearson Education.

Häusser, J.A., Kattenstroth, M., van Dick, R., & Mojzisch, A. (2012). "We" are not stressed: social identity in groups buffers neuroendocrine stress reactions. *Journal of Experimental Social Psychology, 48*, 973-977.

Helliwell, J.F., & Barrington-Levy, C.P. (2012). How much is social capital worth? In J. Jetten, C. Haslam, and S.A. Halsam (Eds.), *The social cure: Identity, health and well-being* (pp. 55-71). Hove & New York: Psychology Press.

Helliwell, J. F., Barrington-Leigh, C., Harris, A., & Huang, H. (2010). International differences in the social context of well-being. In E. Diener, D. Kahneman & J. F. Helliwell (Eds.), *International Differences in Well-Being* (pp. 291-324). London: Oxford University Press.

Helliwell, J.F. & *Putnam*, R.D. (*2004*). The Social Context of Well-Being. *Philosophical Transactions of the Royal Society B, 359*, 1435-1446.

Henriques, G. (2017, May). Twenty Billion Fails to "Move the Needle" on Mental Illness. *Psychology Today*. Retrieved from http://www.psychologytoday.com/magazine

Henry, J.D., & Crawford, J.R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): construct validity and normative data in a large non- clinical sample. *British Journal of Clinical Psychology, 44*, 227–239.

Higgins, T.E. (1987). Self-Discrepancy: A theory relating self and affect. *Psychological Review, 94*, 319-340.

Hipp, J.R., Petersilia, J.& Turner, S. (2010). Parolee recidivism in California: The effect of neighborhood context and social service agency characteristics. *Criminology, 48*, 947-979.

Hirschfield, P.J., & Piquero, A.R (2010). Normalization and legitimation: Modeling stigmatizing attitudes toward ex-offenders. *Criminology: An Interdisciplinary Journal, 48*, 27–55.

Hochstetler, A.L., Murphy, D.S., & Simons, R.L. (2004) Damaged goods: Exploring predictors of distress in prison inmates. *Crime & Delinquency, 50*, 436- 457.

Hogg, M. A., & Abrams, D. (1990). Social motivation, self-esteem and social identity. In D. Abrams, & M. A. Hogg (Eds.), *Social identity theory: Constructive and critical advances* (pp. 48 –70). New York: Harvester Wheatsheaf.

Hogg, M. A., & Hains, S. C. (1996). Intergroup relations and group solidarity: Effects of group identification and social beliefs on depersonalized attraction. *Journal of Personality and Social Psychology, 70*, 295–309.

Hogg, M. A., & Hains, S. C. (1998). Friendship and group identification: a new look at the role of cohesiveness in groupthink. *European Journal of Social Psychology, 28*, 323–341.

Hogg, M.A., & Reid, S. (2006). Social Identity, Self-Categorization, and the Communication of Group Norms. *Communication Theory, 16*, 7-30.

Holt-Lunstad, J. (2018a). Why social relationships are important for physical health: a systems approach to understanding and modifying risk and protection, *69*, 437-458.

Holt-Lunstad, J. (2018b). The potential public health relevance of social isolation and loneliness: prevalence, epidemiology, and risk factors. *Public Policy & Aging Report, 27*, 127–130.

Holt-Lunstad, J., & Smith, T. (2012). Social Relationships and Longevity. *Social and Personality Psychology Compass, 6*, 41–53.

Holt-Lunstad, J., Robles, T.F., & Sbarra, D.A. (2017). Advancing social connection as a public health priority in the United States. *The American Psychologist, 72*, 517–530.

Holt-Lunstad, J., Smith, T., Layton, J. (2010). Social relationships and mortality risk: a meta-analytic review. *PLoS Medicine*, 7.

Holt-Lunstad, J., Smith, T.B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspectives on Psychological Science, 10*, 227–237.

Hopkins, N., & Reicher, S. D. (2017). Social identity and health at mass gatherings. *European Journal of Social Psychology,47*, 867-877.

Hopkins, N., Reicher, S. D., Khan, S. S., Tewari, S., Srinivasan, N., & Stevenson, C. (2016). Explaining effervescence: Investigating the relationship between shared social identity and positive experience in crowds. *Cognition and Emotion,30*, 20-32.

Hornsey, M. J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and Personality Psychology Compass,2*, 204-222.

Hostinar, C.E., Sullivan, R.M., & Gunnar, M.R. (2014). Psychobiological mechanisms underlying the social buffering of the hypothalamic-pituitary-adrenocortical axis: A review of animal models and human studies across development. *Psychological Bulletin*, *140*, 256–282.

House of Commons (2005). *Home Affairs Committee on the Rehabilitation of Prisoners*. London: House of Commons Library.

House of Commons (2017). *Prisoners' Voting Rights: developments since May 2015*. London: House of Commons Library.

House of Commons (2018). *The prison estate*. London: House of Commons Library.

House of Lords (2017). *Rehabilitation in prisons*. London: House of Lords Library.

House, J. S. (2001). Social isolation kills, but how and why? *Psychosomatic Medicine*, *63*, 273-274.

House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, *241*, 540-545.

Howard, J.A. (2000). Social psychology of identities. *Annual Review of Sociology*, *26*, 367-393.

Human Rights Watch (2004). *No second chance: people with criminal records denied access to public housing*. USA: Human Rights Watch.

Hunter, B. A., Lanza, A. S., Lawlor, M., Dyson, W., & Gordon, D. M. (2015). A strengths-based approach to prisoner reentry: The fresh start prisoner reentry program. *International journal of offender therapy and comparative criminology*, *60*, 1298-314.

Hunter, P. G., Schellenberg, E. G. (2010). Music and emotion. In *Music perception*. New York: Springer.

Hurley, W., & Dunne, M. P. (1991). Psychological Distress and Psychiatric Morbidity in Women Prisoners. *Australian & New Zealand Journal of Psychiatry,25*, 461-470.

Inzlicht, M., Tullett, A.M., & Gutsell, J.N. (2012). Stereotype threat spillover: The short- and long-term effects of coping with threats to social identity. In M Inzlicht & T Schmader (Eds.), *Stereotype threat: Theory, process, and application* (pp 107-123). New York, NY: Oxford University Press.

Irwin, J. & Cressey, D.R. (*1962*). Thieves, Convict, and the Inmate Culture. *Social Problems*, *10*, 142-155.

Iyer, A., Jetten, J., Tsivrikos, D., Postmes, T., & Haslam, S. A. (2009). The more (and more compatible) the merrier: Multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *British Journal of Social Psychology*, *48*, 707–733.

Jacobson, J., Heard, C. & Fair, H. (2017). *Prison: evidence of its use and overuse from around the world*. London: Institute for Criminal Policy Research.

Jasinskaja-Lahti, I., Liebkind, K., Jaakola, M., & Jaakola, R.A. (2006). Perceived discrimination, social support networks, psychological well-being among three immigrant groups. *Journal of Cross-Cultural Psychology*, *37*, 293-311.

Jetten, J. Haslam, S.A., Iyer, A., & Haslam, C. (2010). Turning to others in times of change: Social identity and coping with stress. In S. Sturmer & M. Snyder (Eds.), *The psychology of pro-social behaviour: Group processes, intergroup relations, and helping* (pp. 139-156). Oxford, UK: Blackwell.

Jetten, J., Branscombe, N., Haslam, S.A., Haslam, C., Cruyws, T., Jones, J.M., Cui, L., Dingle, G., Liu, J., Murphy, S., Thai, A., & Walter, Z., Zhang, A. (2015). Having a lot of a good thing: Multiple important group memberships as a source of self-esteem. *PLoS ONE, 10*, 1-29.

Jetten, J., Branscombe, NR., Schmitt, MT., & Spears, R. (2001). Rebels with a cause: Group identification as a response to perceived discrimination from the mainstream. *Personality and social psychology bulletin*, *27*, 1204-1213.

Jetten, J., Haslam, S. A., & Haslam, C. (2012). *The social cure: Identity, health and well-being*. Hove & New York: Psychology Press.

Jetten, J., Haslam, A.S., Cruwys, T., Greenaway K.H., Haslam, C., & Steffens, N. (2017). Advancing the social identity approach to health and well-being: Progressing the social cure research agenda. *European Journal of Social Psychology*, *47*, 789-802.

Jetten, J., Haslam, C., Haslam, S.A., & Branscombe, N. (2009). The social cure. *Scientific American Mind*, *20*, 26-33.

Jetten, J., Haslam, S.A., Haslam, C., Dingle, G., Jones, J.M. (2014). How groups affect our health and well-being: The path from theory to policy. *Social Issues and Policy Research*, *8*, 102-128.

Jetten, J., Spears, R., & Manstead, A.S.R. (1997). Distinctiveness threat and prototypicality: combined effects on intergroup discrimination and collective self-esteem. *European Journal of Social Psychology*, *27*, 635-657.

Jiang, S., & Winfree, L. T., Jr. (2006). Social support, gender, and inmate adjustment to prison life: Insights from a national sample. *The Prison Journal, 86*, 32-55.

Johnstone, M., Jetten, J., Dingle, G., Parsell, C. & Walter, Z. (2016). Enhancing Well-being of Homeless Individuals by Building Group Memberships. *Journal of Community & Applied Social Psychology*, *26*, 421-438.

Johnstone, M., Parsell, C., Jetten, J., Dingle, G., & Walter, Z. (2015). Breaking the cycle of homelessness: Housing stability and social support as predictors of long-term well-being. *Housing Studies*, *31*, 410-426.

Jones, J. M., Williams, W. H., Jetten, J., Haslam, S. A., Harris, A., & Gleibs, I. H. (2012). The role of psychological symptoms and social group memberships in the development of post-traumatic stress after traumatic injury. *British Journal of Health Psychology,17*, 798-811.

Jones, J.M., & Jetten, J. (2011). Recovering from strain and enduring pain: Multiple group memberships promote resilience in the face of physical challenges. *Social Psychological and Personality Science, 3,* 239-243.

Kaeble, D., & Glaze, N. (2016). *Correctional Populations in the United States, 2015*. US Department of Justice: Bureau of Justice Statistics.

Kearns, M., Muldoon, O. T., Msetfi, R. M., & Surgenor, P. W. (2017). Darkness into light? Identification with the crowd at a suicide prevention fundraiser promotes well-being amongst participants. *European Journal of Social Psychology,47*, 878-888.

Kellezi, B., & Reicher, S. (2012). Social cure or social curse? The psychological impact of extreme events during the Kosovo conflict. In J. Jetten, C. Haslam, & A. Haslam (Eds.), *The social cure: identity, health and well-being (*pp. 217-233). Hove: Psychology Press.

Kellezi, B., Bowe, M., Wakefield, J. R. H., McNamara, N., & Bosworth, M. (2018). Coping with immigration detention: Social identities as cures and curses. *European Journal of Social Psychology, 00*, 1-19.

Kessler, R. C., & Mcleod, J. D. (1984). Sex differences in vulnerability to undesirable life events. *American Sociological Review,49*, 620 – 631.

Khan, S.S., Hopkins, N., Reicher, S.D., Tewari, S., Srinivasan, N., & Stevenson, C. (2015). Shared identity predicts enhanced health at a mass gathering. *Group Process and Intergroup Relations*, *18*, 504–522.

Kidd, S. A. (2007). Youth homelessness and social stigma. *Journal of Youth and Adolescence*, *36*, 291–299.

Kinner, S.A. (2006). Continuity of health impairment and substance misuse among adult prisoners in Queensland, Australia. *International Journal of Prisoner Health*, *2*, 101-113.

Koudenburg, N., Jetten, J. & Dingle, G. (2017). Personal autonomy in group-based interventions. *European Journal of Social Psychology*, *47*, 653-660.

Krueger, K. R., Wilson, R. S., Kamenetsky, J. M., Barnes, L. L., Bienias, J. L., & Bennett, D. A. (2009). Social engagement and cognitive function in old age. *Experimental Aging Research*, *35*, 45-60.

Kruttschnitt, C., & Gartner, R. (2003). Women's imprisonment. *Crime and Justice, 30*, 1–81.

Kuppens, T., Easterbrook, M. J., Spears, R., & Manstead, A. S. R. (2015). Life at both ends of the ladder: Education-based identification and its association with well-being and social attitudes. *Personality and Social Psychology Bulletin*, *41*, 1260-1275.

Kyprianides, A., & Easterbrook, M. (2019). "Finding Rhythms made me find my rhythm in prison": the role of a music program in promoting social engagement and psychological well-being amongst prisoners. *The Prison Journal, 'Prison Arts' special issue.*

Kyprianides, A., Easterbrook, M., & Brown, R. (under review). Group identities benefit well-being by satisfying needs. *Journal of Experimental Social Psychology.*

Kyprianides, A., Easterbrook, M., & Cruwys, T. (2019). "I changed and hid my old ways": How social rejection and social identities shape well-being among ex-prisoners. *Journal of Applied Social Psychology*, *00*, 1-12. DOI:10.1111/jasp.12582

Kyprianides, A., & Easterbrook, M. (under review). Social factors boost well-being behind bars: the importance of individual and group ties for prisoner well-being. *Applied Psychology: Health & Well-being.*

La Guardia, J. G., & Patrick, H. (2008). Self-determination theory as a fundamental theory of close relationships. *Canadian Psychology/Psychologie canadienne, 49*, 201-209.

La Vigne, N. G., Visher, C., & Castro, J. (2004). *Chicago prisoners' experiences returning home*. Washington, DC: The Urban Institute

Lam, B. C., Haslam, C., Haslam, S. A., Steffens, N. K., Cruwys, T., Jetten, J., & Yang, J. (2018). Multiple social groups support adjustment to retirement across cultures. *Social*

Science & Medicine, 208, 200-208.

Latrofa, M., Vaes, J., Pastore, M., & Cadinu, M. (2009). "United we stand, divided we fall"! The protective function of self-stereotyping on stigmatized members' psychological well-being. *Applied Psychology: An Integrative Review, 58,* 84-104.

Leach, C.W., van Zomeren, M., Zebel, S., Vliek, M.L.W., Pennekamp, S.F., Doosje, B., & Ouwerkerk, J.W. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology*, *95*, 144–165.

LeBel, T.P. (2012). Invisible stripes: Formerly incarcerated person's perceptions of stigma. *Deviant Behavior*, *33*, 89–107.

Leistico, A.M.R., Salekin, R. T., DeCoster, J., & Rogers, R. (2008). A large-scale meta-analysis relating the Hare measures of psychopathy to antisocial conduct. *Law and Human Behavior, 32*, 28-45.

Levine, M., & Thompson, K. (2004). Identity, Place, and Bystander Intervention: Social Categories and Helping After Natural Disasters. *The Journal of Social Psychology,144*, 229-245.

Levine, M., Cassidy, C., Brazier, G., & Reicher, S. (2002). Self-categorization and bystander non-intervention: Two experimental studies. *Journal of Applied Social Psychology, 32*, 1452-1463.

Levine, M., Prosser, A., Evans, D., & Reicher, S. (2005). Identity and Emergency Intervention: How Social Group Membership and Inclusiveness of Group Boundaries Shape Helping Behavior. *Personality and Social Psychology Bulletin*, *31*, 443-453.

Levine, M., & Reicher, S. D. (1996). Making sense of symptoms: Self-categorization and the meaning of illness and injury. *British Journal of Social Psychology, 35*, 245-256.

Lickel, B., Hamilton, D. L., Wieczorkowska, G., Lewis, A., Sherman, S. J., & Uhles, A. N. (2000). Varieties of groups and the perception of group entitativity. *Journal of Personality and Social Psychology*, *78*, 223–246.

Liebling, A. & Arnold, H. (2012). Social relationships between prisoners in a maximum security prison: Violence, faith, and the declining nature of trust. *Journal of Criminal Justice, 40*, 413-424.

Liebling, A., Hulley, S. and Crewe, B. (2011). Conceptualising and measuring the quality of prison life In Gadd, D., Karstedt, S. and Messner, S. (Eds.), *The SAGE handbook of criminological research methods*. London: Sage.

Lin, N., Dean, A., & Ensel, W.M. (1986). *Social support, life events, and depression*. New

York: Academic Press.

Lindquist, C.H. (2000). Social integration and mental well-being among jail inmates. *Sociological Forum*, *15*, 431-455.

Livingston, J.D., & Boyd, J.E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systematic review and meta-analysis. *Social Sciences and Medicine*, *71*, 2150–2161.

Lloyds Bank Foundation (2015). *The value of small: in-depth research into the distinctive contribution, value and experiences of small and medium-sized charities in England and Wales.* Sheffield Hallam University: Lloyds Bank Foundation.

Lösel, F., Pugh, G., Markson, L., Souza, K., & Lanskey, C. (2012). *Risk and protective factors in the resettlement of imprisoned fathers with their families*. Milton: Ormiston Children's and Families Trust.

Lovibond, P.F., & Lovibond, S.H. (1995). The structure of negative emotional states: comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, *33*, 335–343.

Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime & Delinquency*, *52*, 77–93.

Luciano, E. C., & Orth, U. (2017). Transitions in romantic relationships and development of self-esteem. *Journal of Personality and Social Psychology, 112*, 307-328.

Maden, A., Chamberlain, S., & Gunn, J. (2000). Deliberate self-harm in sentenced male prisoners in England and Wales: Some ethnic factors. *Criminal Behaviour and Mental Health, 10*, 199-204.

Maitland*, A. S., & Sluder, R. D. (1996). Victimization in prisons: A study of factors related to the general well-being of youthful inmates. *Federal Probation*, *60*, 24–31.

Makarios, M., Steiner, B., & Travis, L.F. (2010). Examining the predictors of recidivism among men and women released from prison in Ohio. *Criminal Justice and Behaviour*, *37*, 1377-1391.

Mandela, N. (1995). *Long walk to freedom: The autobiography of Nelson Mandela*. London: Abacus.

Manstead, A. S. R. (1997). Situations, belongingness, attitudes and culture: Four lessons learned from social psychology. In C. McGarty, & S. A. Haslam (Eds.), *The message of social psychology: Perspectives on mind in society* (pp. 238–251). Oxford: Blackwell.

Markson, L., Lösel, F., Souza, K., & Lanskey, C. (2015). Male prisoners' family relationships and resilience in resettlement. *Criminology & Criminal Justice*, *15*, 423–441.

Maruna, S. (2001). *Making good: How ex-convicts reform and rebuild their lives*. Washington, DC, US: American Psychological Association.

Maruna, S. & LeBel, T.P. (2002). Revisiting ex-prisoner re-entry: A buzzword in search of a narrative. In S. Rex & M. Tonry (Eds.), *Reform and Punishment* (pp. 158–80). Cullompton: Willan.

Maschi, T., Viola, D., & Koskinen, L. (2015). Trauma, stress, and coping among older adults in prison: Towards a human rights and intergenerational family justice action agenda. *Traumatology*, *21*, 188-200.

Maxwell, J. (2004). Using Qualitative Methods for Causal Explanation. *Field Methods*, *16*, 243-264.

McCorkle, R. (*1993*). Research note punish and rehabilitate public attitudes toward six common crimes. *Crime & Delinquency*, *39*, 240-252.

McCorkle, R., Miethe, T. D., & Drass, K. A. (1995). The Roots of Prison Violence: A Test of the Deprivation, Management, and "Not-So-Total" Institution Models. *Crime & Delinquency*, *41*, 317–331.

McGrath, J. (1981). The study of research choices and dilemmas. *American Behavioral Scientist*, *25*, 179–210.

McLaughlin, K., & Muldoon, O. (2014). Father identity, involvement and work–family balance: an in-depth interview study. *Journal of Community and Applied Social Psychology*, *5*, 439-452.

McNamara, N., Stevenson, C. & Muldoon, O. (2013). Community identity as resource and context: A mixed-method investigation of the role of social identity in coping and collective action in a disadvantaged community. *European Journal of Social Psychology*, *43*, 393-403.

Merrall, E. L., Kariminia, A., Binswanger, I. A., Hobbs, M. S., Farrell, M., Marsden, J., . . . Bird, S. M. (2010). Meta-analysis of drug-related deaths soon after release from prison. *Addiction,105*, 1545-1554.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal Social Psychology*, *67*, 371–378.

Ministry of Justice (MOJ; 2016). *Prison safety and reform*. London: MOJ.

Ministry of Justice (MOJ; 2018). *Proven reoffending*. London: MOJ.

Ministry of Justice (MOJ; 2008). *Working with the third sector to reduce re-offending:*

securing effective partnerships 2008-2011. London: Ministry of Justice.

Moore, K.E., Stuewig, J., & Tangney, J. (2016a). The effect of stigma on criminal offenders' functioning: A longitudinal meditational model. *Deviant Behavior*, *37*, 196-218.

Moore, K.E., Stuewig, J., Tangney, J. (2013). Jail inmates' perceived and anticipated stigma: Implications for post-release functioning. *Self and Identity*, *12*, 527–547.

Moore, K.E., Tangney, J.P., & Stuewig, J.B. (2016). The self-stigma process in criminal offenders. *Stigma Health*, *1*, 206-224.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained. *Journal of Mixed Methods Research,1*, 48-76.

Morgan, R. & A. Owers (2001). Foreword. In HMIProbation/HMIPrisons *Through the Prison Gate*. London: HMI Probation and HMI Prisons.

Morris, R. G., Carriaga, M. L., Diamond, B., Piquero, N. L., & Piquero, A. R. (2012). Does prison strain lead to prison misbehavior? An application of general strain theory to inmate misconduct. *Journal of Criminal Justice, 40*, 194-201.

National Audit Office (NAO; 2017). *Mental health in prisons*. London: National Audit Office.

National Institute of Justice (NIJ; 2012). *Challenges of conducting research in prisons*. National Institute of Justice: Office of Justice Programs.

Newell, T. (2001). *Restorative practice in preparing prisoners for resettlement, integration and return to their communities*. London: Restorative Justice Consortium.

Nurse, J., Woodcock, P., & Ormsby, J. (2003). Influence of environmental factors on mental health within prisons: focus group study. *British Medical Journal*, *327*, 480-483.

Nussbaum, A. (1974). *A second chance: Amnesty for the first offender*. New York: Hawthorn Books.

Official Statistics (2018). *Prison population figures: 2018*. London: Ministry of Justice.

Paige, P. (2013). The role of community based programs in reducing recidivism in ex-offenders. Retrieved from Sophia, the St. Catherine University repository website: https://sophia.stkate.edu/msw_papers/247.

Paterline, B. A., & Petersen, D. M. (1999). Structural and social psychological determinants of prisonization. *Journal of Criminal Justice,27*, 427-441.

Patrick, H., Knee, C. R., Canevello, A., & Lonsbary, C. (2007). The role of need fulfillment in relationship functioning and well-being: A self-determination theory perspective. *Journal of Personality and Social Psychology*, *92*, 434–457.

Pearce, E., Launay, J., Machin, A., & Dunbar, R. I. M. (2016). Is group singing special? Health, well-being and social bonds in community- based adult education classes. *Journal of Community & Applied Social Psychology, 26*, 518–533.

Pennington, D., Gillen, K., & Hill, P. (1999). *Social psychology*. London: Arnold.

Pereboom, D. (2014). *Free will, agency, and meaning in life*. Oxford: Oxford University Press.

Petersilia, J. (2001). Prisoner Reentry: Public Safety and Reintegration Challenges. *The Prison Journal, 81*, 360-375.

Petersilia, J. (2003). *When prisoners come home: Parole and prisoner reentry*. New York: Oxford University Press.

Petrosino, A., Derzon, J., & Lavenberg, J. (2009). *The role of the family in crime and delinquency*: *Evidence from prior quantitative review. Southwest Journal of Criminal Justice, 6*, 108-132.

Phillips, C. (2012). 'It ain't nothing like America with the Bloods and the Crips': Gang narratives inside two English prisons. *Punishment & Society, 14*, 51-68.

Platow, M. J., Voudouris, N. J., Coulson, M., Gilford, N., Jamieson, R., Najdovski, L., . . . Terry, L. (2007). In-group reassurance in a pain setting produces lower levels of physiological arousal: Direct support for a self-categorization analysis of social influence. *European Journal of Social Psychology,37*, 649-660.

Plumb, L., & Stickley, T. (2017). Singing to promote mental health and well-being. *Mental Health Practice, 20*, 31–36.

Poehlmann, J.A., Dallaire, D.H., Loper, A.B., & Shear, L.D. (2010). Children's contact with their incarcerated parents: research findings and recommendations. *The American psychologist, 65*, 575-98.

Pogorzelski, W., Wolff, N., Pan, K.Y., & Blitz, C.L. (2005). Behavioral health problems, ex-offender reentry policies, and the "Second Chance Act". *Public Health Consequences of Imprisonment, 95*, 1718–1724.

Postmes, T., & Branscombe, N. R. (2010). *Rediscovering social identity: Core sources*. New York: Psychology Press.

Postmes, T., Haslam, S. A., & Jans, L. (2013). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology, 52*, 597–617.

Postmes, T., Spears, R., Lee, A. T., & Novak, R. J. (2005). Individuality and social influence in groups: Inductive and deductive routes to group identity. *Journal of personality and social psychology, 89*, 747-763.

Praharso, N. F., Tear, M. J., & Cruwys, T. (2017). Stressful life transitions and well-being: A comparison of the stress buffering hypothesis and the social identity model of identity change. *Psychiatry Research*, *247*, 265–275.

Pratt, D., Piper, M., Appleby, L., Webb, R., & Shaw, J. (2006). Suicide in recently released prisoners: A population-based cohort study. *The Lancet,368*, 119-123.

Prentice, D.A., Miller, D.T., and Lightdale, J.R. (1994). Asymmetries in attachments to groups and to their members: Distinguishing between common-identity and common-bond groups. *Personality and Social Psychology Bulletin, 20*, 484–493.

Prison Reform Trust (2018). *Prison: the facts*. London: Prison Reform Trust factfiles.

Prisoners Education Trust (2018). *Home* | Prisoners Education Trust. [online] Available at: https://www.prisonerseducation.org.uk/

Public Health England (2016). *Rapid review of evidence of the impact on health outcomes of NHS commissioned health services for people in secure and detained settings to inform future health interventions and prioritisation in England*. London: Public Health England.

Purvis, M., Ward, T., & Shaw, S. (2013). *Applying The Good Lives Model to the case management of sexual offenders: A practical guide for probation officers, parole officers, and case workers*. Brandon, VT: Safer Society Press.

Putnam, RD. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.

Ranganathan, P., Pramesh, C. S., & Buyse, M. (2016). Common pitfalls in statistical analysis: The perils of multiple testing. *Perspectives in clinical research*, *7*, 106-7.

Redersdorff, S., Martinot, D., & Branscombe, N. (2004). The impact of thinking about group-based disadvantages or advantages on women's well-being: An experimental test of the Rejection-Identification model. *Current Psychology of Cognition*, *22*, 203-222.

Reicher, S. (2000). Social identity definition and enactment: A broad SIDE against irrationalism and relativism. *SIDE issues centre stage: Recent developments in studies of de-individuation in groups*. Amsterdam: Royal Netherlands Academy of Arts and Sciences.

Reicher, S. (2001). The psychology of crowd dynamics. In M. A. Hogg and R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 182–208). Oxford: Blackwell.

Reicher, S., & Haslam, S. A. (2006a). On the agency of individuals and groups: Lessons from the BBC Prison Study. In: T. Postmes, & J. Jetten (Eds.), *Individuality and the group: Advances in social identity* (pp. 237–257). London: Sage.

Reicher, S. D. & Haslam, S. A. (2006b). Tyranny revisited: Groups, psychological well-being and the health of societies. *The Psychologist*, *19*, 46–50.

Reicher, S., Templeton, A., Neville, F., Ferrari, L., & Drury, J. (2016). Core disgust is attenuated by ingroup relations. *Proceedings of the National Academy of Sciences, 113*, 2631-2635.

Reicher, S., Cassidy, C., Wolpert, I., Hopkins, N., & Levine, M. (2006). Saving Bulgaria's Jews: An analysis of social identity and the mobilisation of social solidarity. *European Journal of Social Psychology*, *36*, 49–72.

Rhodes, L. (2004). *Total confinement: Madness and Reason in the Maximum Security Prison*. Berkley, Los Angeles, London: University of California Press.

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and Social Psychology Bulletin, 27*, 151-161.

Robles, T. F., & Kiecolt-Glaser, J. K. (2003). The physiology of marriage: Pathways to health. *Physiology and Behavior*, *79*, 409-416.

Rutledge, T., Linke, S. E., Olson, M. B., Francis, J., Johnson, B. D., Bittner, V., York, K., McClure, C., Kelsey, S.F., Reis, S.E., Cornell, C.E., Vaccarino, V., Sheps, D.S., Shaw, L.J., Krantz., D.S., Parashar, S., Merz, C. N. (2008). Social networks and incident stroke among women with suspected myocardial ischemia. *Psychosomatic Medicine,70*, 282-287.

Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*, 68-78.

Ryan, T.A., & McCabe, K. A. (1994). Mandatory versus voluntary prison education and academic achievement. *The Prison Journal*, *74*, 450–461.

Sackett, P., Mullen, E. (1993). Beyond formal experimental design: Towards an expanded view of the training evaluation process. *Personnel Psychology*, *46*, 613-627.

Sampson, R. J., & Laub, J. H. (1993). *Crime in the making: Pathways and turning points through life*. Cambridge, MA: Harvard University Press.

Sani, F., Herrera, M., Wakefield, J.R.H., Boroch, O., & Gulysas, C. (2012). Comparing social contact and group identifications as predictors of mental health. *British Journal of Social Psychol*ogy, *51*, 781–790.

Sani, F., Madhok, V., Norbury, M., Dugard, P., & Wakefield, J. R. (2015). Greater number of group identifications is associated with healthier behaviour: Evidence from a Scottish community sample. *British Journal of Health Psychology,20*, 466-481.

Schenk, A. M., & Fremouw, W. J. (2012). Individual characteristics related to prison violence: A critical review of the literature. *Aggression and Violent Behavior, 17*, 430-442.

Schmid, T. J., & Jones, R. S. (1993). Ambivalent actions: Prison adaptation strategies of first-time, short-term inmates. *Journal of Contemporary Ethnography*, *21*, 439–463.

Schmitt, M. T., Branscombe, N. R., Postmes, T., & Garcia, A. (2014). The consequences of perceived discrimination for psychological well-being: a meta- analytic review. *Psychological Bulletin*, *140,* 921–948.

Schmitt, M.T., & Branscombe, N.R. (2002). The meaning and consequences of perceived discrimination in disadvantaged and privileged social groups. *European Review of Social Psychology*, *12*, 167–199.

Schmitt, M.T., Branscombe, N.R., Kobrynowicz, D., & Owen, S. (2002). Perceiving discrimination against one's gender group has different implications for well-being in women and men. *Personality and Social Psychology Bulletin*, *28*, 197–210.

Schneider, A., & McKim, W. (2003). Stigmatization among probationers. *Journal of Offender Rehabilitation*, *38*, 19–31.

Seeman, T. E., Lusignolo, T. M., Albert, M., & Berkman, L. (2001). Social relationships, social support, and patterns of cognitive aging in healthy, high-functioning older adults: MacArthur studies of successful aging. *Health Psychology*, *20*, 243-255.

Seeman, T. E., Miller-Martinz, D. M., Merkin, S. S., Lachman, M. E., Tun, P. T., & Karlamangla, A. S. (2011). Histories of social engagement and adult cognition: Midlife in the U.S. Study. *The Journals of Gerontology, Series B: Psychological Sciences & Social Sciences*, *66B*(S1), i141-i152.

Segrin, C. & Flora, J. (2001) Perceptions of relational histories, marital quality, and loneliness when communication is limited: An examination of married prison inmates. *Journal of Family Communication*, *1*, 151-173.

Semega, J.L., Fontenot, K.R., & Kollar, M.A. (2017). *Income and Poverty in the United States*. United States Census Bureau.

Seppala, E. (2012, August). Connect to thrive: Social connection improves health, well-being & longevity. *Psychology Today*. Retrieved from http://www.psychologytoday.com/magazine

Setty, E., Sturrock, R. & Simes, E. (2014) *Gangs in Prison: The Nature and Impact of Gang*

Involvement Among Prisoners. London: The Dawes Unit, Catch 22.

Seymour-Smith, M., Cruwys, T., Haslam, S.A., & Brodribb, W. (2017). Loss of group memberships predicts depression in postpartum mothers. *Social Psychiatry and Psychiatric Epidemiology*, *52*,1483-1494.

Shankar, A., McMunn, A., Demakakos, P., Hamer, M., & Steptoe, A. (2017). Social isolation and loneliness: prospective associations with functional status in older adults. *Health Psychology*, *36*, 179–187.

Shapiro, C., & DiZerega, M. (2010). It's Relational: Integrating Families into Community Corrections. In F. McNeill, P. Raynor, C. Trotter (Eds.), *Offender Supervision: New Directions in Theory, Research and Practice*. Cullompton: Willan.

Shih, M. (2004). Positive Stigma: Examining Resilience and Empowerment in Overcoming Stigma. *The ANNALS of the American Academy of Political and Social Science*, *591*, 175-185.

Shor, E., & Roelfs, D. J. (2015). Social contact frequency and all-cause mortality: A meta-analysis and meta-regression. *Social Science & Medicine,128*, 76-86.

Silverman, M., & Vega, M. (1990). Reactions of prisoners to stress as a function of personality and demographic variables. *International Journal of Offender Therapy and Comparative Criminology, 34*, 187-196.

Singh, J. P., Grann, M., & Fazel, S. (2011). A comparative study of violence risk assessment tools: A systematic review and metaregression analysis of 68 studies involving 25,980 participants. *Clinical Psychology Review,31*, 499-513.

Slatcher, R.B. & Selcuck, E. (2017). A social psychological perspective on the links between close relationships and health. *Current Directions in Psychological Science*, *26*, 16-21.

Smart Richman, L., & Leary, M. R. (2009). Reactions to discrimination, stigmatization, ostracism, and other forms of interpersonal rejection: a multimotive model. *Psychological Review*, *116*, 365.

Smeekes, A., Verkuyten, M., Çelebi, E., Acartürk, C., & Onkun, S. (2017). Social identity continuity and mental health among Syrian refugees in Turkey. *Social Psychiatry and Psychiatric Epidemiology,52*, 1317-1324.

Smith, E. (2008). Pitfalls and promises: the use of secondary data analysis in educational research. *British Journal of Educational Studies*, *56*, 323-339.

Smith, I., & McCarthy, D. (2016). The effects of prisoner attachment to family on re-entry outcomes: a longitudinal assessment. *British Journal of Criminology*, *57*, 1-20.

Smyth, J. M., Nazarian, D., & Arigo, D. (2008). Expressive writing in the clinical context. In A. Vingerhoets, I. Nyklicek, & J. Denollet (Eds.), *Emotion regulation – Conceptual and clinical issues* (pp. 215–233). New York, NY: Springer

Social Exclusion Unit (SEU; 2002). *Reducing reoffending by Ex-Prisoners*. London: SEU.

Solomon, A.L., Waul, M., Van Ness, A., Travis, J. (2004). *Outside the walls: A national snapshot of community-based prisoner reentry programs*. Washington, DC: The Urban Institute.

Solomon, L., Montague, B. T., Beckwith, C. G., Baillargeon, J., Costa, M., Dumont, D., . . . Rich, J. D. (2014). Survey finds that many prisons and jails have room to improve HIV testing and coordination of postrelease treatment. *Health Affairs, 33*, 434-442.

Sønderlund, A.L., Morton, T.A., & Ryan, M.K. (2017). Multiple Group Membership and Well-Being: Is There Always Strength in Numbers? *Frontiers in Psychology*, *8*, 1-20.

Spaulding, A. C., Seals, R. M., Mccallum, V. A., Perez, S. D., Brzozowski, A. K., & Steenland, N. K. (2011). Prisoner Survival Inside and Outside of the Institution: Implications for Health-Care Planning. *American Journal of Epidemiology,173*, 479-487.

Stacy, R., Brittain, K., & Kerr, S. (2002). Singing for health: An exploration of the issues. *Health Education,102*, 156-162.

Stahler, J., Mennis, J., Belenko, S., Welsh, W., Hiller, M., & Zajac, G. (2013). Predicting recidivism for released state prison offenders. *Criminal Justice and Behaviour*, *40*, 690-711.

Steffens, N. K., Haslam, S. A., Schuh, S. C., Jetten, J., & Dick, R. V. (2017). A Meta-Analytic Review of Social Identification and Health in Organizational Contexts. *Personality and Social Psychology Review,21*, 303-335.

Steffens, N.K., Cruwys, T., Haslam, C., Jetten, J., & Haslam, S.A. (2016). Social group memberships in retirement are associated with reduced risk of premature death: evidence from a longitudinal cohort study. BMJ Open, *6*, 1-9.

StepTogether (2018). *Home | StepTogether*. [online] Available at: https://www.step-together.org.uk/

Stets, J.E., Burke, P.J. (2000) Identity theory and social identity theory. *Social Psychology Quarterly, 63*, 224-237.

Stewart, N. A., & Lonsdale, A. J. (2016). It's better together: The psychological benefits of singing in a choir. *Psychology of Music,44*, 1240-1254.

Stickley, T., & Hui, A. (2012a). Social prescribing through arts on prescription in a U.K. City: Participants' perspectives (part 1). *Public Health*, *126*, 574–579.

Stickley, T., & Hui, A. (2012b). Social prescribing through arts on prescription in a U.K. City: Referrers' perspectives (part 2). *Public Health*, *126*, 580–586.

Stickley, T., Wright, N., & Slade, M. (2018). The art of recovery: outcomes from participatory arts activities for people using mental health services. *Journal of Mental Health*, *27*, 367-373.

Subramanian, R., Delaney, R., Roberts, S., Fishman, N., & McGarry, P. (2015). *Incarceration's Front Door: The Misuse of Jails in America*. Vera Institute of Justice.

Sykes, G.M. (1958; 2007). The Pains of Imprisonment. In *The Society of Captives: A Study of a Maximum Security Prison.* Princeton, NJ: Princeton University Press.

Tajfel, H. (1972). La categorisation sociale (English Trans.). In S. Moscovici (Ed.), *Introduction a la psychologie sociale* (Vol. 1, pp. 272-302). Paris: Larousse.

Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London: Academic Press.

Tajfel, H., Billig, M.G., Bundy, R.F., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, *1*, 149-177.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The Social Psychology of Intergroup Relations* (pp. 33-47). Monterey, CA: Brooks/Cole.

Tang, K. N., & Chan, C. S. (2017). Life satisfaction and perceived stress among young offenders in a residential therapeutic community: Latent change score analysis. *Journal of Adolescence,57*, 42-53.

Tashakkori, A., & Creswell, J.W. (2007). Editorial new era of mixed methods. *Journal of mixed methods research*, *1*, 3-7.

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes*, *5*, 63-75.

Tewari, S., Khan, S., Hopkins, N., Srinivasan, N., & Reicher, S. (2012). Participation in mass gatherings can benefit well-being: longitudinal and control data from a North Indian Hindu pilgrimage event. *PLoS One*, *7*(10).

Tewksbury, R. (2006). *Behind Bars: Readings on Prison Culture*. Upper Saddle River, NJ: Pearson Prentice Hall.

Third Sector Research Centre (TSRC; 2018). *Home | TSRC*. [online] Available at: https://esrc.ukri.org/research/our-research/third-sector-research-centre-tsrc/

Thoits, P. A. (1995). Stress, coping, and social support processes: where are we? What next? *Journal of Health and Social Behavior,35*, 53-79.

Thomas, E. G., Spittal, M. J., Heffernan, E. B., Taxman, F. S., Alati, R., & Kinner, S. A. (2015). Trajectories of psychological distress after prison release: Implications for mental health service need in ex-prisoners. *Psychological Medicine,46*, 611-621.

Toch, H. (1975). *Men in crisis: Human breakdowns in prison*. Oxford, England: Aldine.

Toch, H. (1977). *Living in prison: The ecology of survival*. Washington, DC: American Psychological Association.

Tomasello, M. (2014). The ultra-social animal. *European Journal of Social Psychology*, *44*, 187-194.

Top 10 tips: Improve health and well-being in your workplace. (2019, January 09). Retrieved from https://www.healthyperformance.co.uk/top-10-tips-improve-health-and-well-being-in-your-workplace/

Trafimow, D. (2015). A defense against the alleged unreliability of difference scores. *Cogent Mathematics*, *2*.

Travis J. (2005). *But they all come back: Facing the challenges of prisoner reentry*. Washington, DC: Urban Institute Press.

Travis, J. & Petersilia, J. (2001). Re-entry Reconsidered: A new look at an old question. *Crime & Delinquency, 47*, 291–313.

Travis, J., Solomon, A. J., *Waul*, M. (*2001*). *From prison to home: The dimensions and consequences of prisoner reentry*. Washington, DC: Urban Institute.

Turner, J. C. (1982). Toward a cognitive redefinition of the social group. In H. Tajfel (Eds.), *Social identity and intergroup relations* (pp. 15-40). Cambridge, UK: Cambridge University Press.

Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive theory of group behaviour. In E. J. Lawlor (Eds.), *Advances in group processes* (Vol. 2, pp. 71-122). Greenwich, CT: JAI Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S., & Wetherell, M. (1987). *Rediscovering the social group: A self-categorisation theory*. Oxford, UK: Blackwell.

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality and Social Psychology Bulletin*, *20*, 454-463.

Uchino, B.N. (2006). Social support and health: a review of physiological processes potentially underlying links to disease outcomes. *Journal of Behavioral Medicine*, *29*, 377–387.

Uggen, C., Manza, J., & Thompson, M. (2006). Citizenship, democracy, and the civic reintegration of criminal offenders. *The Annals of the American Academy of Political and Social Science***,** *605*, 281-310.

Underwood, P. W. (2000). Social support: The promise and reality. In B. H. Rice (Eds.), *Handbook of stress, coping and health* (pp. 367-391). Newbury Park, CA: Sage.

US Department of Justice (2017). *Prison reform: reducing recidivism by strengthening the federal bureau of prisons*. The United States Department of Justice Archives.

US Equal Employment Opportunity Commission (EEOC; 2017). *Background checks: what employers need to know*. US: US Equal Employment Opportunity Commission.

van Dooren, K. V., Kinner, S. A., & Forsyth, S. (2013). Risk of death for young ex-prisoners in the year following release from adult prison. *Australian and New Zealand Journal of Public Health,37*, 377-382.

van Olphen, J., Eliason, M. J., Freudenberg, N., & Barnes, M. (2009). *Nowhere* to *go*: How *stigma limits* the *options* of *female drug users after release* from *jail*. *Substance Abuse Treatment, Prevention, and Policy*, *4*, 41-10.

van Olphen, J., Freudenberg, N., Fortin, P., & Galea, S. (2006). Community reentry: perceptions of people with substance use problems returning home from New York City jails. *Journal of urban health: bulletin of the New York Academy of Medicine*, *83*, 372-81.

van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. W. (2004). Put your money where your mouth is: Explaining collective action tendencies through group-based anger and group efficacy. *Journal of Personality and Social Psychology*, *87*, 649–664.

Verona, E., Patrick, C. J., & Joiner, T. E. (2001). Psychopathy, antisocial personality, and suicide risk. *Journal of Abnormal Psychology, 110*, 462-470.

Vignoles, VL., Regalia, C., Manzi, C., Golledge, J., Scabini, E (2006). Beyond self-esteem: influence of multiple motives on identity construction. *Journal of Personality and Social Psychology*, *90*, 308-333.

Visher, C., Kachnowski, V., La Vigne, N. G., & Travis, J. (2004). *Baltimore prisoners' experiences returning home*. Washington, DC: The Urban Institute.

Visher, C., LaVigne, N., & Travis, J. (2004). *Returning Home: Understanding the Challenges of Prisoner Reentry*. Washington, DC: Urban Institute, Justice Policy Centre.

Wagner, P., & Rabuy, B. (2017). *Mass Incarceration: The Whole Pie 2017*. Prison policy initiative.

Walter, Z. C., Jetten, J., Parsell, C., & Dingle, G. (2015). The impact of self-categorizing as "homeless" on well-being and service use. *Analyses of Social Issues and Public Policy*, *15*, 333-356.

Walter, Z. C., Jetten, J., Dingle, G. A., Parsell, C., & Johnstone, M. (2016). Two pathways through adversity: Predicting well-being and housing outcomes among homeless service users. *British Journal of Social Psychology*, *55*, 357-374.

Walters, G.D. (2003). Changes in criminal thinking and identity in novice and experienced inmates prisonization revisited. *Criminal Justice and Behavior*, *30*, 399–421.

Ward, T., & Marshall, W.L. (2004). Good lives, aetiology and the rehabilitation of sex offenders: A bridging theory. *Journal of Sexual Aggression*, *10*, 153–169.

Ward, T., & Stewart, C. (2003). Criminogenic needs and human needs: A theoretical model. *Psychology, Crime & Law*, *9*, 125–143.

Warren, J. I., Hurt, S., Loper, A. B., & Chauhan, P. (2004). Exploring prison adjustment among female inmates: Issues of measurement and prediction. *Criminal Justice and Behavior*, *31*, 624–645.

Watson, D., Clark, L.A., & Tellegan, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.

Watson, N., and Thrash, T.M. (2010). Self-discrepancy: comparisons of the psychometric properties of three instruments. *Psychological Assessment*, *22*, 878-92.

Whitehead, D., & Schneider, Z. (2012). Mixed-method research. In Z. Schneider, D. Whitehead, G LoBiondo-Wood & J. Haber (Eds.), *Nursing and Midwifery Research: Methods and Appraisal for Evidence Based Practice* (pp. 263-284). Australia: Elsevier.

Whitehead, P.R., Ward, T., & Collie, R.M. (2007). Time for a change applying The Good Lives Model of rehabilitation to a high-risk violent offender. *International journal of offender therapy and comparative criminology*, *51*, 578–598

Wilkinson R., & Marmot M. (2003). *Social determinants of health: The solid facts*. Copenhagen, Denmark: World Health Organization.

Williams, E., Dingle, G., Jetten, J., & Rowan, C. (2018). Identification with arts-based groups improves mental well-being in adults with chronic mental health conditions. *Journal of Applied Social Psychology*, *49*, 15-26.

Williams, R., Kemp, V., Haslam, S.A., Haslam, C., Bdui, K.S., Bailey, S., & Maughan, D. (2019). Social scaffolding: Applying the lessons of contemporary social science to

health and healthcare. Cambridge: Cambridge University Press.

Willis, G.M., Ward, T., & Levenson, J.S. (2014). The Good Lives Model (GLM): An evaluation of GLM operationalization in North American treatment programs. *Sexual abuse: a journal of research and treatment*, *26*, 58–81.

Winnick, T.A, & Bodkin, M. (2009). Stigma, secrecy and race: An empirical examination of black and white incarcerated men. *American Journal of Criminal Justice*, *34*, 131–150.

Wolff, N., & Shi, J. (2012). Childhood and adult trauma experiences of incarcerated persons and their relationship to adult behavioral health problems and treatment. *International Journal of Environmental Research and Public Health*, *9*, 1908-1926.

Wright, K. N. (1985). Developing the Prison Environment Inventory. *Journal of Research in Crime and Delinquency*, *22*, 257–277.

Wright, K. N. (1989). Race and economic marginality in explaining prison adjustment. *Journal of Research in Crime and Delinquency*, *26*, 67-89.

Wright, K. N. (1991). A study of individual, environmental, and interactive effects in explaining adjustment to prison. *Justice Quarterly*, *8*, 217–242.

Yang, Y.C., Boen, C., Gerken, K., Li, T., Schorpp, K., & Harris, K.M. (2016). Social relationships and physiological determinants of longevity across the human life span. *Proceedings of the National Academy of Sciences of the United States of America*, *113*, 578–583.

Yeager, D. (2012). Older Inmates Adjust to Life Outside Prison**. *Social** Work Today*, *12*, 28-30.

Young, Q., Ignaszewski, A., Fofonoff, D. & Kaan, A. (2007). Brief screen to identify 5 of the most common forms of psychosocial distress in cardiac patients. *The Journal of Cardiovascular Nursing*, *22*, 525-534.

Ysseldyk, R., Haslam, S. A., & Haslam, C. (2013). Abide with me: religious group identification among older adults promotes health and well-being by maintaining multiple group memberships. *Aging and Mental Health*, *17*, 869–879.

Yu, R., Geddes, J.R., & Fazel, S. (2012). Personality disorders, violence, and antisocial behavior: a systematic review and meta-regression analysis. *Journal of Personality Disorders*, *26*, 775–792.

Zack, N. (2017). *The Oxford handbook of philosophy and race*. New York: Oxford University Press.

Zamble, E. (1992). Behavior and adaptation in long-term prison inmates: Descriptive longitudinal results. *Criminal Justice and Behavior*, *19*, 409-425.

Zamble, E., & Porporino, F. J. (1988). *Research in criminology. Coping, behavior, and adaptation in prison inmates.* New York, NY, US: Springer-Verlag Publishing.

Zheng, X. & Berry, J. (1991). Psychological Adaptation of Chinese Sojourners in Canada. *International Journal of Psychology*, *26*, 451-470.

Zolkowska, T., & Kaliszewska, K. (2014) The social construction of social identity of people with intellectual disability. *International Journal of Developmental Disabilities*, *60*, 3-12.

Appendices

Appendix 1: Participant booklet for Chapter 2 Study 1

Study on Well-being

Information and Consent

Thank you for your interest in this study.

You will be asked to complete two tasks and a series of questionnaires relating to your mood, social identity and feelings. The entire process should take no more than 15 minutes.

All the information you provide to us will be **anonymised**. All the data that we receive will be **treated in the strictest confidence**.

You may withdraw from the study **at any point**. You do not have to provide us with the reason(s) why. It should be noted that as the data is anonymous once the data analysis has started it will not be possible to identify who you are and withdraw your material after that point. The data will be stored securely and analysed. As mentioned there is no information that makes you identifiable.

The research is being conducted as part of a PhD at Sussex University. This research is being conducted by Arabella Kyprianides and is being supervised by Dr Matthew Easterbrook.

This study has been approved by the Sciences & Technology Cross-School Research Ethics Committee (crecscitec@sussex.ac.uk). The project reference number is ER/SK341/2. The University of Sussex has insurance in place to cover its legal liabilities in respect of this study. If you would like any further information, or to receive a copy of the results please contact Arabella Kyprianides at sk341@sussex.ac.uk.

By ticking the YES box at the bottom of this page you confirm that you are over 18 years old and that you have read and understood this information and consent to take part in the research.

I confirm that I am over 18 years old, have read and understood the information provided, and would like to participate in the research.
YES ☐   NO ☐

Age: Gender:
Date (participant):   Signed (participant):

Date (researcher):   Signed (researcher):

* Press 'Play' on the MP3 Player.

Take five minutes to think about something really sad that has happened in your life while listening to the music. Examples could be the following, but there may be other sad events in your life not mentioned here:

1. Loss of a romantic partner
2. Loss of a friend
3. Loss of a relative
4. Loss of a pet
5. Loss of a teacher

If none of these have happened, imagine that one of them did.

Focus on this unhappy event. Write about what happened on that day, how you felt on that day, and the feelings you experience when thinking about this unhappy event now.

_____
_____
_____
_____
_____
_____
_____
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_____
_____
_____
_____
_____
_____
_____
_____

* Press 'Stop' on the MP3 Player & remove the earphones.

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment.**

1	2	3	4	5
Not at all	A little	Moderately	Quite a bit	Extremely

1. Interested   _____
2. Distressed   _____
3. Excited   _____
4. Upset   _____
5. Strong   _____
6. Guilty   _____
7. Scared   _____
8. Hostile   _____
9. Enthusiastic   _____
10. Proud   _____
11. Down   _____
12. Happy   _____

[Condition: Groups (1) OR Relationships (2) OR Films (3)]

Groups (1)

Here are a number of groups that are important to people. Some are social category memberships, and some involve face-to-face interactions with people:

1. Age
2. Class
3. Gender
4. Nationality
5. Religion
6. My group of flat mates
7. My group of course mates
8. Sports club/ Society (e.g. University Society)
9. My family
10. My group of work colleagues

Choose 3 groups that are most important to you and focus on these. These can be some of the above, or there may be other groups that are important to you.
Now take a moment to think about your groups. In a few words, write the name of the group and then describe why each one is important or unimportant to you. After each group, rate its importance and the extent to which you identify with it on the scale provided from 1 **Strongly Disagree** to 7 **Strongly Agree**.

1. NAME: _____
_____
_____
_____
This group is important to me   1   2   3   4   5   6   7
I identify with this group   1   2   3   4   5   6   7

2. NAME: _____
_____
_____
_____
This group is important to me   1   2   3   4   5   6   7
I identify with this group   1   2   3   4   5   6   7

3. NAME: _____
_____
_____
_____
This group is important to me   1   2   3   4   5   6   7
I identify with this group   1   2   3   4   5   6   7

Relationships (2)
Here are a number of people that may be important to you. All involve close individual relationships with people:

1. Romantic partner
2. Relative
3. Friend
4. Teacher
5. Flat mate
6. Course mate
7. Sports team member
8. Society member (e.g. University Society)
9. Work colleague
10. Priest/ Imam/ Rabbi

Choose 3 relationships that are most important to you and focus on these. These can be some of the above, or there may be other relationships that are important to you. Now take a moment to think about your relationships. In a few words, write the name of the relationship and then describe why each one is important or unimportant to you. After each relationship, rate its importance and the extent to which you identify with it on the scale provided from **1 Strongly Disagree** to 7 **Strongly Agree**.

1. NAME: _____
_____
_____
_____
This relationship is important to me   1   2   3   4   5   6   7
I identify with this relationship   1   2   3   4   5   6   7

2. NAME: _____
_____
_____
_____
This relationship is important to me   1   2   3   4   5   6   7
I identify with this relationship   1   2   3   4   5   6   7

3. NAME: _____
_____
_____
_____
This relationship is important to me   1   2   3   4   5   6   7
I identify with this relationship   1   2   3   4   5   6   7

Films (3)

Write down the names of 3 films/ TV programs you've seen. For each film/ TV program, describe it in a brief sentence and afterwards rate how much you liked it on a scale from 1 Not At All to 7 Very Much.

1. NAME: _____

_____

_____

_____

I liked this film/ TV program 1   2   3   4   5   6   7

2. NAME: _____

_____

_____

_____

I liked this film/ TV program 1   2   3   4   5   6   7

3. NAME: _____

_____

_____

_____

I liked this film/ TV program 1   2   3   4   5   6   7

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment.**

1	2	3	4	5
Not at all	A little	Moderately	Quite a bit	Extremely

1. Irritable _____
2. Alert _____
3. Ashamed _____
4. Inspired _____
5. Nervous _____
6. Determined _____
7. Attentive _____
8. Jittery _____
9. Active _____
10. Afraid _____
11. Sad _____
12. Cheerful _____

The following questions are about YOU. Please answer every question and don't skip any. There are no right or wrong answers, nor does it matter how other people would answer the questions.

EXAMPLE

	Strongly Disagree				Strongly Agree
The weather is nice today.	1	2	3	4	5

If the weather is…

Really very nice	→circle '5' = you strongly agree
Quite good	→ circle '4' = you agree
Neither good nor bad	→ circle '3' = you neither agree nor disagree
Quite bad	→circle '2' = you disagree
Really very bad	→circle '1' = you strongly disagree

	Strongly Disagree				Strongly Agree
1. I can get the emotional support I need from other people.	1	2	3	4	5
2. I can get the help I need from other people.	1	2	3	4	5
3. I can get the resources I need from other people.	1	2	3	4	5
4. I can get the advice I need from other people.	1	2	3	4	5
5. I feel in control of my life.	1	2	3	4	5
6. I am free to live my life how I wish.	1	2	3	4	5
7. My experiences in life are due to my own actions.	1	2	3	4	5
8. On the whole, I am satisfied with myself.	1	2	3	4	5
9. I feel that I'm a person of worth, at least on an equal plane with others.	1	2	3	4	5
10. I take a positive attitude toward myself.	1	2	3	4	5
11. I know what I like and what I don't like.	1	2	3	4	5
12. I know what my morals are.	1	2	3	4	5
13. I am aware of the roles and responsibilities I have in my life.	1	2	3	4	5
14. I feel that my choices are based on my true interests and values.	1	2	3	4	5
15. I feel free to do things my way.	1	2	3	4	5
16. I feel that my choices express my true self.	1	2	3	4	5

| | Strongly | | | | Strongly |

	Disagree				Agree

17. I feel a sense of contact with people who care for me, and whom I care for.   1   2   3   4   5

18. I feel close and connected with other people who are important to me.   1   2   3   4   5

19. I feel a strong sense of intimacy with the people I spend time with.   1   2   3   4   5

20. I feel that I can successfully complete difficult tasks and projects.   1   2   3   4   5

21. I feel that I can take on and master hard challenges.   1   2   3   4   5

22. I feel that I am capable in the things that I do.   1   2   3   4   5

23. I sometimes miss the big picture.   1   2   3   4   5

24. I think about things in great detail.   1   2   3   4   5

25. In the grand scheme of things, details don't mean all that much.   1   2   3   4   5

26. I usually take a step back and look at the bigger picture.   1   2   3   4   5

27. I often think about positive aspects of myself.   1   2   3   4   5

28. I often think about things I like about myself.   1   2   3   4   5

29. I often think about things I value about myself.   1   2   3   4   5

Thank you very much!
Feel free to ask us any questions/ share your thoughts about this booklet with us.

Appendix 2: Pre-testing experimental manipulation for Chapter 2

The pilot study was approved by the relevant institutional ethics committee. We report all measures, manipulations, and exclusions in this study.

Method

Participants and design. Sixty university students (36 female; Age: M=22.72, SD=2.99, Range = 19-33 years) were recruited through advertisements. We used the minimum 20 participants per cell requirement (Simmons et al., 2011) due to resource constraints. No participants were excluded from the study. We employed a 2 (time: mood pre-manipulation vs. mood post-manipulation) x 3 (experimental condition: groups vs. relationships vs. films) mixed design, with experimental Condition as a between-subjects factor and Time as a within-subjects factor. Well-being was operationalized as relative positive affect.

Procedure, materials and measures. Participants were tested individually. First, they underwent a negative mood induction procedure. This comprised a combination of two well-established mood induction methods, Prokofiev's *Russia under the Mongolian Yoke* played at half speed (Clark et al. 2001), and writing about an unhappy life event (Fishbach & Labroo, 2007). To test the effectiveness of this novel paradigm, we ran a pilot study with 30 university students (18 female; Age: M=22.40, SD=2.75, Range 19-27 years). A one-way ANOVA indicated that our mood manipulation significantly lowered mood (N = 15; M = 3.10, SD = 0.77) compared to a control group (N = 15; M = 3.64, SD = 0.41), $F(1, 28) = 5.75$, $p = .023$, Cohen's $d = .87$.

Immediately after the mood induction, participants reported their mood with a version of the Positive and Negative Affect Schedule (PANAS; adapted from D. Watson et al., 1988). Participants were asked to indicate the extent to which they were experiencing six positive emotions (e.g. happy) and six negative emotions (e.g. down) using a 5-point scale ranging from 1 *Not at all* to 5 *Extremely*. We reverse coded the negative emotion scales and the mean PANAS score of all items served as our measure of relative positive affect pre-manipulation ($\alpha = .76$).

Next, participants completed the experimental manipulation. They were randomly assigned to write about *either* three important social groups ('Family' (33%) was the most frequent response; *n*=20), *or* three important interpersonal relationships ('Relative' was the most frequent response (43%); *n*=20), *or* three films/ TV programs of their choice (*n*=20). After choosing three groups or relationships, those in the Groups and Relationships conditions indicated how much they agreed with the statement *'This group/relationship is important to me'* on a scale from 1 *Strongly disagree* to 7 *Strongly agree,* before they read the following instructions: *'Now take a moment to think about your groups/relationships. In a few words, please describe why your group/relationship is important or unimportant to you.'* Participants in the control condition rated how much they liked the films they had listed on a scale from 1 *Not at all* to 7 *Very much,* before describing each film in a brief sentence. Participant booklets looked identical so the experimenter was blind to the condition that each participant had been assigned to.

Next, participants reported their mood again by completing a second (adapted) 12-item PANAS, which served as our measure of relative positive affect post-manipulation ($\alpha = .85$). This contained slightly different items from the pre-test measure to avoid repetition and boredom, to obscure the purpose of the manipulation and hence discourage socially desirable responding (e.g. sad and cheerful). Participants then completed demographic information before being thanked and debriefed.

Results

Manipulation checks. A one-sample t-test established that we were successful in depressing participants' mood prior to our experimental manipulation. Mean relative positive affect pre-manipulation ($M = 2.68$, $SD = .54$) was significantly lower than the midpoint of 3, 95% CI [-.46, -.18], $t(59) = -4.51$, $p < .001$. We were also successful in priming participants to focus on their *important* groups or relationships, defined by whether importance of the group or relationship was above the mid-point (4) on the 7-point importance scale. Mean identification for groups and relationships ($M = 6.18$, $SD = .64$) was significantly higher than the mid-point of 4, 95% CI [1.98, 2.39], $t(39) = 21.42$, $p < .001$.

The social cure effect (H1). Hierarchical multiple regression was used to examine the effects of condition on post-mood, controlling for pre-mood, using two orthogonal contrasts: 'Social vs. Control' (effect-coded: groups (1), relationships (1), films (-2)); 'Groups vs. Relationships' (effect-coded: groups (1), relationships (-1), films (0)) (see Table 1). The addition of 'Social vs. Control' and 'Groups vs. Relationships' (Model 2) to Model 1 significantly improved the model fit, $\Delta R^2 = .46$, $F(2, 56) = 23.94$, $p < .001$, and both contrasts significantly predicted post-mood ('Social vs. Control': $\beta = .66$, $p < .001$, CIs [.19, .35], Cohen's $d = 1.61$; 'Groups vs. Relationships': $\beta = .20$, $p = .050$, CIs [.001, .28], Cohen's $d = .73$). Thus, participants in both the Groups ($M = 4.08$, $SD = .26$) and Relationships ($M = 3.83$, $SD = .40$) conditions reported significantly more post-manipulation positive mood compared to Control ($M = 3.18$, $SD = .60$) and, crucially, thinking about Groups enhanced mood significantly more than thinking about Relationships.

Table. *Hierarchical Multiple Regression Predicting post-relative positive affect from 'Social vs. Control' and 'Groups vs. Relationships': pre-testing experimental manipulation*

| | Relative positive affect Post-Manipulation | | | | | | | |
| | Model 1 | | | | Model 2 | | | |
Variable	B	*Std. Error*	β	95% CI (B)	B	*Std. Error*	β	95% CI (B)
Constant	3.64***	.39		[2.86, 4.41]	3.26***	.30		[2.66, 3.85]
Pre-affect	.02	.14	.02	[-.26, .31]	.17	.11	.15	[-.05, .38]
Social vs.Control					.27	.04	.66***	[.19, .35]
Groups vs.Rels					.14	.07	.20*	[.001, .28]
R^2	.00				.46			
F	.03				15.98***			
ΔR^2	.00				.46***			
ΔF	.03				23.94***			

Note. $N = 60$. $*p < .05$; $***p < .001$.

Appendix 3: Thematic Analyses (for Chapter 2 pilot study & study 1)

Pilot study thematic analysis
Before we designed Study 1, we undertook a thematic analysis of participants'
responses to the instruction 'please describe why your group/ relationship is important
or unimportant to you' to investigate whether participants spontaneously wrote about
any potential mediators that matched our theoretical predictions. Our qualitative
analysis suggested that both groups and relationships satisfy the needs of support and
relatedness, but that groups additionally satisfy self-esteem and competence needs. In
the next three studies, then, we test for statistical evidence of mediation via these needs.

The table below shows the frequencies of each theme by condition, with examples.

Theme (need)	Frequency by condition	
	% Groups (20 participants, 60 group descriptions)	% Relationships (20 participants, 60 relationship descriptions)
Support	67[a]	63[b]
Relatedness	57[c]	47[d]
Self-esteem	37[e]	0
Competence	33[f]	2[g]

Examples:

Support
a. Meditation community: *I practice mediation and find the community really
supportive and helpful.*
b. Relative: *The unconditional love, the shoulder I can rely on.*

Relatedness
c. Nationality: *Even though everyone is different and people cannot be categorized by
their nationalities, some nationalities (Greek) will bring me closer to people as we
share common customs and identities. Greeks provide a sense of familiarity in this
country and so I feel like I 'fit in' and 'at home'.*
d. Friend: *Good listener, mutual understanding, same wavelength.*

Self-esteem
e. University: *I've learned so much and feel a lot more knowledgeable having been at
University and having been surrounded by my peers and teachers for 2 years. I now feel
a lot more confident when I find myself chatting to adults, I no longer feel like I don't
know what they're talking about!*

Competence
f. Nam Yang: *When I first started kickboxing I was really bad, but at Nam Yang it
didn't matter. I trained hard with the group and now see myself as quite a good
kickboxer that can take on more experienced fighters during sparring sessions.*
g. Romantic partner: *I feel loved and totally accepted, and capable to do things I never
thought I could.*

Study 1 thematic analysis: more examples
The tables below show the frequencies of each theme by condition, with some more examples.

Theme (Function)	Frequency by condition	
	% Groups (40 participants, 120 group descriptions)	% Relationships (40 participants, 120 relationship descriptions)
Interactions	46[a]	50[b]
Identities	38[c]	3[d]
Support	65[e]	60[f]
Relatedness	54[g]	43[h]
Self-esteem	25[i]	2[j]
Competence	31[k]	0

More examples:
> Interactions

a. *SEP Squad: Fun and social. We generally talk about work issues or political issues, and we laugh a lot. I also like being with this crew because this is the crew with whom I go to bars, hang out in crowds - they make me feel connected to the world socially.*
b. House mate: *live together, share responsibilities and activities. I can talk to them about everything and enjoy laughter with them.*
> Identities

c. Nationality: *I am an Indian by birth and I take pride in the achievements of my country. I identify myself as an Indian and I am proud to be an Indian. My country and our culture is very important to me and it has instilled upon me a feeling of patriotism towards my home land.*
d. Mum: *I would not be how I am if it wasn't for her and I wouldn't have been able to achieve what I have achieved.*
> Support

e. My family: *They are the people who have been with me since birth, supported me and unconditionally love me.*
f. Partner: *he is always there for me; I couldn't imagine my life without him.*
> Relatedness

g. Religion: *I feel like I belong with people who share my religion despite our differences in personality.*
h. Brother: *we have grown up together and can fully understand each other as we have the same values.*
> Self-esteem

i. Gym group: *we work out together every week – they've helped me improve my body image and I feel much better about myself as a result.*
j. Sister: makes me feel good about myself, even my bad traits sometimes.
> Competence

k. Gender: *'Acting like a man' has helped me overcome a lot of situations;* Religion: *I couldn't get through my life without my faith.*

Appendix 4: Chapter 2 mediation models including Control as a potential mediator

Study 1

The model below showed that connectedness and self-worth were underlying the effects of the critical 'Groups vs. Relationships' comparison, but control was not. 'Groups vs. Relationships' *only indirectly* predicted relative positive affect via connectedness (indirect = .08, BCa CIs [.01, .20]) and via self-worth (indirect =.21, BCa CIs [.09, .38]), but not via control (indirect = .03, BCa CIs [-.07, .14]). The direct effect of 'Groups vs. Relationships' on relative positive affect was not significant (direct = .001, CIs [-.12, .12]).
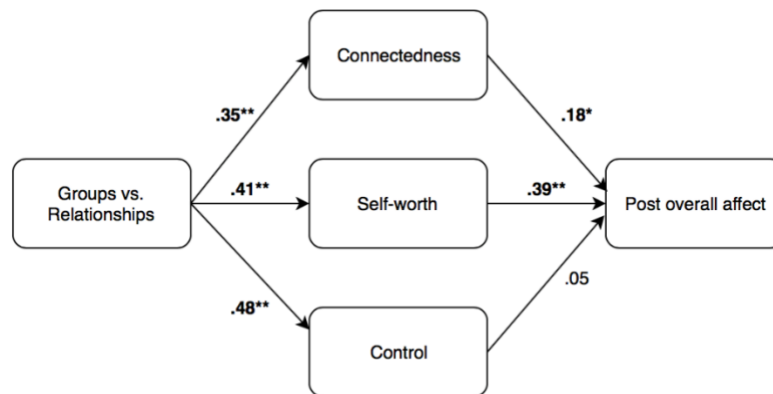
Regression coefficients for the relationship between 'Groups vs. Relationships' and relative positive affect post manipulation, testing mediators connectedness, self-worth, and control, controlling for 'Social vs. Control' and relative positive affect pre-manipulation. *p < .05; ***p < .001.

Study 2

The model below showed that there was a significant indirect effect of 'Social categories vs. Social networks' on life satisfaction via connectedness (indirect =.06, 95% BCa CI [.01, .15]), but not via self-worth (indirect =.04, 95% BCa CI [-.01, .13]), or control (indirect = .03, 95% BCa CI [-.01, .10].
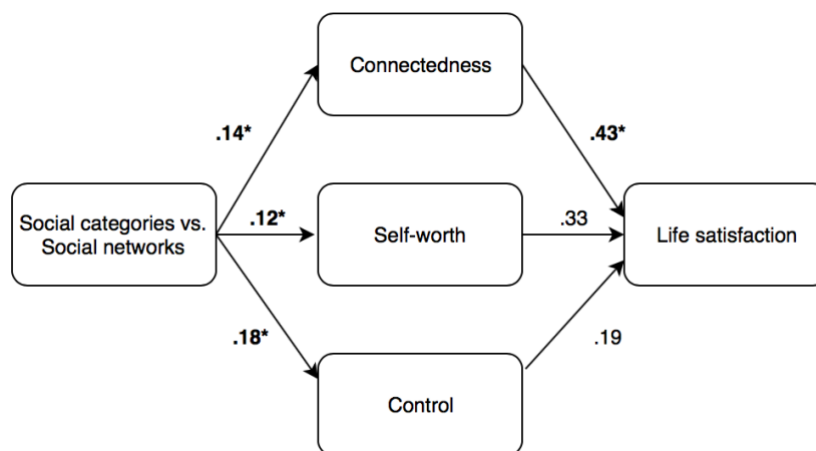
Regression coefficients for the relationship between 'Social categories vs. Social networks' and life satisfaction testing mediators connectedness, self-worth, and control, controlling for 'Social categories & Networks (groups) vs. Relationships'. *p < .05.

Study 3

The model below showed that there was a significant indirect effect of Condition on life satisfaction via connectedness (indirect = .35, 95% BCa CI [.04, .63]) and via self-worth (indirect = 1.14, 95% BCa CI [.72, 1.66]), but not via control (indirect = .09, 95% BCa CI [-.28, .48]).
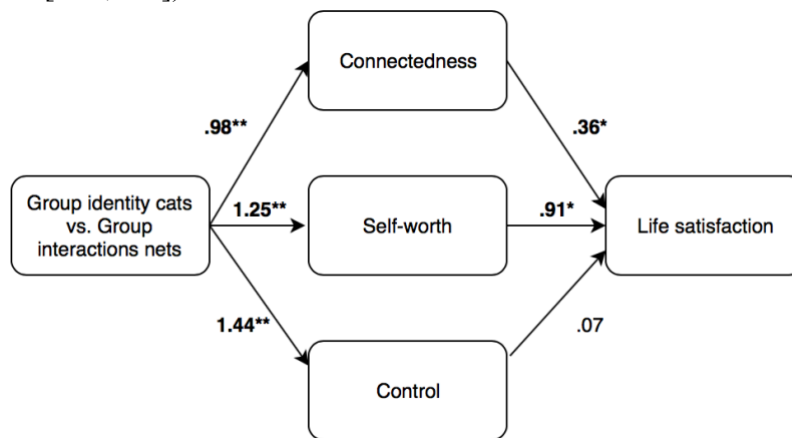
Regression coefficients for the relationship between condition and life satisfaction testing mediators connectedness, self-worth, and control.
*p < .05; **p < .001.

Appendix 5: EFA: Chapter 2 studies 2 & 3

Study 2 EFA

Based on an initial scree plot and eigenvalues (~ > 1), we conducted an exploratory factor analysis using principal axis factoring and direct oblimin rotation of two factors. Factor 1 was formed of the items measuring self-esteem and competence, and accounted for 84% of variance, with all factor loadings above .75 and no cross loadings above .6; and Factor 2 was formed of the items measuring support and relatedness, and accounted for 8% of variance, with all factor loadings above .74 and no cross loadings above .6. We thus merged the relatedness and support items into a Connectedness factor (α = .89), and the self-esteem and competence items into a Self-Worth factor (α = .91).

Study 3 EFA

Based on an initial scree plot and eigenvalues (~ > 1), we conducted an exploratory factor analysis using principal axis factoring and direct oblimin rotation of two factors. Factor 1 was formed of the items measuring support and relatedness and accounted for 77% of variance, with all factor loadings above .79 and no cross loadings above .40; and Factor 2 was formed of the items measuring self-esteem and competence, and accounted for 910% of variance, with all factor loadings above .74 and no cross loadings above .40. We thus merged the relatedness and support items into a Connectedness factor (α = .96), and the self-esteem and competence items into a Self-Worth factor (α = .97).

Appendix 6: Well-being operationalized as mood in Chapter 2 studies 2 & 3

Study 2 results operationalizing well-being as mood

Types of groups: social categories vs. social networks. When we included the two contrasts in the same regression model, both significantly predicted (positive) mood ('Social categories & Networks (groups) vs. Relationships': β= .47, p < .001; 'Social categories vs. Social networks': β= .12, p = .013). In other words, social categories (*M* = 3.82, *SD* = .73) and social networks (*M* = 3.56, *SD* = .51) provided better mood than relationships (*M* = 2.83, *SD* = .96), and, critically, social categories provided better mood than social networks.

Mediators of the social categories vs. social networks effect. Controlling for 'Social categories & Networks (groups) vs. Relationships', there was a significant indirect effect of 'Social categories vs. Social Networks' on mood via connectedness (indirect =.04, 95% BCa CI [.01, .09]), and via self-worth (indirect = .04, 95% BCa CI [.01, .08]; and the direct effect was not significant (direct = .06, CIs [-.01, .12]). We present this model the figure below.
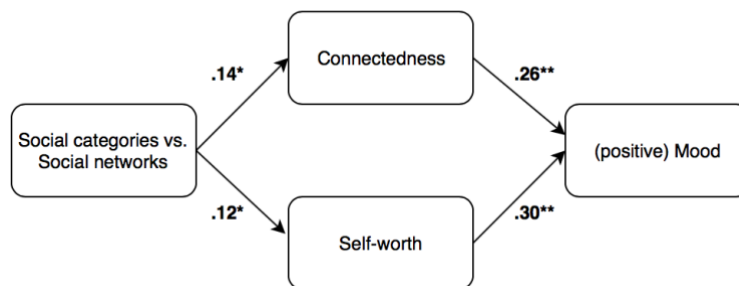
Connectedness — .14* ← Social categories vs. Social networks → .12* — Self-worth; Connectedness → .26** → (positive) Mood; Self-worth → .30** → (positive) Mood

Regression coefficients for the relationship between 'Social categories vs. Social networks' and mood as mediated by connectedness and self-worth, controlling for 'Social categories & Networks (groups) vs. Relationships'. *p < .05; **p < .001.

Study 3 results operationalizing well-being as mood

Functions of groups: group identity vs. group interaction. An independent t-test showed that (positive) mood differs by condition t = 9.86, p < .001. The mean mood score for those in the group identity condition (M = 4.20, SD = .66) was significantly higher than for those in the group interaction condition (M = 3.00, SD = .95) (M$_{diff}$ = 1.20). In other words, people's group identities that stemmed from their social categories provided better mood than interacting with fellow group members within their social networks.

Mediators of the category group identity vs. network group interaction effect. There was a significant *indirect* effect of Condition on mood via self-worth (indirect = .69, 95% BCa CI [.50, .92]) but not via connectedness (indirect = .16, 95% BCa CI [-.02, .30]); and the direct effect of Condition on mood was significant (direct = .35, CIs [.15, .55]). We present this model in the figure below.

Connectedness — .98** ← Group identity cats vs. Group interaction nets → 1.25** — Self-worth; Connectedness → .16 → (positive) Mood; Self-worth → .55** → (positive) Mood
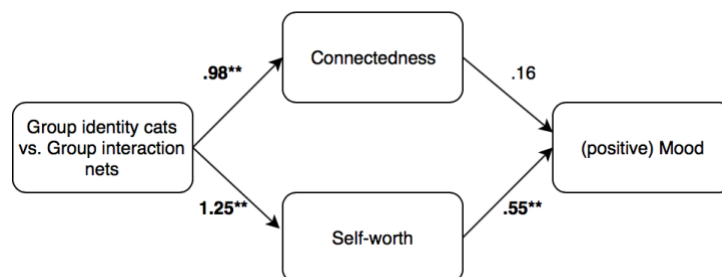
Regression coefficients for the relationship between condition and mood as mediated by self-worth. *p < .05; **p < .001.

Appendix 7: Chapter 2 study 2 mediators

<u>Mediators of the social categories & networks (groups) vs. relationships effect</u>
Tests for evidence of mediation were conducted using PROCESS (2012) model 4. We specified a multiple mediation model with the two needs mediating the effect of the 'Social categories & Networks (groups) vs. Relationships' contrast on life satisfaction, with 'Social categories vs. Social Networks' as a covariate. The direct effect of 'Social categories & Networks (groups) vs. Relationships' on life satisfaction was significant (direct = .43, CIs [.33, .52]); and this model showed that self-worth (indirect =.04, BCa CIs [.01, .10]), but not connectedness (indirect =.01, BCa CIs [-.02, .06]), were underlying the effects of the 'Social categories & Networks (groups) vs. Relationships' comparison.
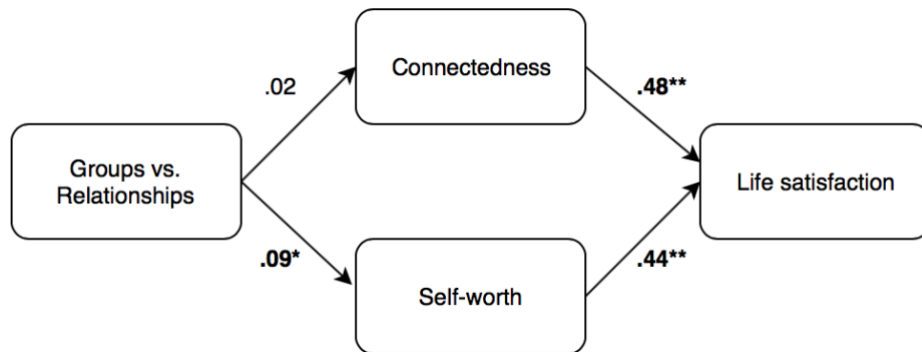
Regression coefficients for the relationship between 'Social categories & Networks (groups) vs. Relationships' and life satisfaction as mediated by self-worth, controlling for 'Social categories vs. Social networks'.
*p < .05; **p < .001.

Appendix 8: Online questionnaire for Chapter 2 Study 2

Study on Well-being

Information and Consent

Thank you for your interest in this study.

You will be asked to list three social groups that you belong to, or three of your interpersonal relationships, and to complete a series of questions relating to those groups/ relationships and to your well-being. The entire process should take no more than 20 minutes.

All the information you provide to us will be **anonymised**. All the data that we receive will be **treated in the strictest confidence**.

You may withdraw from the study **at any point.** You do not have to provide us with the reason(s) why. It should be noted that as the data is anonymous once the data analysis has started it will not be possible to identify who you are and withdraw your material after that point. The data will be stored securely and analysed. As mentioned there is no information that makes you identifiable.

The research is being conducted as part of a PhD at Sussex University. This research is being conducted by Arabella Kyprianides and is being supervised by Dr Matthew Easterbrook.

This study has been approved by the Sciences & Technology Cross-School Research Ethics Committee (crecscitec@sussex.ac.uk). The project reference number is ER/SK341/3. The University of Sussex has insurance in place to cover its legal liabilities in respect of this study. If you would like any further information, or to receive a copy of the results please contact Arabella Kyprianides at sk341@sussex.ac.uk.

By clicking to proceed to the next page you confirm that you are over 18 years old and that you have read and understood this information and consent to take part in the research.

How old are you? Please state your age in digits, e.g. 22
_____

What is your gender?

○ Male

○ Female

Manipulation: social categories OR social networks OR relationships

Social categories can be very large and inclusive such as nationality, gender, or age, or more exclusive, such as Sussex University students. You do not have to know all the members of the category, you only need to consider yourself a member of that category.

List 3 social categories of which you are a member.

○ Social category 1 _____

○ Social category 2 _____

○ Social category 3 _____

Social networks can be anything from formal organisations such as your group of work colleagues, to informal groups such as your family, friends, and flatmates, but you should know all or most of the members of the group personally. List 3 social networks of which you are a member.

○ Social network 1 _____

○ Social network 2 _____

○ Social network 3 _____

An **interpersonal relationship** is a strong, deep, or close association or acquaintance between two people that may range in duration from brief, such as a teacher or flat mate, to enduring, such as a romantic partner or relative.

List 3 of your interpersonal relationships.

○ Relationship 1 _____

○ Relationship 2 _____

○ Relationship 3 _____

[Below questions adapted for social networks & relationships conditions, and all questions are answered for all 3 social categories, social networks, or relationships listed.]

The following questions are about YOUR social categories. Please answer every question and don't skip any. There are no right or wrong answers, nor does it matter how other people would answer the questions. ${Q4/ChoiceTextEntryValue/1}

1. I identify with this group.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

2. This group makes me feel like I have the support I need from other people.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

3. This group makes me feel that I have control over my life.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

4. This group gives me high self-esteem.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

5. This group gives me a clear sense of who I am.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

6. This group makes me feel that the way I behave is entirely my own choice.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

7. This group makes me feel close and connected with the people who are important to me.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

8. This group makes me feel that I am good at what I do.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

9. This group makes me step back and think about the most important things in my life.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

10. This group makes me think about the positive aspects of myself.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

The following questions ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way on the scale provided from **0 Never** to **4 Very Often**.

1. In the last month, how often have you felt that you were unable to control the important things in your life?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

2. In the last month, how often have you felt confident about your ability to handle your personal problems?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

3. In the last month, how often have you felt that things were going your way?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

This scale consists of a number of words that describe different feelings and emotions. Thinking about yourself and how you normally feel, to what extent, from **1 Never** to **5 Always**, do you generally feel:

Upset
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Hostile
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Alert
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Ashamed
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Inspired
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Nervous
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Determined
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Attentive
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Afraid
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Active
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always

Below are five statements that you may agree or disagree with. Using the scale provided, from **1 Strongly Disagree** to **7 Strongly Agree**, indicate your agreement with each item. Please be open and honest in your responding.

1. In most ways my life is close to my ideal.
   1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
   5 Slightly Agree 6 Agree 7 Strongly Agree

2. The conditions of my life are excellent.
   1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
   5 Slightly Agree 6 Agree 7 Strongly Agree

3. I am satisfied with my life.
   1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
   5 Slightly Agree 6 Agree 7 Strongly Agree

4. So far I have gotten the important things I want in life.
   1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
   5 Slightly Agree 6 Agree 7 Strongly Agree

5. If I could live my life over, I would change almost nothing.
   1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
   5 Slightly Agree 6 Agree 7 Strongly Agree

Appendix 9: Online questionnaire for Chapter 2 Study 3

Study on Well-being

Information and Consent

Thank you for your interest in this study.

You will be asked to list three social groups that you belong to and to complete a series of questions relating to those groups and to your well-being. The entire process should take no more than 20 minutes.

All the information you provide to us will be **anonymised**. All the data that we receive will be **treated in the strictest confidence**.

You may withdraw from the study **at any point.** You do not have to provide us with the reason(s) why. It should be noted that as the data is anonymous once the data analysis has started it will not be possible to identify who you are and withdraw your material after that point. The data will be stored securely and analysed. As mentioned there is no information that makes you identifiable.

The research is being conducted as part of a PhD at Sussex University. This research is being conducted by Arabella Kyprianides and is being supervised by Dr Matthew Easterbrook.

This study has been approved by the Sciences & Technology Cross-School Research Ethics Committee (crecscitec@sussex.ac.uk). The project reference number is ER/SK341/4. The University of Sussex has insurance in place to cover its legal liabilities in respect of this study. If you would like any further information, or to receive a copy of the results please contact Arabella Kyprianides at sk341@sussex.ac.uk.

By clicking to proceed to the next page you confirm that you are over 18 years old and that you have read and understood this information and consent to take part in the research.

How old are you? Please state your age in digits, e.g. 22
_____

What is your gender?

○ Male

○ Female

Manipulation: Social Identity OR Social Interaction

[Social Identity]
People belong to many different social groups, ranging from small friendship groups, flatmates, or work colleagues, to larger and more inclusive categories of people such as British, female, University of Sussex student, Muslim, footballer, or psychologist. Please take a moment to think of three groups that you are a member of that are important to you.

Now, please spend some time thinking about how these group memberships affect your sense of who you are, or your identity. Please try to describe in a few sentence how these group memberships affect your sense of who you are.

Social group 1

○ Group name _____

Social group 1: How does this group membership affect your identity or sense of who you are?
_____

Social group 2

○ Group name _____

Social group 2: How does this group membership affect your identity or sense of who you are?
_____

Social group 3

○ Group name _____

Social group 3: How does this group membership affect your identity or sense of who you are?
_____

[Social Interaction]

People belong to many different social groups, ranging from small friendship groups, flatmates, or work colleagues, to larger and more inclusive categories of people such as British, female, University of Sussex student, Muslim, footballer, or psychologist. Please take a moment to think of three groups that you are a member of that are important to you.

Now, please spend some time thinking about what it is like when you interact with other members of these groups. Please write down a few sentences about what it's like to interact with other people who are members of these groups.

Social group 1

○ Group name _____

Social group 1: Please describe your interactions with other group members.

_____

Social group 2

○ Group name _____

Social group 2: Please describe your interactions with other group members.

_____

Social group 3

○ Group name _____

Social group 3: Please describe your interactions with other group members.

_____

The following questions are about YOU. Please answer every question and don't skip any. There are no right or wrong answers, nor does it matter how other people would answer the questions.

1. I can get the emotional support I need from other people.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

2. I can get the help I need from other people.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

3. I can get the advice I need from other people.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

4. I am in control of my life.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

5. I am free to live my life how I wish.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

6. My experiences in life are due to my own actions.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

7. On the whole, I am satisfied with myself.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

8. I'm a person of worth, at least on an equal plane with others.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

9. I take a positive attitude toward myself.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

10. My choices are based on my true interests and values.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

11. I feel free to do things my way.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

12. My choices express my true self.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

13. I feel a sense of contact with people who care for me, and whom I care for.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

14. I feel close and connected with other people who are important to me.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

15. I feel a strong sense of intimacy with the people I spend time with.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

16. I can successfully complete difficult tasks and projects.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

17. I can take on and master hard challenges.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

18. I am capable in the things that I do.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

19. I understand my life's meaning.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

20. My life has a clear sense of purpose.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

21. I have a good sense of what makes my life meaningful.

    1 Strongly Disagree   2   3   4   5 Strongly Agree

The following questions ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way on the scale provided from **0 Never** to **4 Very Often**.

 1. In the last month, how often have you felt that you were unable to control the important things in your life?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

2. In the last month, how often have you felt confident about your ability to handle your personal problems?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

3. In the last month, how often have you felt that things were going your way?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
     0 Never   1 Almost Never   2 Sometimes   3 Fairly Often   4 Very Often

This scale consists of a number of words that describe different feelings and emotions. Thinking about yourself and how you normally feel, to what extent, from **1 Never** to **5 Always**, do you generally feel:

Upset
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Hostile
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Alert
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Ashamed
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Inspired
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Nervous
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Determined
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Attentive
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Afraid
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always
Active
     1 Never 2 Rarely 3 Sometimes 4 Very Often 5 Always

Below are five statements that you may agree or disagree with. Using the scale provided, from **1 Strongly Disagree** to **7 Strongly Agree**, indicate your agreement with each item. Please be open and honest in your responding.

1. In most ways my life is close to my ideal.
    1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
    5 Slightly Agree 6 Agree 7 Strongly Agree

2. The conditions of my life are excellent.
    1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
    5 Slightly Agree 6 Agree 7 Strongly Agree

3. I am satisfied with my life.
    1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
    5 Slightly Agree 6 Agree 7 Strongly Agree

4. So far I have gotten the important things I want in life.
    1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
    5 Slightly Agree 6 Agree 7 Strongly Agree

5. If I could live my life over, I would change almost nothing.
    1 Strongly Disagree 2 Disagree 3 Slightly Disagree 4 Neither Agree nor Disagree
    5 Slightly Agree 6 Agree 7 Strongly Agree

Please read the following descriptions of 'social categories' and 'social networks' and then decide what you think the groups you listed at the beginning of the survey are more likely to be.

Social categories can be very large and inclusive such as nationality, gender, or age, or more exclusive, such as Sussex University students. You do not have to know all the members of the category, you only need to consider yourself a member of that category. Social networks can be anything from formal organisations such as your group of work colleagues, to informal groups such as your family, friends, and flatmates, but you should know all or most of the members of the group personally.

Please indicate whether each of the groups you listed at the beginning of the survey is a Social Category or a Social Network. If you're not sure, simply mark what you think your group is more likely to be. Then please also indicate the extent to which you identify with each group.

Social group 1: ${Q68/ChoiceGroup/AllChoicesTextEntry}

◯ Social Category

◯ Social Network

Social group 1: ${Q68/ChoiceGroup/AllChoicesTextEntry}
I identify with this group.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

Social group 2: ${Q67/ChoiceGroup/AllChoicesTextEntry}

◯ Social Category

◯ Social Network

Social group 2: ${Q67/ChoiceGroup/AllChoicesTextEntry}
I identify with this group.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

Social group 3: ${Q70/ChoiceGroup/AllChoicesTextEntry}

◯ Social Category

◯ Social Network

Social group 3: ${Q70/ChoiceGroup/AllChoicesTextEntry}
I identify with this group.
    1 Strongly Disagree   2   3   4   5 Strongly Agree

Appendix 10: Participant booklet Chapter 3 Study 2

STUDY ON PRISONER WELL-BEING

PRISONER QUESTIONNAIRE: CONSENT FORM

Names of Researchers: Arabella Kyprianides and Matthew Easterbrook

1. I confirm that I have read and understand the information sheet (see overleaf) for the above study, and have had an opportunity to ask questions.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my prison sentence, parole, standard of care, rights or privileges being affected.

3. I understand that my completed survey may be looked at by the two researchers working on this project, where it is relevant to my taking part in research.

4. I agree to take part in the survey.

Date (participant):   **Signed (participant):**

Date (researcher):   Signed (researcher):

If you are happy for us to access your personal information such as sentence length and nature of offence, please provide us with your Prisoner ID number below.

Prisoner ID number _____

STUDY ON PRISONER WELL-BEING

PRISONER QUESTIONNAIRE: INFORMATION SHEET

This survey asks you questions about the social groups that you belong to and your well-being, and is being conducted by Arabella Kyprianides as part of her PhD at the University of Sussex. *We hope that 200 prisoners at HMP Lewes will take part in this study.*

Your participation is voluntary, and you are free to withdraw your participation at any time without giving any reason. This will not affect your prison sentence, parole, standard of care or rights or privileges. There are no direct foreseeable benefits to you in participating, nor are there any foreseeable harms. If you do complete this study, you can still decide to remove your responses at any point until XXX[1]. You do not have to give a reason for this, and you will not be penalized for this decision at all.

Please note that this study is completely unrelated to Arabella's IMB role.

Responses will be kept in strict confidence and the surveys will be stored securely. **All** the information you provide to us will be completely **anonymous and confidential**. Your responses will **not** be shown to anyone, and will only be seen by the two researchers working on this project. No prison staff or other prisoners will see your answers.

The findings will primarily be used in a research article and in Arabella's PhD thesis.

Part one asks you questions about your social groups. Part two asks you questions about your psychological needs. Part three asks you questions about your well-being. The survey takes around twenty minutes to fill in.

If you would like to have anything explained, or have any difficulties with reading or writing, please ask the researcher (Arabella).

This study has been checked and approved by NOMS (National Offender Management Service) and Sussex University.

If you would like any further information, or to hear about the findings of this study, please contact Arabella Kyprianides (put in an IMB application asking to see Arabella, a member of the IMB at HMP Lewes).

---

[1] *6 months from completion of the study*

How old are you? Please state your age in digits. _____

What is your gender?

◯ Male   ◯   Female

What are social groups?

A group can be any number people who are connected to each other in some way. For example, you and your friends may be a group because you are all close friends. A team or organisation you are in could be a group because everyone works together or has the same interests. You could also be part of a very large group that is made up of people who share something in common such as religion, politics, or nationality.

In this booklet, we would like you to think about the groups that **you** are a part of, and to answer some questions about them. The groups you are part of can be anything: it doesn't matter whether your groups are inside or outside the prison, large or small, or whether you like being part of them or not. There are not any right or wrong answers to these questions, we only want to know what you **think.**

The following statements are about your social groups.

Please circle your response to each sentence on a scale of 1-5 where
<u>1 is 'Agree'</u> and <u>5 is 'Disagree'</u>.

I belong to lots of different groups.				
1	2	3	4	5
Agree				Disagree

I am involved in the activities of lots of different groups.				
1	2	3	4	5
Agree				Disagree

I have friends who are in lots of different groups.				
1	2	3	4	5
Agree				Disagree

I have strong ties with lots of different groups.				
1	2	3	4	5
Agree				Disagree

What are the particular social groups that make up your life?

In the spaces below, please write down some of the groups you belong to. Please write down as many as you can think of, without worrying about whether you like being part of them or how important they are to you. It doesn't matter if you can't fill all the spaces, just write down as many as you can.

Please also tell us how important being a member of each of these groups is to you by putting a number between 1 and 5 next to each one. The higher the number, the more important that group is to you. For example, if being part of a group isn't important to you at all, put a 1 next to it. If being part of a group is very important to you, put a 5 next to it. For those that fall somewhere in between, chose a number between 1-5.

Remember – a group can be any number of people who you feel are connected!

Work?

British?

Prisoners?

Library group?

Environmentalist?

KeepOut?

Football team fan?

Religion?

Drug rehab course?

Friendship group?

Family?

Sports?

My Groups	Importance of my groups Not at all important Very important 1 2 3 4 5

Pick 3 groups: Now, please pick **THREE** of the groups from the list you just wrote, and write these three in the space below. You can pick any 3 from those that you wrote on the previous page.

Group A: _____

Group B: _____

Group C: _____

Group participation:

How many days in the last month did you spend time with the group?

Choose a number between 0 and 30. If you spent time with this group every day in the last month, the number would be 30. If you were with this group for four days in the last month, then the number would be 4. So choose a number between 0 and 30 for each group:

Group A: _____   Group B: _____   Group C: _____

How many days in the last month <u>would you like</u> to have spent time with the group?

Choose a number between 0 and 30. For example, if you would have liked to spend time with this group every day in the last month, write down the number 30. If you'd like to have seen or done things with this group for four days in the last month, then write down the number 4. For each group, pick a number between 0 and 30.

Group A: _____   Group B: _____   Group C: _____

Now, please think about your three groups and the how you currently feel about them.

In each space in the table below, please write a number between 1-5 to tell us how much you agree or disagree with each of the statements. Do this three times for each statement, once for each group. Use the scale below to pick the number that tells us how much you agree or disagree.

Agree…		…neither…		…disagree
1	2	3	4	5

Statement	Group A					Group B					Group C				
	1 Agree	2	3	4	5 Disagree	1 Agree	2	3	4	5 Disagree	1 Agree	2	3	4	5 Disagree
This group makes me feel that I have the support I need from other people.															
This group makes me feel that I have control over the important aspects of my life.															
This group makes me feel that I have high self-esteem.															
This group makes me feel that how I spend my time is my own choice.															
This group makes me feel that I have people that I am close and connected to.															
This group makes me feel that I am good at the things that I do.															
This group makes me feel that my life is meaningful.															
This group does me more good than bad.															
I identify with this group															

Now think about your <u>current</u> life as a whole.
Please tell us how much you agree or disagree with each of the statements below by circling a number between 1-5, where <u>1 is 'Agree'</u> and <u>5 is 'Disagree'</u>.

I have the support I need from other people.

1	2	3	4	5
Agree				Disagree

I have control over the important aspects of my life.

1	2	3	4	5
Agree				Disagree

I have high self-esteem.

1	2	3	4	5
Agree				Disagree

How I spend my time is my own choice.

1	2	3	4	5
Agree				Disagree

I have people that I am close and connected to.

1	2	3	4	5
Agree				Disagree

I am good at the things that I do.

1	2	3	4	5
Agree				Disagree

I feel that my life is meaningful.

1	2	3	4	5
Agree				Disagree

I often think about the fact that I am a prisoner.

1	2	3	4	5
Agree				Disagree

I identify with prisoners.

1	2	3	4	5
Agree				Disagree

This page is about your well-being.

Please tell us how much you agree or disagree with the following statements by circling a number between 1-5, where 1 is 'Agree' and 5 is 'Disagree'.

In the last month I've been feeling…

Positive	1 Agree	2	3	4	5 Disagree
Good	1 Agree	2	3	4	5 Disagree
Pleasant	1 Agree	2	3	4	5 Disagree
Happy	1 Agree	2	3	4	5 Disagree
Joyful	1 Agree	2	3	4	5 Disagree
Content or Satisfied	1 Agree	2	3	4	5 Disagree

Please tell us how much you agree or disagree with the following statements by circling a number between 1-5, where 1 is 'Agree' and 5 is 'Disagree'.

Over the last month, I've been bothered by…

… Feeling down, sad, or uninterested in life.

1 Agree	2	3	4	5 Disagree

… Feeling anxious or nervous.

1 Agree	2	3	4	5 Disagree

…Feeling stressed.

1 Agree	2	3	4	5 Disagree

This page is also about your well-being.

Please tell us how much you agree or disagree with the following statements by circling a number between 1-5, where <u>1 is 'Agree'</u> and <u>5 is 'Disagree'</u>.

In the last month...

... I've been feeling optimistic about the future

1	2	3	4	5
Agree				Disagree

... I've been feeling useful

1	2	3	4	5
Agree				Disagree

... I've been feeling relaxed

1	2	3	4	5
Agree				Disagree

... I've been dealing with problems well

1	2	3	4	5
Agree				Disagree

... I've been thinking clearly

1	2	3	4	5
Agree				Disagree

... I've been feeling close to other people

1	2	3	4	5
Agree				Disagree

... I've been able to make up my own mind about things

1	2	3	4	5
Agree				Disagree

Thank you very much!

Appendix 11: Online questionnaire for Chapter 4

Invitation to take part

You are being invited to take part in a research study to further our understanding of the ways in which social groups benefit well-being. Thank you for carefully reading this information sheet, a copy of which you can download for your records. This study is being conducted as part of a PhD at Sussex University by Arabella Kyprianides (sk341@sussex.ac.uk) and is being supervised by Dr Tegan Cruwys (t.cruwys@uq.edu.au) from the University of Queensland, Australia, who are happy to be contacted if you have any questions. The research is additionally being funded by the Economic and Social Research Council (ESRC).

Why have I been invited for testing and what will I do?

We are recruiting 200 ex-prisoners or people with a criminal record, and the study will take no longer than 15 minutes. During the study you will be asked to complete a series of questions relating to your social groups and to your well-being.

What will happen to the results and my personal information?

The results of this research may be written into a scientific report for a PhD thesis and/ or publication. We anticipate being able to provide a summary of our findings on request from 01/09/2017. If you would like any further information, or to receive a copy of the results please contact Arabella Kyprianides at sk341@sussex.ac.uk. Your anonymity will be ensured in the way described in the consent information below. Please read this information carefully and then, if you wish to take part, please check the box at the bottom of the page to show you have fully understood this sheet, and that you consent to take part in the study as it is described here.

CONSENT

- I understand that by checking the box at the bottom of this page I am agreeing to take part in the University of Sussex research described here, and that I have read and understood this information sheet.
- I understand that my participation is entirely voluntary, that I can choose not to participate in part or all of the study, and that I can withdraw at any stage of testing without having to give a reason and without being penalised in any way.
- I understand that since the study is anonymous, it will be difficult to withdraw my data once I have completed and submitted the test.
- I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as strictly confidential (subject to legal limitations) and handled in accordance with the Data Protection Act 1998.
- I understand that my data including my personal information will be stored safely. Electronic data will be stored on a password-protected computer.
- I understand that my identity will remain confidential in any written reports of this research, and that no information I disclose will lead to the identification in those reports of any individual either by the researchers or by any other party, without first obtaining my written permission.
- I understand that my name and data will not be shared with any third party outside the research group, unless I later provide written permission.

Our research group at the University of Sussex carries out studies on the ways in which social groups benefit well-being. Please check the box below if you are happy for us to include your data again in future studies if these have gained independent ethical approval, based on the strict confidentiality terms described above. For further information about this research please contact Arabella Kyprianides (sk341@sussex.ac.uk). This research has been approved (ER/SK341/8) by the Sciences & Technology Cross-Schools Research Ethics Committee (C-REC). The University of Sussex has insurance in place to cover its legal liabilities in respect of this study.

*** Please use a computer or tablet, <u>not a smartphone</u>, to complete this study***

○ I have fully understood this information, and I consent to take part in the study as it is described here.

Q1 Have you ever been incarcerated? i.e. spent at least 24 hours in a jail, or a prison, or correctional facility
Yes   No

Q2 When were you incarcerated in prison or jail or in a correctional facility? If you have been incarcerated multiple times, or for multiple years, then specify the most recent year you spent in prison or jail or in a correctional facility.
2017   2016   2015   2014   2013   2012   2011   2010   2009   2008   before 2008

Q3 For how long were you incarcerated in prison or jail or in a correctional facility? If you have been incarcerated multiple times, or for multiple years, then specify the total amount of time spent in prison/ jail/ correctional facility.
•   Less than a week
•   Less than a month
•   Less than 3 months
•   Less than 6 months
•   Less than a year
•   Less than 3 years
•   3 years +

Q4 Do you have a criminal record? i.e. convicted of a felony which is recorded against your name.
Yes   No

Q5 For the next section of the study, you will be directed to an online system called the "Social Mapping Tool", where you will be asked to draw a map of your social world.

Please follow the instructions in the tutorial, as they will show you how to map out the various groups you have in your life.

When you have finished your social map, please click 'I'm Finished' (in the top right corner). The website will then direct you back to this survey.

Please include 'ex-prisoners' as one of your social groups.

Q6 Various terms exist to mean 'someone who has been incarcerated' or 'someone with a criminal record'. We understand that you may have a preference. Which of the following groups of people best describes you if you had to select one:
o   ex-prisoners
o   ex-cons
o   ex-felons
o   ex-inmates
o   ex-offenders
o   people with a criminal record
o   people who have been incarcerated

Q7 In line with your response above, you therefore prefer to describe yourself as:
o   an ex-prisoner
o   an ex-con
o   an ex-felon
o   an ex-inmate
o   an ex-offender
o   a person with a criminal record
o   a person who has been incarcerated

Q8 Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I feel a bond with other ${Q6/ChoiceGroup/SelectedChoices}.	C	O	O	C	O	(	C
I feel solidarity with other ${Q6/ChoiceGroup/SelectedChoices}.	C	O	O	C	O	(	C
I feel committed to other ${Q6/ChoiceGroup/SelectedChoices}.	C	O	O	C	O	(	C
Being ${Q7/ChoiceGroup/SelectedChoices} gives me a good feeling.	C	O	O	C	O	(	C
I often think about the fact that I am ${Q7/ChoiceGroup/SelectedChoices}.	C	O	O	C	O	(	C
The fact that I am ${Q7/ChoiceGroup/SelectedChoices} is an important part of my identity.	C	O	O	C	O	(	C
Being ${Q7/ChoiceGroup/SelectedChoices} is an important part of how I see myself.	C	O	O	C	O	(	C
I have a lot in common with the average ${Q7/ChoiceGroup/SelectedChoices}.	C	O	O	C	O	(	C
I am similar to the average ${Q7/ChoiceGroup/SelectedChoices}.	C	O	O	C	O	(	C
${Q6/ChoiceGroup/SelectedChoices} have a lot in common with each other.	C	O	O	C	O	(	C
${Q6/ChoiceGroup/SelectedChoices} are very similar to each other.	C	O	O	C	O	(	C

Q9 Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
As a group, ${Q6/ChoiceGroup/SelectedChoices} have been victimised by society.	○	○	○	○	○	○	○
As a group, ${Q6/ChoiceGroup/SelectedChoices} regularly encounter discrimination.	○	○	○	○	○	○	○
As a group, ${Q6/ChoiceGroup/SelectedChoices} have been victimised because of their conviction.	○	○	○	○	○	○	○
Prejudice and discrimination against ${Q6/ChoiceGroup/SelectedChoices} exists.	○	○	○	○	○	○	○
I have personally been a victim of discrimination because I am ${Q7/ChoiceGroup/SelectedChoices}.	○	○	○	○	○	○	○
I consider myself a person who has been deprived of opportunities available to others because I am ${Q7/ChoiceGroup/SelectedChoices}.	○	○	○	○	○	○	○
I feel like I am personally a victim of society because I am ${Q7/ChoiceGroup/SelectedChoices}.	○	○	○	○	○	○	○
I regularly encounter discrimination against ${Q6/ChoiceGroup/SelectedChoices}.	○	○	○	○	○	○	○
Prejudice against ${Q6/ChoiceGroup/SelectedChoices} has affected me personally.	○	○	○	○	○	○	○

Q10 Please indicate the extent to which you agree with the following statements:

The public believes most people with a criminal record or people that have been incarcerated . . .

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
cannot be trusted.	○	○	○	○	○	○	○
are unwilling to get or keep a regular job.	○	○	○	○	○	○	○
are dirty and unkempt.	○	○	○	○	○	○	○
are below average in intelligence.	○	○	○	○	○	○	○
are unpredictable.	○	○	○	○	○	○	○
cannot be rehabilitated.	○	○	○	○	○	○	○
are dangerous.	○	○	○	○	○	○	○
are bad people.	○	○	○	○	○	○	○

Q11

I think most people with a criminal record or people that have been incarcerated . . .

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
cannot be trusted.	◯	◯	◯	◯	◯	◯	◯
are unwilling to get or keep a regular job.	◯	◯	◯	◯	◯	◯	◯
are dirty and unkempt.	◯	◯	◯	◯	◯	◯	◯
are below average in intelligence.	◯	◯	◯	◯	◯	◯	◯
are unpredictable.	◯	◯	◯	◯	◯	◯	◯
cannot be rehabilitated.	◯	◯	◯	◯	◯	◯	◯
are dangerous.	◯	◯	◯	◯	◯	◯	◯
are bad people.	◯	◯	◯	◯	◯	◯	◯

Q12
Because I have been incarcerated/ have a criminal record . . .

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
cannot be trusted.	○	○	○	○	○	○	○
are unwilling to get or keep a regular job.	○	○	○	○	○	○	○
are dirty and unkempt.	○	○	○	○	○	○	○
are below average in intelligence.	○	○	○	○	○	○	○
are unpredictable.	○	○	○	○	○	○	○
cannot be rehabilitated.	○	○	○	○	○	○	○
are dangerous.	○	○	○	○	○	○	○
are bad people.	○	○	○	○	○	○	○

Q13 Is there anything you would like to add about this? Is being an ex-prisoner/ having a criminal record a part of how you see yourself as a person?

_____
_____
_____
_____

Q14 Is there anything you would like to add about ex-prisoners/ people with a criminal record and stigma?

_____
_____
_____
_____

Q15 Please indicate the extent to which you agree with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
In most ways my life is close to my ideal.	○	○	○	○	○	○	○
The conditions of my life are excellent.	○	○	○	○	○	○	○
I am satisfied with my life.	○	○	○	○	○	○	○
So far I have gotten the important things I want in life.	○	○	○	○	○	○	○
If I could live my life over, I would change almost nothing.	○	○	○	○	○	○	○

Q16 Please indicate how frequently in the past month you have experienced each of the symptoms listed below:

	Did not apply to me at all	Applied to me to some degree or some of the time	Applied to me to a considerable degree or for a good part of time	Applied to me very much, or most of the time
I found it hard to wind down.	○	○	○	○
I was aware of dryness of my mouth.	○	○	○	○
I couldn't seem to experience any positive feeling at all.	○	○	○	○
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).	○	○	○	○
I found it difficult to work up the initiative to do things.	○	○	○	○
I tended to over-react to situations.	○	○	○	○
I experienced trembling (e.g., in the hands).	○	○	○	○
I felt that I was using a lot of nervous energy.	○	○	○	○
I was worried about situations in which I might panic and make a fool of myself.	○	○	○	○
I felt that I had nothing to look forward to.	○	○	○	○
I found myself getting agitated.	○	○	○	○
I found it difficult to relax.	○	○	○	○

I felt down-hearted and blue.	○	○	○	○
I was intolerant of anything that kept me from getting on with what I was doing.	○	○	○	○
I felt I was close to panic.	○	○	○	○
I was unable to become enthusiastic about anything.	○	○	○	○
I felt I wasn't worth much as a person.	○	○	○	○
I felt that I was rather touchy.	○	○	○	○
I was aware of the action of my heart in the absence of physical exertion (eg, sense of heart rate increase, heart missing a beat).	○	○	○	○
I felt scared without any good reason.	○	○	○	○
I felt that life was meaningless.	○	○	○	○

Q17 How old are you? Please state your age in digits, e.g. 22

_____

Q18 What is your gender?
o   Male
o   Female
o   Other

Q19 Please specify your Nationality.

_____

Q20 What is your ethnic group?
White   Black   Hispanic/ Latino   Native American   Asian   Other (please specify)

Q21 Are you currently...
Employed for wages Self-employed Out of work and looking for work
Out of work but not currently looking for work A homemaker
A student Retired Unable to work

Q22 What is your total household income?
Less than $10,000 $10,000 to $19,999
$20,000 - $29,999 $30,000 - $39,999
$40,000 - $49,999 $50,000 - $59,999
$60,000 - $69,999 $70,000 - $79,999
$80,000 - $89,999 $90,000 - $99,999
$100,000 - $149,999   More than $150,000

Q23 What is the highest degree or level of school you have completed? If currently enrolled, highest degree received.
No schooling completed   Primary school to 8th grade
Some high school, no diploma   High school graduate, diploma or the equivalent
Some college credit, no degree   Trade, technical, vocational training
Associate degree   Bachelor's degree
Master's degree   Professional degree
Doctorate degree

Q24 Do you think we should include your responses in our research?
Please select no if you weren't honest in the study, weren't paying attention, or if there is any other reason the data you have provided shouldn't be used. You will receive payment for your participation regardless of your answer to this question.
o   Yes
o   No

DEBRIEF SHEET

Online study exploring the social worlds and well-being of people who have spent time in prison

Thank you!

The aim of this study is to explore the social worlds and well-being of people who have spent time in prison. We are particularly interested in whether experiencing ex-prisoner stigma affects people's well-being, and whether having multiple social groups benefits people's well-being.

If you would like to discuss your experience of having spent time in prison, or of having a criminal record, you can contact the following organisations who can provide information, support, and guidance (you can copy & paste the websites into the search bar of your internet provider).

Unlock	http://www.unlock.org.uk
Pioneer Human Services	http://pioneerhumanservices.org
Five8 support for ex-offenders	http://www.five8australia.com.au

Thank you for completing the survey, your participation is greatly appreciated.

If you would like any further information about the study or have any questions that you would like to ask, please contact Arabella Kyprianides on sk341@sussex.ac.uk.

Please click onto the next screen >> to receive your MTurk validation code.

Appendix 12: Questionnaires for Chapter 5 Study 1

Pre-course questions. Prison name:	
Participant name	
Participant ID	

Indicate your responses to the questions below by circling a number between 1-5, where <u>1 is</u> <u>'Agree'</u> and <u>5 is 'Disagree'</u>.

1. How strongly do you agree with the following statements?							
I have the support I need from other people	I have control over my life	I have high self-esteem	How I spend my time is my own choice	I am close and connected to other people	I am good at the things I do	My life has meaning	I often think about the fact that I am a prisoner
5	5	5	5	5	5	5	5
4	4	4	4	4	4	4	4
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1

2. How have you been feeling in the last month?					
Down, sad, or uninterested in life	Anxious or nervous	Stressed	Happy	Positive	Good
5	5	5	5	5	5
4	4	4	4	4	4
3	3	3	3	3	3
2	2	2	2	2	2
1	1	1	1	1	

3. How do you feel about Finding Rhythms?		
I feel a bond with them	I feel committed to them	I identify with them
5	5	5
4	4	4
3	3	3
2	2	2
1	1	1

End-of-course questions. Prison name:	
Participant name	
Participant ID	

Indicate your responses to the questions below by circling a number between 1-5, where 1 is 'Agree' and 5 is 'Disagree'.

1. How strongly do you agree with the following statements?

I have the support I need from other people	I have control over my life	I have high self-esteem	How I spend my time is my own choice	I am close and connected to other people	I am good at the things I do	My life has meaning	I often think about the fact that I am a prisoner
5	5	5	5	5	5	5	5
4	4	4	4	4	4	4	4
3	3	3	3	3	3	3	3
2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1

2. How have you been feeling in the last month?

Down, sad, or uninterested in life	Anxious or nervous	Stressed	Happy	Positive	Good
5	5	5	5	5	5
4	4	4	4	4	4
3	3	3	3	3	3
2	2	2	2	2	2
1	1	1	1	1	

3. How do you feel about Finding Rhythms?

I feel a bond with them	I feel committed to them	I identify with them
5	5	5
4	4	4
3	3	3
2	2	2
1	1	1

4. Finding Rhythms has helped me:

Learn how to work with other people	Express myself	Learn about working in a professional environment	Control my language and behaviour	Feel more confident about what I can achieve in future	Develop skills I will use outside the project	Change my opinion of education
5	5	5	5	5	5	5
4	4	4	4	4	4	4
3	3	3	3	3	3	3
2	2	2	2	2	2	2
1	1	1	1	1	1	1

5. The staff on the project have:

Listened to me	Helped me to think differently about myself
5	5
4	4
3	3
2	2
1	1

6. I am proud of what we have achieved

5
4
3
2
1

Appendix 13: Interview schedule for Chapter 5 Study 2

- Can you tell me a little bit about your experience of the FR program?
  - Did you enjoy the workshops?
  - What did you enjoy?

- Do you think FR has helped or benefited you?
  - In what ways?
  - Do you think it will be useful to you?
  - Is this the kind of thing that you will carry on once FR finishes? (prompt: e.g. carry on to the outside once you are released from prison)

- Did you feel part of the FR group?
  - Why do you think that is?
    - Can you describe your relationships with members of the FR group? do you feel close to/ any sort of bond with them? Was it easy to get along with people? (working together)
    - Do you see yourself as similar or different to those in the FR group?

- Do you think FR changes how you feel about being a prisoner?
  - Do you think about the fact that all the FR participants are prisoners, or not?

- Anything else you'd like to say about FR?

Appendix 14: Finding Rhythms media for *The Prison Journal*

- **Video of the FR program (link to video):**
https://www.dropbox.com/s/r92pkthqbzj17em/Switch%20Back%20Scolt%20Session.mp4?dl=0

- **Photographs of prisoners participating in FR workshops at two UK prisons:**

- **Audio – music (link to FR group CDs):** http://www.finding-rhythms.co.uk/our-music/

Endnotes

[i] There are arguably a number of needs that I could have additionally investigated, however, my research priority was not to come up with an exhaustive list of psychological needs that identities provide, but, rather, to demonstrate identity processes by (1) testing a set of needs that are also arguably satisfied by our interpersonal relationships, and (2) further investigating this set of needs within the applied angle of my research. What's more, I attempted to minimize the 'multiple testing problem' risk inherent in measuring too many variables in any given study (Ranganathan, Pramesh, & Buyse, 2016).

[ii] See Appendix 1 for the full booklets given to participants for all studies.

[iii] In Study 1, no differences emerged when we conducted our analysis using the positive and negative affect subscales separately. We therefore analyze PANAS as a single (positive valence) scale.

[iv] See Appendix 2 for results of our two pilot studies that confirmed the effectiveness of our experimental manipulation.

[v] 'Family' can be a group (a *category* in the SCT sense, i.e. a group of relatives) or an interpersonal relationship (i.e. a relative). As such, 'family' can afford people a social identity, as well as social contact (see Sani et al., 2012; McLaughlin & Muldoon, 2014), which explains why 'family' appears in different conditions across the studies.

[vi] A thematic analysis of participants' responses to the pilot study instruction 'please describe why your group/ relationship is important or unimportant to you' revealed these needs that also matched our theoretical predictions. See Appendix 3.

[vii] We also included some exploratory measures of psychological needs in studies 1-3. In Studies 1 and 2 autonomy and control were also included as potential mediators of the Social Cure effect, and in Study 3 we also added meaning. However, these were mainly exploratory and not part of our primary hypotheses. We did not, therefore, include these needs in our analyses. Nevertheless, because control has been found to mediate the social cure effect in previous research (Greenaway et al., 2015, 2016) we include analyses including control in the supplementary materials (see Appendix 4).

[viii] We find the same factors in both the subsequent studies and therefore create the same composite needs in all subsequent studies. See Appendix 5 for the EFA relating to Studies 2 and 3.

[ix] See Appendix 3 for more examples of each theme.

[x] In both Study 2 and Study 3 the same main effect was obtained when using PANAS as our well-being measure, however, in Study 3, self-worth was found to be the only significant mediator of this main effect (see Appendix 6).

[xi] Power analysis (using G*Power) indicated that 52 participants per condition would be required to detect an effect similar to that which we found, with 80% power and $\alpha = .05$.

xii See Appendix 7 for results of a multiple mediation model with the two needs mediating the effect of the 'Social categories & Networks (groups) vs. Relationships' contrast on life satisfaction, with 'Social categories vs. Social Networks' as a covariate.

xiii Power analysis (using G*Power) indicated that 20 participants per condition would be required to detect an effect similar to that which we found, with 80% power and α = .05.

xiv Note that with large samples, even the smallest deviation of the data from the model being tested will yield a significant chi-square value, so this should not be interpreted to imply a bad fitting model (Asparouhov, 2006).

xv CFI = comparative fit index (excellent fit: CFI > .96); SRMR = standardized root mean square residual (excellent fit: SRMR < .05); RMSEA = root mean square error of approximation (excellent fit: RMSEA < .08).

xvi Despite it being a male prison, 2% of participants identified as 'female' or 'other'.

xvii Category C prisoners are those who are not trusted in open conditions but who are deemed unlikely to try to escape.

xviii We also tested whether social contact discrepancy moderates the effects of multiple group memberships on the three psychological needs using PROCESS model 8. However, although the main moderation we report here was still significant (social contact discrepancy moderates the effect of multiple group memberships on well-being), social contact discrepancy did not moderate any of the multiple group memberships to needs relationships.

xix We use the term "ex-prisoner" to include both those with a criminal record and those who have been incarcerated, because our sample is predominantly the latter.

xx Although we were only interested in the moderation of the direct effect, as depicted in Figure 1, we confirmed that multiple group memberships do not moderate the indirect effect as well using PROCESS models 8 and 15.