PERCEIVED DISCRIMINATION, COPING OPTIONS AND THEIR RELATIONSHIP TO MENTAL HEALTH AND PSYCHOLOGICAL DISTRESS IN HOMELESS ADULTS

Michael Tully

Submitted in accordance with the requirements for the degree of

Doctor of Clinical Psychology (D. Clin. Psychol.)

The University of Leeds

School of Medicine

Academic Unit of Psychiatry and Behavioural Sciences

May 2014

Acknowledgements

I would like to thank my supervisors Dr Tracey Farragher, Dr Cathy Brennan and Dr Susan Odell. I am really grateful for all the drafts you read, the advice you gave, the support you offered and the sense of humour you brought.

I would also like to thank all the participants and services who took part. I am really grateful to you for your time, the support you offered and how welcome you made me feel. I only hope that I have done justice to the information that you have so kindly shared with me.

A special thanks to all my classmates and especially Elaine, Fiona, Jenny and Kay for their help with proof-reading, advice and opportunities for avoidance.

I would also like to express my gratitude to the Max Hamilton Fund for the additional resources to make the research possible

Finally, I would like to thank my family Elizabeth, Michael and Andrew and my partner Paul. You make it all worthwhile.

Abstract

While homelessness is associated with mental illness, what is not fully understood is how these are connected. In seeking to address this issue the present research uses a social identity approach to consider the relationship between homelessness and mental health, focusing on the roles of perceived discrimination, social identity, social support and coping options. It is guided by previous research which examines the relationship between these factors and mental health for other stigmatised groups. This previous research finds that perceived discrimination is negatively associated with mental health, but stigmatised groups can buffer these negative effects through increased social identity. Two mechanisms have been put forward to explain this buffering effect: social identity provides access to increased ingroup support and also makes group level coping strategies possible. The current research examines whether these findings hold for homeless people. In addition, identity with, and perceived support from family is also considered. A quantitative cross-sectional design was employed to examine these relationships. Data was collected from an opportunistic sample of 188 homeless adults accessing services for homeless people in Yorkshire. The current research finds that homeless people do perceive discrimination and this is associated with negative psychological outcomes. While socially identifying with homeless people is associated with increased perceived ingroup support and group coping options, these do not ameliorate the negative relationship between perceived discrimination and mental health. Moreover, perceived support and group coping options were associated with negative psychological outcomes in certain conditions. The relationships between psychological outcomes and family identity and support were also mixed Overall, these findings highlights the negative association between homelessness and mental health via social identity related processes but unlike other stigmatised minorities, the homeless identity does not provide access to stress buffering resources. The practical implications for services working with homeless people are discussed.

Table of Contents

List of Tables

List of Figures

Abbreviations

BC	Bias corrected
BSI	Brief symptom inventory
CI	Confidence interval
EFCO	Emotion-focused coping option
ETHOS	European typology of homelessness and housing exclusion
FEANTSA	European federation of national organisations working with the homeless
GSI	Global severity index
MSPSS	Multidimensional scale of perceived social support
PFCO	Problem-focused coping option
PSS	Perceived stress scale
RIM	Rejection-identification model
RQ	Research question
SCT	Self-categorisation theory
SD	Standard deviation
SIT	Social identity theory
SSES	Short self-esteem scale

1. Introduction

1.1 Overview

Homeless people have poorer mental and physical health than their housed counterparts (Busch-Geertsema, Edgar, O'Sullivan, & Pleace, 2010; Philippot, Lecocq, Sempoux, Nachtergael, & Garland, 2007). While mental health difficulties are a known risk factor for becoming homeless, it has also been posited that the homeless lifestyle itself contributes to mental ill-health (Goodman, Saxe, & Harvey, 1991; Philippot et al., 2007). However, research examining the mental health of homeless people has largely been descriptive and atheoretical (Philippot et al., 2007) and therefore an understanding of how homelessness might be associated with mental health is lacking. The aim of the current research is to further our understanding of this relationship.

This section begins by outlining research on the health of homeless adults. It then reviews the theories put forward to explain this relationship before proposing that a social psychological approach, and specifically a social identity approach, may be beneficial in understanding this relationship. The section then describes a social identity approach, which focuses on examining the relationship between discrimination, social identity, social support and mental health, before reviewing research conducted with homeless people related to these factors. Owing to the dearth of theoretical research with homeless participants, the section then reviews theories and research which have examined these relationships in other stigmatised groups to inform the current research. Finally, the section discusses methodological factors which also affect the relationship between homelessness and mental health before summarising the current aim of the research and detailing the specific research questions.

1.2 The Relationship between Homelessness and Health

Research consistently finds that homeless people have poorer mental and physical health than their housed counterparts (Busch-Geertsema et al., 2010; European Federation of National Organisations Working with the Homeless [FEANTSA], 2006a; Jones & Pleace, 2010; Muñoz & Vázquez, 1999; Rees, 2009). The physical illnesses associated with homelessness include, respiratory problems, tuberculosis, skin diseases, physical injury as a result of accidents or violence, rheumatism, arthritis, scabies and digestive problems (Busch-Geertsema et al., 2010; FEANTSA, 2006a; Jones & Pleace, 2010; Vázquez, Muñoz, Crespo, Guisado, & Dennis, 2003). The association between physical ill-health and homelessness is largely dependent on accommodation status, with people who sleep rough at greater risk compared to people who access emergency or longer-term homeless accommodation (FEANTSA, 2006a). With regard to the UK, the national report to FEANTSA on the health of homeless people (FEANTSA, 2006b) reported that rough sleepers were four times more likely than the general population to die from unnatural causes such as drug or alcohol poisoning, assaults or accidents and that the average life expectancy was 42 years, approximately half that of the general population. While the report did not comment on the specific physical health difficulties of homeless people accessing accommodation, it considered that these too would be poorer than the general housed population.

In addition to high levels of physical ill-health, research consistently finds strong links between homelessness, mental health, drug and alcohol misuse (Busch-Geertsema et al., 2010; Jones & Pleace 2010; Philippot et al., 2007). Fazal, Khosla, Doll and Geddes (2008) conducted a systematic review and meta-analyses of surveys assessing the prevalence of mental disorders in homeless populations in Western Europe and North America. They found a substantial level of heterogeneity in prevalence estimates, which ranged from 8.1% to 58.5% and 4.5% to 54.2% for alcohol and drug dependence respectively and from 2.8% to 42.3% for psychotic illness. Such variations in rates have been explained by the range of methodologies used to collect data, biased sampling procedures and use of inappropriate measures (Vázquez & Muñoz, 2001).

With regard to homeless people in England, overall, they experience much higher rates of mental illness than their housed counterparts, which are often comorbid with problematic drug and/or alcohol use (Jones & Pleace, 2010). Again, the extent of mental health difficulties experienced by homeless people depends on their accommodation status, with rough sleeping associated with greater risk and severity. For example, the UK submission to FEANTSA (2006b) reported that rough sleepers were 35 times more likely than the general population to take their own lives. In addition, 30-50% of rough sleepers were considered to have mental health difficulties. Similar results have been reported by Gill, Meltzer, Hinda and Petticrew (1996), who assessed the mental health of single homeless people from multiple sites in England using diagnostic measures. They found that up to 60% of daycentre and night shelter users were considered to have a severe mental illness compared to 8% of people using homeless hostels. While homeless people accessing accommodation are at reduced risk of mental illness in comparison to those not doing so, they still experience high levels of mental health problems such as anxiety, depression and stress (FEANTSA, 2006b). With regard to drug and alcohol use, the report to FEANTSA (2006b) reported that 50% of rough sleepers were considered to be alcohol dependent and approximately 70% were misusing drugs. Again, drug and alcohol use is lower in homeless people accessing accommodation. For example, a review of single homeless people accessing services for homeless people across England found that 20% reported drinking more than four times a week and 52% of participants reported illegal drug use (Homeless Link, 2010).

In addition to high levels of mental health difficulties, homeless people also exhibit high rates of general cognitive impairment. Research in Scotland found that, for a representative sample of 266 homeless adults, the vast majority (82%) scored within the clinical range when assessed for cognitive impairment using Addenbrooke's Cognitive Examination and one fifth of the sample were also considered to have alcohol-related brain damage when assessed by a psychologist and psychiatrist (Gilchrist & Morrison, 2005). Research conducted in Leeds found that almost half of homeless participants surveyed reported a history of traumatic brain injury compared to only one fifth in a matched sample of housed control participants (Oddy, Moir, Fortescue, & Chadwick, 2012).

In addition to poorer mental and physical health, homeless people also encounter greater barriers to accessing services than the general population (Homeless Link, 2010; Jones & Pleace 2010). Research has found that homeless people are generally either not registered with a GP or do not access the service (Warnes, Crane, Whitehead, & Fu, 2003). In addition, the stigma associated with homelessness can prevent homeless people from attempting to access GP services as they expect to be refused treatment (Busch-Geertsema et al., 2010; Pleace, Jones, & England, 2000). Access to mental health care is also particularly difficult, especially in instances of dual diagnosis (Warnes et al., 2003).

1.3 Prevalence of Homelessness

While the need to understand the relationship between homelessness and mental health is justified in its own right, it is also of significant importance owing to the high international and national prevalence of homelessness. Homelessness is a reality in all nations (Toro, 2007). In England, estimates of the prevalence of homelessness are derived from local authorities, who collect information on the number of households in temporary accommodation as well as the number of households ‘accepted’ as being owed a statutory duty as outlined by the Housing Act 1996, the Homelessness Act 2002 and the Homelessness (Priority Need for Accommodation) (England) Order 2002 (FEANTSA, 2014). The statutory homeless report for October to December 2013 (Department for Communities and Local Government, 2013) reported that 52,910 households were accepted as homeless by local authorities in 2013 and a total of 56,930 households were in temporary accommodation on 31 December 2013. With regard to rough sleepers, the total estimate in England in autumn 2013 was 2,414 people (Department for Communities and Local Government, 2014). How these figures tally is not explained.

While these figures highlight that homelessness is a reality for a large proportion of people, these figures do not provide a complete picture of the number of homeless people (O’Connell, 2003), which is likely to be much larger. This is for a number of reasons. The local authority report only includes people who made an application for support. In addition, the report does not define what is considered to be a household. For example, the 56,930 households in temporary accommodation at the end of the year included 80,950 children. Finally, the number of acceptances is not synonymous with the number of people homeless as people will not be accepted if they are not in priority need or are considered to be intentionally homeless.

While it is unknown how many people in England are homeless, what is known is that the number of people sleeping rough and in temporary accommodation in England is increasing and has been for the previous four years (FEANTSA, 2014). This rise in homelessness has been attributed to changes in welfare and housing policy and cuts in funding for prevention and support services as well as for general mental health services (ibid).

1.4 Interventions Aimed at Improving the Health of Homeless People

Despite the known link between homelessness and mental health, research on interventions aimed at ameliorating these negative effects is sparse. Hwang, Tolomiczenko, Kouyoumdjian and Garner (2005) systematically reviewed all researched interventions aimed at improving the physical and mental health of homeless people published before 2004. They identified 45 articles which they considered to be of good (n = 13) or fair (n = 32) quality. Of these, 15 studies examined interventions to improve the health of homeless people diagnosed with a mental illness and seven examined interventions to improve the health of homeless people with concurrent mental illness and substance abuse. For homeless people with a mental illness, the majority of the studies examined case management based interventions, which involved increased care planning and a greater coordination of services, or assertive community treatment, which comprised of psychiatric care from a multidisciplinary team. Overall, case management was associated with reduced psychological distress and less need for inpatient care. Findings in relation to assertive community treatment were mixed with one study finding an improvement in psychiatric symptoms and two studies finding no difference between assertive community treatment and case management or usual care. They did not describe what usual care entailed. For homeless people with concurrent mental illness and substance abuse the majority of research examined the effectiveness of integrated intervention programmes versus separate mental health and substance abuse programmes or the use of a therapeutic community type intervention. These studies found no significant effects on mental health or substance-use outcomes for either integrated or separate programmes and that the use of therapeutic communities was associated with reduced symptoms of depression but not for other psychiatric symptoms or substance use when compared to usual care. Again, they did not detail what usual care involved.

Fitzpatrick-Lewis et al. (2011) built on this review and completed a systematic review of interventions aimed at improving the physical and mental health of homeless people published between 2004 and 2009. They identified a further 10 studies, which they considered to be of moderate quality, of which two were associated with improving the health of homeless people with mental illness. One study found that providing housing to people leaving psychiatric care was associated with better outcomes than usual care, which involved a referral to social work but no assistance with accessing housing. The second study found that immediate access to independent housing reduced the need for substance abuse treatment for homeless adults with concurrent mental illness and substance abuse, compared to similar adults provided with outreach services, drop-in centres and group living arrangements. There were no differences in psychiatric outcomes between the groups.

Overall these reviews reflect the limited amount of research evaluating the effectiveness of interventions aimed at improving the mental health of homeless adults. In addition, they also highlight that these interventions generally involve coordinating treatment through case management or providing housing, which has been noted by other authors (Toro, 2007). The findings also reflect service provision in Europe, which generally provide primary assistance, such as food, accommodation, support and advice (Busch-Geertsema et al., 2010; Philippot et al., 2007). While these interventions are important, they are generic interventions aimed at covering clients’ most urgent and basic needs and not more complex needs, such as their mental health (Busch-Geertsema et al., 2010). One possible reason for the lack of more complex and psychologically informed interventions aimed at improving mental health may be that the link between homelessness and health is still not fully understood. This is discussed in the following section.

1.5 Understanding the Relationship between Homelessness and Mental Health

As the research discussed above highlights, poor health and homelessness are inextricably linked. There is a consensus that poor physical health can be both a cause and consequence of homelessness. Physical ill-health and disability are known risk factor for becoming homeless (Busch-Geertsema et al., 2010). Research has also found that homelessness can cause physical illness, mainly through exposure to the elements, poor diet, difficulty maintaining personal hygiene, being a victim of assaults and difficulty with accessing appropriate care (Jones & Pleace 2010).

With regard to mental health, it has long been considered as a risk factor for becoming homeless (Busch-Geertsema et al., 2010). Thus, the higher prevalence of mental health difficulties has been attributed to the individual deficit approach to homelessness (Shinn, Knickman, & Weitzman, 1991), with mentally ill people considered to be more likely to lose their home. However, contemporary research has found little evidence in favour of this hypothesis and more recent research has posited that the homeless lifestyle itself contributes *to* mental ill-health (Goodman et al., 1991; Muñoz & Vázquez, 1999; Philippot et al., 2007; Sullivan, Burnam, & Koegel, 2000). A number of factors may account for the relationship between homelessness and mental ill-health which are based on a social causation hypothesis. These are described below.

1.5.1 Homelessness and stress.

One reason for the high incidence of mental health difficulties among homeless people may be related to the high number of stressful events that they face (Vázquez & Muñoz, 2001). Research has found that homeless people experience a high proportion of stressful experiences (Muñoz, Vázquez, Bermejo, & Vázquez, 1999). Research has also examined the relationship between stress and health for homeless adults, although the number of studies is limited. Bates and Toro (1999) found that experience of stressful events was associated with physical ill-health for 144 homeless and poor adults. However the researchers did not differentiate between findings for homeless and non-homeless participants. Similar research was conducted by Toro, Tulloch and Ouellette (2008) who examined the effects of social support on health, distress, alcohol and drug use for two samples of homeless adults totalling 468 participants. They found that experience of stressful events was associated with higher levels of psychological distress and symptoms of physical ill-health. For both studies, stress was measured by assessing the number of stressful events encountered in the past six months. These potential stressful events covered a range of possible experiences including financial, social, legal and personal.

1.5.2 Homelessness as a psychological trauma.

Related to the theory that mental ill-health is associated with homelessness via increased stress is the idea put forward by Goodman et al. (1991) who posited that homelessness itself should be viewed as a psychological trauma. They suggested two reasons why this might occur; the loss of one’s home could be a stress of such severity that it produces symptoms of trauma, alternatively, the loss of predictability, safety and control associated with using services for homeless people and accommodation may produce trauma symptoms. In support of their theory, they cite that homeless people generally show social disaffiliation as evidenced by low levels of social support, behaviours associated with learned helplessness and high levels of substance abuse, which they note as symptoms of psychological trauma. They did not attempt to test their hypothesis explicitly.

1.5.3 A social identity approach.

Philippot et al. (2007) suggest that models from social psychology might provide a useful theoretical ground on which to develop research on homelessness. They suggest that theories such as self-efficacy or learned helplessness may be relevant, as would theories associated with identity construction. Recent developments in the application of social psychological theories to health have led to what has been termed a social identity approach to health (Haslam Jetten, Postmes, & Haslam, 2009; Jetten, Haslam, & Haslam, 2012). This approach highlights that groups impact on our health and well-being, not only through the support that we perceive, receive and offer, but also through "their capacity to be internalised as part of a person's social identity" (Haslam et al., 2009, p. 1). Thus, groups affect not only how we interact with others but also how we see ourselves, such that if groups provide us with a sense of purpose and belonging this can lead to positive psychological outcomes (ibid.). However, the converse is also true and being a member of a devalued group can have negative consequences. Overall this approach considers that group life, and the social identities that underpin it, can have an impact on mental health and provides a theoretical framework for understanding these impacts (Jetten, Haslam, Haslam, & Dingle, 2014).

The social identity approach is based on two connected theories: social identity theory (SIT; Tajfel & Turner, 1979) and self-categorisation theory (SCT: Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). SIT was developed to explain intergroup conflict and discrimination. It does this by making reference to a social identity which Tajfel (1978, p. 63) describes as ". . . that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership." Social identities are apparent when we use 'us' and 'we' instead of 'I' and 'me' (Jetten, et al., 2012). According to SIT (Tajfel & Turner, 1979) people can define themselves as either an individual or as a member of a social group; in terms of their personal identity or their social identity. People desire a positive and distinct self concept however they define themselves (Haslam & Reicher, 2012). Thus, when a given social identity is salient, people will strive to see their ingroup as superior, through favourable comparisons, with relevant outgroups (ibid.). For high status ingroups, comparisons to relevant outgroups should be beneficial and contribute to high esteem. However, for low status groups, comparisons to relevant outgroup will not benefit esteem, and will only serve to highlight their subordinate position in society (Tajfel & Turner, 1979).

SCT extends upon SIT's insights and posits that changes in how we categorise ourselves impacts upon how we behave (Haslam, 2004). Of primary importance to the current research is that SCT considers that "social identity is the cognitive mechanism that makes group behaviour possible" (Turner, 1982, p. 21). An example of this provided by

Haslam et al. (2009) is that it is only when people with Asperger's syndrome defined themselves in terms of a shared group membership were they able to engage in collective action as a group to challenge discrimination and promote awareness. Overall, these two theories, when applied to homelessness, suggest that homeless people will internalise their group membership as a social identity which may have negative mental health consequences and will experience discrimination as members of a stigmatised group. However, this social identity will be associated with collective coping options and increased group support.

1.6 Research Findings with Homeless People Related to a Social Identity Approach

This section outlines research relevant to a social identity approach to understanding the relationship between homelessness and mental health. The research includes findings in relation to stigma, social identity and social support.

1.6.1 Stigma and discrimination towards homeless people.

Research examining stigma and discrimination towards homeless people has generally focused on stigma, the view that the general population have towards homeless people and not discrimination, assessed by asking homeless people about their experiences. Phelan, Link, Moore, and Stueve (1997) used vignettes to compare the attitudes towards a domiciled poor man and a homeless man in a sample of 143 US respondents. They found that respondents expressed significantly greater social distancing to the man described as homeless than to the vignette of the poor but domiciled man. They conclude that identifying as homeless, "rather than eliciting compassion and reducing blame, engenders a degree of stigma over and above that attached to poverty" (p.332).

Buck, Toro, and Ramos (2004) examined the volume and content of media and professional coverage of homelessness in four US newspapers and professional literature indexed in PsycINFO from 1974 to 2003. They found that both the media and professional literatures reported on the deviant characteristics and individual deficits of homeless people to a greater extent than the structural causes. This was particularly the case for professional literature.

Toro et al. (2007) used a random sampling method to question representative samples of between 250 and 435 adults from Italy, Belgium, Germany, the UK and the US on their attitudes and opinions towards homelessness. The US showed significantly less compassion towards homeless people overall. However, participants from the UK were significantly less compassionate towards homeless people and considered personal failings to be the cause of homelessness when compared to the other three European countries.

Research has not yet examined whether homeless people in the UK experience discrimination. However, more general research in this area would indicate that this is very likely. Pleace (2000) highlights a predominant narrative in Britain is that people who are sleeping rough are there either by choice or as a result of personal failings. This narrative is considered to be underpinned by the longstanding construct of the undeserving poor and a dependency culture (Carlen, 1996; Phelan et al., 1997). Evidence for this can be seen in the legal framework used by local authorities to assess housing need which divides homeless people into a deserving group, such as families with children, and an undeserving group, which includes those considered to have intentionally made themselves homeless (Pleace, 2000).

1.6.2 Homeless social identity and coping.

Research has found that homeless people do develop homeless social identities, although the number of studies is limited. Snow and Anderson (1987) researched the process of identity construction and avowal among 168 homeless people using an ethnographic field study over one year in Austin, Texas. They found that the level to which people identified as homeless varied with duration spent homeless but that generally people experiencing homelessness for more than two years identified as being homeless, and with other homeless people.

Snow and Anderson (1987) identified three strategies used by homeless participants to construct a positive identity: distancing, embracement and fictive storytelling. Distancing involved consciously distancing oneself from the homeless identity through distancing from other homeless people, from activities and roles associated with homelessness, such as begging, and from services catering to homeless people. Embracement related to verbal “confirmation of one’s acceptance of and attachment to the social identity” (p.1354). Embracement was evidenced in participants referring to themselves in terms of stereotypical street role identities at the time such as ‘bum’ or ‘tramp’ or in terms of activities associated with homelessness, such as being an ‘expert dumpster diver’. It was also evidenced in terms of positive social ties to other homeless people such as being a good friend. Fictive storytelling related to accounts of one’s past, present or possible future accomplishments, which ranged from “minor exaggerations to fanciful claims and fabrications” (p. 1358).

Snow and Anderson (1987) found that the use of these coping options to construct a positive identity differed with time spent homeless. People who were homeless for less than six months used more social distancing from homeless people in general and also used high levels of fictive storytelling. People who experienced homelessness for between six months and two years distanced themselves less from other homeless people in general but did distance themselves from specific groups of homeless people or specific roles. People homeless between two and four years showed the highest level of distancing from specific groups of homeless people and also from services for homeless people, and the highest level of all types of embracing. Finally, for those over four years homeless, they showed a high level of distancing themselves from services for homeless people, a high level of categorical embracement and the least fictive storytelling.

More recent research examining identity construction and management strategies was conducted by Farrington and Robinson (1999) who used a covert participant observation study of 21 participants in a homeless hostel. The duration that people were homeless for in their sample ranged from 2 weeks to 15 years. Again, they found that duration was positively associated with homeless identification; people who had experienced homelessness for greater than two years showed a greater identification with a homeless identity than people who experienced shorter homeless durations. However, they also found that people who were homeless for shorter durations did identify themselves as homeless, although this was not as strongly asserted and that they did not identify with ingroup members.

Farrington and Robinson (1999) also found that homeless people used coping options to manage what they saw as a devalued social identity and that the choice of coping options was affected by duration spent homeless. For newly homeless participants they noted that, while they did identify as homeless, they also distanced themselves from other homeless people and made personally favourable intragroup comparisons. People who had spent between two to four years homeless identified themselves with a subgroup of homeless people and used this group to make favourable intergroup comparisons to other homeless people. People who were homeless for longer than three and a half years identified themselves with homeless people in general and made fewer comparisons to other groups of homeless people and also saw themselves as prototypical group members, for example referring to themselves as ‘typical dossers’ or ‘old alcoholics’. Participants in this phase were acutely aware of their stigmatised position.

Boydell, Goering, and Morrell-Bellai (2000) also qualitatively examined the experience of identity construction with a sample of 29 homeless Canadian adults. They found that homelessness meant a loss of previously valued social identities, such as those connected with employment. In addition, their current identity as a homeless person was devalued and they experienced a sense of stigma as a result. However, they did not detail at what point people began to socially identify with homelessness. To cope with this devalued identity, the researchers found that both newly and chronically homeless participants differentiated themselves from, and considered themselves better than, other homeless people, for example referring to themselves as not as bad or as lazy. They also spoke of a future unconnected to homelessness involving valued attributes such as wealth or education. However, this study did not examine whether these strategies were associated with duration spent homeless.

Overall these findings indicate that homeless people do socially identify as homeless and with other homeless people, and that this generally increases with duration spent homeless. The research also highlights that homeless people see this identity as socially devalued and as causing identity management problems which they attempt to cope with by using a variety of strategies, the use of which changes over time. Newly homeless people tend to distance themselves from all other homeless people. As durations spent homeless increase, people tend to align with some homeless people and distance themselves from others. With increased durations, homeless people tend to identify with other homeless people in general although they still favourably compare themselves to some homeless people. Others come to see themselves as prototypical group members and stop comparing themselves altogether. While the studies discussed above further our understanding of identity construction and maintenance for homeless people, they share three limitations. Firstly the authors did not separate out the developing homeless identity from the coping options employed. Secondly, the research did not examine the effectiveness of these coping options in creating a valued social identity. Thirdly, the authors did not examine whether the development of a homeless social identity impacted upon the health of their participants.

1.6.3 Social support.

In general, research has found that the social networks of homeless people are smaller than those of their domiciled counterparts, although there have been some exceptions (Toro et al., 1995, 1999). In the U.S., research has found that relative to the general population, a greater proportion of homeless adults have never been married and have smaller social networks, especially those relating to family (Bates & Toro, 1999). In a European context, slightly more than half of homeless men and women in Paris reported never having been married and a further third reported being divorced or separated. With regard to family contact, even after controlling for age, homeless people in Paris maintained less contact with their families of origin than the rest of the population (Firdion & Marpsat, 2007). In addition, this family support is generally not tied to an offer of accommodation (Firdion & Marpsat, 2007; Shinn et al., 1991). In addition to homelessness depleting social resources, Eyrich-Garg, Pollio and North (2003) found that duration spent homeless can affect network composition. They found that individuals who had spent shorter amounts of time homeless reported significantly more family contact whereas the longer-term homeless reported a significantly higher rate of contact with homeless friends.

Research has examined the relationship between social support, stress and both mental and physical health for homeless adults. Bates and Toro (1999) assessed perceived social support, support network size, experience of stressful events and physical and mental health. They found that psychological distress was negatively related to family network size and perceived support, and that social support buffered the negative relationship between stress and physical health. However, participants with a diagnosis of mental illness and those with higher scores for stressful live events reported larger non-family network size. Similar research was conducted by Toro et al. (2008) who examined the main and stress-buffering effects of social support on health, distress, alcohol and drug use for two samples of homeless adults. They found that perceived social support was associated with both reduced psychological distress and symptoms of physical ill-health and also buffered the negative effects of stressful events on distress. With regard to structural social support, the authors report unexpected findings as participants with larger and/or more supportive family network members reported significantly higher drug use and, and participants with larger and/or more supportive overall social networks reported higher alcohol dependence. In making sense of these findings, the authors suggested that participants with substance misuse issues may seek out more assistance or that social networks can operate differently for people with a high level of needs.

1.6.4 Summary.

Overall, the research reviewed above suggests that factors associated with a social identity approach, namely stigma, social identity and social support, have a significant impact on the lives of homeless people. However, exception for social support, the relationship between these factors and the mental health of homeless adults has not been explicitly examined in published research. Research conducted for a Master’s thesis examined the relationship between mental health, perceived discrimination and identification with, and support from, both homeless friends and non-homeless family and found these factors to be significantly associated to mental health in a sample of homeless Irish adults (Tully, 2011). Specifically, this research found that perceived discrimination was associated with poorer mental health but that identity with, and perceived social support from family was associated with better mental health. However, contrary to expectations, perceived ingroup support exacerbated the negative relationship between perceived discrimination on mental health.

Published research conducted with homeless participants has not yet examined how discrimination, social identity and social support may be associated to mental health, and one another. However, such relationships have been theorised and investigated with other stigmatised minorities, therefore one potential avenue to further our understanding of the relationship between homelessness and mental health is to examine whether theories and research conducted with other devalued groups is applicable to homeless people. The following section outlines the theories and research which has examined the relationship between perceived discrimination, social identity social support and mental health in other stigmatised groups.

1.7 Theories and Research Examining a Social Identity Approach with Other Stigmatised Groups

1.7.1 Perceived discrimination and mental health.

The terms stigma and discrimination are often used interchangeably, although stigma is considered to be a broader concept (Major & O’Brien, 2005), which includes problems of knowledge (ignorance), attitudes (prejudice) and behaviour (discrimination) (Thornicroft, Rose, Kassam, & Sartorius, 2007). Thus, discrimination can be considered as the outcome of stigma and has been defined as “deny[ing] to individuals or groups of people equality of treatment which they may wish” (Allport, 1954, p. 51). As a result, discrimination is conceptualised as the values and behaviours of the majority group towards the stigmatised group (Mummendey & Wenzel, 1999). In contrast, perceived discrimination has been defined as the subjectively experienced behavioural expression or unfair treatment towards members of a group as a result of negative attitudes or judgements towards the group (Pascoe & Smart Richman, 2009). The accuracy of perceived discrimination as a construct has been debated “because it is perceived and reported by subjects without verification of actual events” (Pascoe & Smart Richman, 2009, p. 533). Despite this, the majority of research examines perceived discrimination and not objectively observed discrimination (Pascoe & Smart Richman, 2009) as accurate estimates of observable discrimination depend on unobservable information, such as intent (Williams, Neighbors, & Jackson, 2003).

Numerous studies have found a link between perceived discrimination and physical and mental health for a wide variety of social groups including women, African Americans, Latino Americans, immigrants, gays and lesbians and international students (Armenta & Hunt, 2009; Branscombe, Fernandez, Gomez, & Cronin, 2012; Bourguignon, Seron, Yzerbyt, & Herman, 2006; Schmitt, Spears, & Branscombe, 2003; Sellers, Cadwell, Schmeelk-Cone, & Zimmerman, 2003). While attributions to discrimination under specific conditions have been posited to protect self-esteem (Crocker & Major, 1989), the majority of research has found a negative relationship (Schmitt & Branscombe, 2002). This negative relationship has been found in relation to self-esteem (e.g. Armenta & Hunt, 2009; Bourguignon et al., 2006; Schmitt et al., 2003), perceived stress (e.g. Sellers et al., 2003) and psychological distress (e.g. Cassidy, O’Connor, Howe, & Warden, 2004; Sellers et al., 2003) among other measures. This link has also received support from large scale reviews. For example, Pascoe and Smart Richman (2009) completed a meta-analysis of 110 studies which examined the effects of perceived discrimination on mental health. They found that increased perceived discrimination was significantly associated with poorer mental health. Discrimination was measured using a variety of methods but all studies contained a measure of perceived discrimination or unfair treatment. Measures of mental health included symptomatology scales for mental illness, measures of psychological distress and general indicators of well-being, such as self-esteem and perceived stress. The authors noted that the negative relationship between perceived discrimination was equally strong across all types of mental health outcomes.

There are a number of factors which can affect the relationship between perceived discrimination and mental health (Schmitt & Branscombe, 2002).One important factor is whether the individual or the group are perceived as the target of the discrimination. Research has found that discrimination perceived to be targeted towards the group can have the opposite effect and be positively associated with well-being. For example, Bourguignon et al. (2006) found that, for both African immigrants and women, personal discrimination was significantly negatively related to self-esteem but that group discrimination was positively related to self-esteem. To explain these findings in relation to group discrimination, the authors posit that perceiving the group to be the target reduces the perceived personal responsibility. Similar findings were reported by Armenta and Hunt (2009) with Latino Americans.

1.7.2 Coping with perceived discrimination.

While members of stigmatised groups experience discrimination, they do not passively accept this devaluation of their collective identity but actively resist the effects that this devaluation can have (Crocker & Major, 1989). There are a number of coping options available to group members to buffer these negative effects (Matheson & Anisman, 2012; Schmitt & Branscombe, 2002). One such possibility is the use of social identification.

1.7.3 Increased minority identity and the rejection-identification model (RIM).

According to SIT, discrimination towards one's ingroup will lead to increased identification with that in-group (Tajfel & Turner, 1986), which has been found to buffer the negative effects (Schmitt & Branscombe, 2002). To explain these converse findings, Branscombe, Schmitt and Harvey (1999) proposed the RIM. This model predicts that perceiving discrimination towards one’s ingroup will negatively affect psychological well-being. However, in response to this discrimination, stigmatised group members will increasingly identify with their disadvantaged ingroup. This increased ingroup identity will alleviate some of the negative consequences that discrimination has on wellbeing. This is displayed visually in Figure 1.

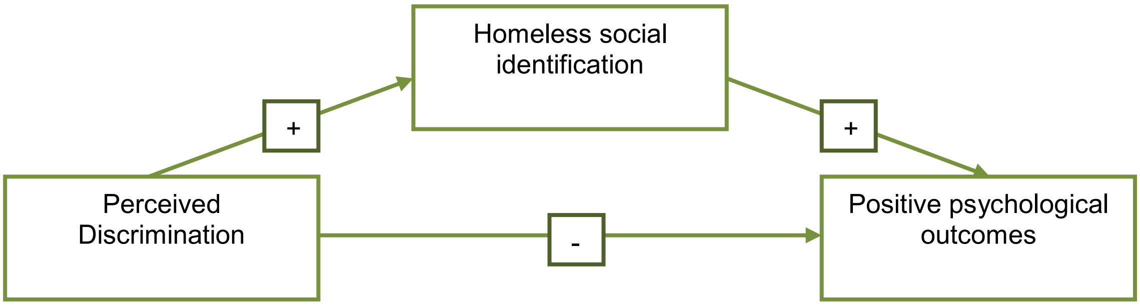


Figure 1: The Rejection Identification Model (RIM)

1.7.4 Research findings on the RIM.

The RIM has received empirical support from research conducted with a variety of minority groups on levels of depressive symptoms (Lee, 2005), perceived stress (Sellers et al., 2003), self-esteem (Romero & Roberts, 2003) and well-being (Branscombe et al., 1999). Other studies have found that identification did not affect the relationship between perceived discrimination and measures of mental health and self-esteem (e.g. Lee, 2005). Yet other research has found that higher identification was associated with greater perceived stress and depression and lower self-esteem or well-being. For example, McCoy and Major (2003) found that for women and Latino-Americans, perceiving discrimination against the ingroup was more psychologically painful for individuals who were highly identified with their ingroup compared to individuals who reported less identification. Indeed, Pascoe and Smart Richman's (2009) systematic review provides evidence for all three possible outcomes. They identified 12 articles, involving a total of 68 analyses, which examined the RIM. They found that 18% of the analyses reported that identity had a buffering effect, 79% of the analyses found that identity had no effect and 12% reported that higher levels of group identification were associated with poorer mental health.

Pascoe and Smart Richman (2009), in reviewing these results, considered that increased identification with the ingroup is as likely to amplify the negative perceived discrimination-mental health relationship as it is to buffer the negative effects. Additionally, the direction of the relationship was dependent on the strength of the discrimination and two main factors, which were also identified by Barreto and Ellemers (2010). Firstly, how the discrimination affects the specific components of group identity can affect how individuals cope with discrimination, as these components have different effects on possible coping responses (Ellemers, Korteskass, & Ouwerkerk, 1999). Secondly, the ability of the ingroup to offer access to coping resources and options can also affect the relationship between identity and mental health. Where groups cannot provide such resources then members who identify with their stigmatised groups may be worse off. For example, Crabtree, Haslam, Postmes, & Haslam (2010) examined the effects of discrimination, minority identity and three stress buffering resources or mechanisms (social support, stereotype rejection and stigma resistance) for individuals attending a mental health support group. They found that identifying with the mental health support group was negatively associated with self-esteem. However, these negative effects were negated by the coping resources and options made available by group membership. Thus, the authors concluded that identifying with a stigmatised group is not necessarily positive but can provide access to resources strategies which increase one's ability to challenge discrimination, and thus have positive implications for self-esteem.

1.7.5 Perceived social support and the social identity/self-categorisation (SIT/SCT) model of stress.

As noted above, identity may buffer the negative effects through providing increased access to social support from ingroup members (Haslam, Reicher, & Levine, 2012; Outten, Schmitt, Garcia, & Branscombe, 2009; Schmitt & Branscombe, 2003). The reason that increased social identity is associated with increased support is because, in line with SCT, social support is "more likely to be given, received, and interpreted in the spirit in which it is intended to the extent that those who are in a position to provide and receive that support perceive themselves to share a sense of social identity" (Haslam, et al., 2009, p. 11). To account for this relationship between social identity and social support, and therefore with health, Haslam, O'Brien, Jetten, Vormedal and Penna (2005) proposed the social identity/self-categorisation model of stress. According to this model, social identification is directly associated with increased perceived support and indirectly associated with reduced distress, mediated by social support. This model is displayed in Figure 2.

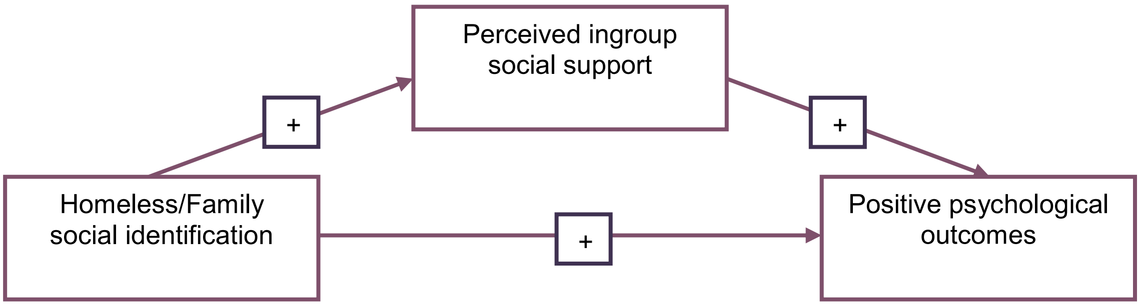


Figure 2: The SIT/SCT model of stress

Research has found in favour of this model with non-stigmatised groups including heart surgery patients, bomb disposal experts and bar workers (Haslam et al., 2005). Research using an experimental design based on the Stanford Prison Experiment (Haney, Banks, & Zimbardo, 1973) also supported the model; as the prisoners' sense of a shared social identity increased, they provided each other with greater support, which buffered the negative effects of situational stressors on health (Haslam & Reicher, 2006). However, the model has yet to be used to examine whether social identity buffers the negative effects of perceived discrimination through providing increased access to ingroup social support.

Indeed, although a considerable amount of research has been conducted on examining the stress buffering effects of social support in general, to a great extent, this has not been applied to understanding responses to discrimination (Matheson & Anisman, 2012). Pascoe and Smart Richman (2009) in their systematic review examining these relationships found only 10 studies involving 22 analyses which examined the effect of social support on the perceived discrimination-mental health relationship. Of these studies, five effects found that increased social support moderated the relationship and was associated with lower depression and higher well-being. While the remaining 17 effects did not moderate the perceived discrimination-mental health relationship, none found that social support exacerbated the perceived discrimination mental health link.

While it has been posited that minority identity buffers the negative effects of perceived discrimination by increasing the level of perceived ingroup support, it is important to remember that social support subsumes a number of coping strategies (Matheson & Anisman, 2012; Schmitt & Branscombe, 2002). Thoits (1995, 2011), in her reviews of the literature draws a useful distinction between social support and coping options. She clarifies that social support is a coping resource; defined as a social or personal characteristic or resource which people can draw upon when dealing with a stressor. They make coping options possible but are not strategies in themselves. In contrast, coping options are cognitive and/or behavioural actions employed to manage specific stressors. Thus, the perception that one can avail of social support from ingroup members makes group coping options possible, for example, through providing informational, instrumental and/or emotional assistance (House, 1981 as cited by Thoits, 1995) or through helping to reinterpret stressors (Thoits, 1995).

1.7.6 The use of group coping options and perceived discrimination.

In addition to social identity providing increased access to ingroup social support, identity may also buffer the negative effects of perceived discrimination through providing access to coping options as predicted by SIT (see Figure 3). SIT suggests that minority identity can lead to three possible strategies to construct a positive social identity: social mobility, social creativity and social competition (Tajfel, 1978; Branscombe et al., 2012).

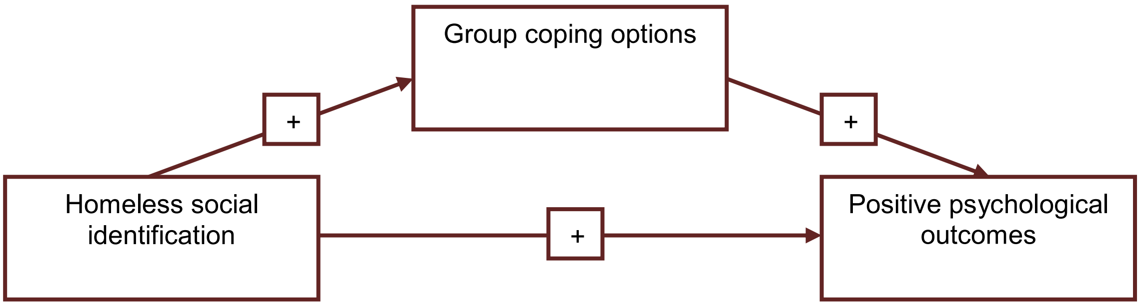


Figure 3: The social identity / coping options mediated model

Social mobility is primarily aimed at protecting the stigmatised individual's personal self and involves reducing the discrimination by figuratively or literally leaving the group (Branscombe et al., 2012). This can involve moving from one group into another. Alternatively, a stigmatised group member may attempt to hide their social identity and 'pass' as a member of the non-stigmatised group (Branscombe et al., 2012). In contrast, social creativity and social competition are collective coping strategies which do not rely on reducing the discrimination but use resources associated with the group's social identity as a means of coping and possibly overcoming the discrimination (Branscombe et al., 2012). These collective strategies rely on increasing contact, and identification, with the stigmatised group. One collective coping strategy proposed by SIT is social competition whereby a stigmatised ingroup will strive for positive distinctiveness though direct competition with the outgroup (Tajfel & Turner, 1979). Alternatively, a stigmatised group may engage in social creativity. This occurs when stigmatised members search for positive distinctiveness for the ingroup though altering the characteristics on which groups are compared (Tajfel & Turner, 1979). These alterations can include changing the dimension on which the groups are compared, amending the values ascribed to the group so that previously negative comparisons are now seen as positive (for example Black is Beautiful), or changing the outgroup with which the ingroup is compared.

The three coping options predicted by SIT can also be further dichotomised into two categories: problem-focused coping, which aims to manage and/or reduce the stressor and emotion-focused coping, which aims to regulate the distress caused by the stressor (Lazarus, 1999; Major & O'Brien, 2005; Outten et al., 2009). Research at the level of the individual has found that when the stressor is considered to be changeable then problem-focused coping is favoured but when the stressor is appraised as unchangeable, then emotion-focused coping is preferred (Lazarus, 1999). While both forms of coping are discussed as distinct types, Lazarus (1999) highlights that in reality, the two types are seldom separate and, when faced with stressors, both types are used as part of a total coping effort.

With regard to research which has examined the effects of coping options, Pascoe and Smart Richman (2009) identified seven studies, involving 26 analyses that examined the use of coping options on the perceived discrimination-mental health relationship. The majority of these studies examined problem-focused coping, emotion-focused coping or avoidance. They found that, for the vast majority of effects (81%), coping options did not impact upon the relationship. Where significant effects were found, avoidance was generally associated with negative outcomes. Only one study reported that problem-focused and emotion-focused coping had a significant effect. Noh and Kaspar (2003) found that problem-focused coping moderated the effects of discrimination but emotion-focused coping was associated with higher levels of depression for Korean immigrants in Canada (Noh & Kaspar, 2003).

Recent research by Outten and colleagues (2009) tested whether appraisals of a number of coping options mediated the relationship between group identification and well-being for 120 Black Americans. The coping options they examined were the two collective coping options from SIT (social creativity and social competition), the use of ingroup social support and coping strategies at the individual level, which involved the individual either reducing their exposure to discrimination or managing their emotional reaction when exposed to discrimination. They termed these intergroup coping, intragroup coping and individual coping respectively. In addition to testing these three levels, they also examined the use of problem-focused and emotion-focused coping strategies at each level. Thus, they tested six different types of coping options: problem-focused coping and emotion-focused coping at the individual, intragroup and intergroup level. They found that higher appraisals of individual emotion-focused coping (the individual managing their emotional reaction to discrimination) and both intergroup coping options (social creativity and social competition) were associated with higher self-esteem and life satisfaction and also mediated the relationship between identity and positive outcomes. Thus, increased minority identity was directly associated with increased appraisal of coping options and indirectly associated with psychological well-being mediated by appraisal of these coping options. However, appraisal of the intragroup coping options (the use of ingroup social support) and individual problem-focused coping (attempts by the individual to reduce their exposure to discrimination) were not associated with self-esteem or life satisfaction and also did not mediate the relationship between identity and positive outcomes. To explain the findings at the individual level, the authors considered that while believing that one can positively manage the emotional consequences of discrimination (i.e. individual emotion-focused coping) can be beneficial, pervasive discrimination may simply be too great a stressor to effectively avoid and therefore individual problem-focused coping is ineffective. With regard to the findings that appraisals of both intergroup options were associated with better outcomes, the authors note that these findings are in line with

SIT, as both intergroup coping options are consistent with the two group based protective strategies proposed by SIT, i.e. intergroup problem-focused coping reflects social competition and intergroup emotion-focused coping reflects social creativity (Tajfel, 1978). In relation to the findings that appraisals of intragroup coping options (i.e. the use of ingroup support to challenge discrimination or manage the effects of encountering discrimination) were not associated with improved outcomes, the authors suggest that the null findings could stem from the way intragroup coping was measured. Specifically, their research measured support from ingroup members in general whereas they point out that the majority of research measures support from friends, family and significant others. By not specifically asking about significant ingroup relationships, such as friends and family, participants may not have considered this support when completing the measure. Thus, measuring perceived social support from specific sources would be of benefit. However, while Outten et al. (2009) considered whether these coping options mediated the relationship between identity and well-being, they did not consider whether these coping options mediated the relationship between perceived social support from friends, family and significant others and well-being (see Figure 4).

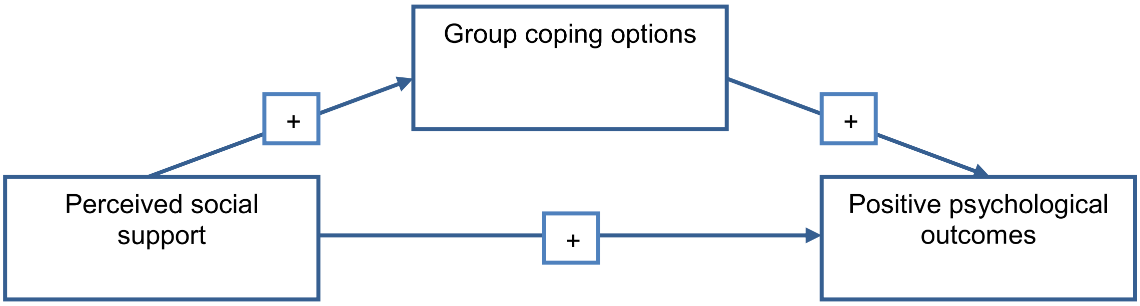


Figure 4: The perceived social support / coping options mediated model

1.7.7 Summary.

In summary, the above models and research highlights that, for other stigmatised groups, perceived discrimination is associated with poorer mental health. However, these groups do not passively accept this devaluation and instead, can increase their minority identity to buffer the negative effects. A number of possible mechanisms have been put forward to explain this buffering effect. One possibility is that increased social identity is associated with increased perceived social support, which provides a resource that buffers the negative effects. Alternatively, in line with SIT, increased social identity may buffer the negative effects through providing ingroup members with group level coping options. Whether these relationships hold for homeless participants is unknown and is investigated by the current research. However, before the present aim and research questions are outlined, it is necessary to highlight some methodological issues and demographic variables which may affect findings on the relationship between homeless and mental health.

1.8 Methodological Issues and Demographic Variables which can affect the Relationship between Homelessness and Mental Health

1.8.1 Definition of homelessness.

How homelessness is defined in research can have direct consequences on findings in relation to health. For example, a very narrow definition focusing on the most extreme forms of homelessness, such as rough sleepers and people using emergency accommodation, will lead to recruiting a higher portion of participants with serious support needs than if a broader definition is applied, for example including people who are in inadequate accommodation (Busch-Geertsema et al., 2010). As a result, research needs to be explicit in the definition of homelessness used.

There is no universal definition of homeless and therefore researchers, policy makers and advocates differ in the definitions they use (Toro & Warren, 1999). There are also international differences in how homelessness is defined (Philippot et al., 2007). To address methodological and definitional issues, FEANTSA developed the European Typology of Homelessness and Housing Exclusion (ETHOS, n.d.) as an operational definition of homelessness (Busch-Geertsema et al., 2010). This typology is underpinned by the understanding that there are three domains which constitute a home. These domains are the physical domain (to have a dwelling over which the person can exercise exclusive possession), the social domain (to be able to maintain privacy and enjoy relations) and the legal domain (to have a legal title to occupation). Homelessness is defined by exclusion from several or all of these domains (Busch-Geertsema et al., 2010). The typology classifies homeless people according to the accommodation they use into four categories. These are:

- Rooflessness: people living rough and people in emergency accommodation
- Houselessness: people in accommodation for the homeless whether this is short or long-term, in women’s shelters, in accommodation for immigrants and people due to be released from institutions where no housing is available prior to release
- Insecure: people living temporarily with friends and family and those with no legal tenancy
- Inadequate: people living in temporary / non-conventional structures, people living in unfit housing and people living in extreme over-crowding.

An area that receives considerably less attention is the subjective definition of homelessness: whether people consider themselves to be homeless. Eyrich-Garg, O’Leary, and Cottler (2008) examined whether women who were objectively defined as homeless also subjectively defined as homeless. Under their objective definition, women who said that they were staying on the streets or in a homeless shelter were classified as literally homeless. Women who said they were staying in a room/boarding house or halfway house or staying with family/friends were classified as marginally housed. They found that 90% of the 31 participants who were objectively defined as literally homeless also subjectively identified as homeless. In contrast only 36% of the 156 women classified as marginally housed considered themselves to be homeless. The researchers suggest that participants be asked whether they subjectively identity as homeless. However, using a subjective definition is not without issue. Firstly, as discussed above, research has found that objectively defined homeless participants do not subjectively define themselves as homeless until approximately six months after becoming homeless (Snow, & Anderson, 1987). One reason for this delay is that homelessness is seen as a process, which involves passing through stages that lead to the development of an identity as a homeless person (Mackenzie & Chamberlain, 2003). Therefore, while someone may be objectively defined as homeless, they may not subjectively identify as such until later in the process. Secondly, as Eyrich-Garg et al. (2008) found, participants’ current accommodation can affect whether people subjectively identify as homeless, with those using emergency accommodation and sleeping rough more likely to self-identify as homeless compared to those using other forms of homeless accommodation. As a result, if research is solely based on participants who subjectively identify as homeless, then this will bias the sample towards people who are homeless for longer than six months and those sleeping rough or in emergency accommodation. Therefore, while this research asks whether participants subjectively consider themselves to be homeless to inform demographic information, an objective definition will be used to determine participant inclusion.

1.8.2 Age.

The relationship between health and homelessness can also differ depending on the age of homeless people surveyed. Tompsett, Fowler and Toro (2009) examined the difference between homeless adolescents, young adults and older adults in a total sample of 850 people in the U.S. While they found differences between adolescents and adults, such as adolescents reported greater contact with friends and family, they also found significant differences between homeless adults. For example, younger adults reported experiencing a higher number of life stressors than older adults, while older adults reported a greater number of physical health symptoms and less contact with friends and family. Therefore, the effects of age on mental health findings need to be considered.

With regard to the age profile of homeless people, Toro (2007) in his review of international research found that most homeless adults are between the ages of 18 and 50. In Spain the average age for homeless people is 42 years (Muñoz & Vázquez, 1999). For Paris, the majority of males were aged between 35 – 59 years, whereas the majority of females were under 35 years of age. While a high prevalence of youth homelessness has been reported in the UK (Philippot et al., 2007), the age profile of the homeless population is unknown.

1.8.3 Gender.

Females are underrepresented in homeless populations and their characteristics differ compared to their male counterparts (Philippot et al., 2007). To explain this gender imbalance, Firdion and Marpsat (2007) posit that females at risk of homelessness are better able to access social support and are often accommodated by family members; are more likely to tolerate crisis situations to avoid becoming homeless, especially when they have children; and as women with children are given priority for housing, are more likely to be re-housed. In addition to the difference in their age, research has also found higher rates of mental illness in homeless women than in homeless men (Fischer & Breakey, 1991; Muñoz, Crespo, & Pérez-Santos, 2005). Therefore, the effects of gender on mental health findings need to be considered.

With regard to the gender profile of homeless people, middle-aged single men still comprise the majority of homeless people in Europe (FEANTSA, 2014; Philippot et al., 2007) and the U.S. (Toro, 2007). For example, Muñoz and Vázquez (1999) using a representative sample of the homeless population in Madrid reported that males comprised 79% of the population. Similar results were found in Paris where the percentage of males was 83% using a representative sample of homeless service users (Firdion & Marpsat, 2007). However, in recent years the profiles of homeless people have been changing in most countries in the EU (Busch-Geertsema et al., 2010). These changes have included an increase in the number of families, women, young people and immigrants who are homeless (FEANTSA, 2014). In relation to the UK, while family homelessness has not increased, national experts reporting to FEANTSA have noted an increase in the other three groups (ibid.). The actual gender balance of homeless people in England is unknown.

1.9 Present Research

The aim of the current research is to use a social identity approach to further our understanding of the relationship between homelessness and mental health. The research is guided by previous findings that stigma, social identity and social support are important factors in the lives of homeless people. To understand how these areas may be associated with mental health, and each other, the current research is guided by theories and research which has examined the relationship between these factors and mental health for other stigmatised groups. Based on this research, and to achieve the aim of increasing our understanding, five research questions are posed. To account for the impact of methodological factors, the research uses ETHOS' definitions for rooflessness and houselessness as the definition for homeless and controls for the effects of age and gender when examining factors associated with mental health outcomes. The five research questions (RQ) are:

RQ1: Is perceived discrimination associated with negative psychological outcomes for homeless people?

RQ 2: Is perceived discrimination associated with increased homeless social identity and indirectly associated with positive psychological outcomes, mediated by this increased social identity as predicted by the RIM?

RQ 3: Is social identity both directly associated with positive psychological outcomes and indirectly positively associated, mediated by perceived social support as predicted by the SIT/SCT model of stress? Two sources of identity and support are considered: identity with, and support from, homeless people, and identity with, and support from, family.

RQ 4: Does problem and emotion-focused coping at the individual, intragroup and intergroup level mediate the putative relationship between social identity and positive psychological outcomes?

RQ 5: Does problem and emotion-focused coping at the individual, intragroup and intergroup level mediate the putative relationship between perceived social support and positive psychological outcomes?

2. Method

2.1 Introduction

The chapter begins with an outline of the research design. Following this, information is presented on participants, the instruments employed and the procedure used to collect data. The chapter concludes with a review of the data management techniques and the statistical analyses used.

2.2 Research Design

The current study employed a quantitative cross-sectional design, which is the most commonly used research methodology for conducting research with homeless participants in Europe (Busch-Geertsema et al., 2010). Information was collected using a structured survey composed of a number of instruments from an opportunistic sample of homeless adults contacted through a range of services for homeless people in Yorkshire.

2.3 Participants

To be included in the research, participants had to meet the classification criteria for either rooflessness or houselessness as defined by (*ETHOS*, n.d.). Due to time and resource constraints, the researcher did not directly seek participants from immigration services or institutions, such as hospitals or prison, who are considered to be houseless under the definition. However, participants from these services could participate where they were also using services for homeless people. Participants also had to report spending at least one night homeless. In addition, participants needed to have lived in the UK for at least one year, to control for possible differences in levels of discrimination between countries and have a reasonable standard of English so that they could understand the questions.

2.4 Instruments

This section details the instruments used in the survey, which were chosen to assess the specific RQs. Instruments were also chosen based on their brevity, reliability and whether they had been previously used with homeless people. With the exception of the measure of perceived group discrimination, Leach et al.'s (2008) hierarchical multicomponent identity measure and both measure of coping options, all measures have been previously employed by the researcher as part of research conducted in fulfilment of the requirements for a Master's degree (Tully, 2011).. All instruments are outlined in Appendix 3.

2.4.1 Demographic questions.

Basic demographic information as well as information specific to homelessness was sought from each participant. Participants were asked their age, gender, ethnic background, relationship status and education. Following these were questions in relation to homelessness.

Participants were asked whether they considered themselves to be homeless, where they were currently staying/sleeping, how old they were when they first became homeless and how long they have been homeless for in total. Participants were given a list of possible responses for their current accommodation option. These were reclassified afterwards into categories based on the length of tenancy the service offered to better reflect the differing types of accommodation.

2.4.2 Perceived discrimination.

Two measures were used to assess both perceived personal discrimination (the discrimination that the participant perceives to be directed at them specifically) and perceived group discrimination (the discrimination that the participant perceives to be directed towards homeless people in general). For both measures, participants responded on a seven point response scale from 1 (*very strongly disagree*) to 7 (*very strongly agree*).

2.4.2.1 Perceived personal discrimination.

Perceived personal discrimination was measured with the two items used to measure perceived personal discrimination towards international students in research conducted by Schmitt et al. (2003). The items were amended to measure perceived discrimination as a result of homelessness. The two items were ‘I feel that other people look down on me because I am homeless’ and ‘Other people have discriminated against me because I am homeless’. Scores for the two items were summed. Higher scores indicate higher perceived personal discrimination. The correlation coefficient of the items was .79 when measuring perceived discrimination against 99 international students (Schmitt et al., 2003) and .85 when measuring perceived discrimination against 190 homeless adults (Tully, 2011). Information on external validity and test-retest reliability is not available. There are other scales which measure perceived personal discrimination (e.g. the schedule of sexist events, Klonoff & Landrine, 1995; the Perceived Racism Scale, McNeilly et al., 1996). These measures are generally context dependent, such as not being promoted at work; are reliant on being identified with the minority group and therefore treated differently, for example in a restaurant or shop; and rely on recall of particular events, which can be limited (Utsey, 1998). Thus, the current measure, while very brief, in addition to being chosen as it has been previously used with homeless people, was also chosen as it does not contain these limitations.

2.4.2.2 Perceived group discrimination.

Perceived group discrimination was measured with the two items used to measure perceived discrimination towards Latino Americans in research conducted by Major, Kaiser, O’Brien and McCoy (2007). These items were amended to measure perceived discrimination as a result of homelessness. The two items were ‘People who are homeless are discriminated against’ and ‘Other people who are homeless experience discrimination’. Scores from the two items were summed. Higher scores indicate higher perceived group discrimination. Major et al. (2007) report that the correlation coefficient of the items is .87 when used to measure perceptions of discrimination against one’s ethnic group in a sample of 191 Latino American undergraduates. Information on external validity and test-retest reliability is not available. Other scales which measure perceived group discrimination have been used in research. For example, Armenta and Hunt (2009) used a single item to measure perceived group discrimination and Bourguignon et al. (2006) used four items to measure discrimination towards Africans. The current measure was chosen owing to its similarity in sentence construction to the measure of perceived personal discrimination.

2.4.3 Social identity.

Identity was assessed using two different identity measures, chosen to assess two different social identities. A longer multicomponent measure was used to assess social identification with homeless people. A shorter measure was used to assess social identification with family members.

2.4.3.1 Homeless social identity.

Homeless social identity was measured using the hierarchical multicomponent measure developed by Leach et al. (2008). It is based on a review and synthesis of previous multicomponent identity measures. The measure consists of 14-items which assess five specific components of ingroup identification organised into a two dimensional model. The five components are solidarity, satisfaction, centrality, individual self-stereotyping and ingroup homogeneity. The two dimensions are self-investment (comprised of the first three components) and self-definition (comprised of the latter two components). The items were amended to measure social identification with homeless people. For example, ‘I feel a bond with homeless people’. Participants responded to each item on a seven point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores for each item within a component were summed to provide scores for each of the five components. Higher scores indicate higher social identification. Cronbach alphas for the five scales ranged from .87 to .93 when assessing a minimum social identities in two samples of Dutch university students (Leach et al., 2008). Data on the test-retest reliability of the scale is not available. The measure was chosen as it is considered to be both a theoretical and methodological advancement on previous multicomponent measures (Leach et al., 2008).

2.4.3.2 Family social identity.

Doosje, Ellemers and Spears' (1995) four-item measure was used to assess identification with family members. It was designed and used previously to measure identification as a psychology student (Doosje et al., 1995). The four items cover the cognitive, evaluative and affective aspects of identification. The items were amended to measure social identification with family. For example 'I see myself as a member of my family'. Participants responded to each item on a seven point scale from 1 (*completely disagree*) to 7 (*completely agree*). Scores for each item were summed. Higher scores indicate higher social identification. The scale has good internal reliability with a Cronbach alpha of .83 reported when it was used to test identification as a psychology student with 131 psychology students (Doosje et al., 1995) and .94 when used to test family identity with a sample of 190 homeless adults (Tully, 2011). Data on the validity and test-retest reliability of the scale is not available. The measure was used as it is a recommended measure of social identity and is used frequently in research (Haslam, 2004) and has been previously used to measure family identity in a sample of homeless people (Tully, 2011).

2.4.4 Perceived social support.

Perceived social support was measured with the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988), which is a 12-item instrument designed to measure the extent to which participants perceive social support from three sources: family, friends and a significant other. For the current research, the MSPSS was amended and used to separately measure the perceived social support from homeless significant others, homeless friends, homeless family and non-homeless family. For example, 'There is a special person who is homeless who is around when I am in need' and 'My family members who are not homeless really try to help me'. Participants responded to each item on a 7-point scale from 1 *(completely disagree)* to 7 *(completely agree)*. Scores for each source of support were summed. Higher scores indicate higher perceived support from each source. The three subscales of family, friends and significant other have been supported by confirmatory factor analyses with both students and people with depression (Clara, Cox, Enns, Murray, & Torgrudc, 2003). The scale has good internal reliability with Cronbach alphas of .87, .85 and .91 reported for the family, friend and significant other subscales respectively when it was used with 279 undergraduates (Zimet et al., 1988). The Cronbach alphas for perceived support from homeless significant others, homeless friends, homeless family and non-homeless family were .99, .95, .98 and .96 respectively for 190 homeless adults (Tully, 2011). The MSPSS also has good concurrent validity and has been found to be significantly negatively correlated with depression and anxiety symptoms (Zimet et al., 1988). Coyne and Downey (1991) highlight that perceived support scales using 'high' and ‘low’ anchors cannot distinguish between participants reporting the absence of a relationship from reports of negative relationships, which can have different effects on psychological distress. Therefore, the current research asked whether participants had a relevant network member from which to perceive support and the questions were only asked if participant said that they had a relevant network member. Thus, for the current research negative answers should reflect negative social relationships and not the absence of a relationship. The scale was chosen as it has been was previously used in this manner with 190 homeless adults (Tully, 2011).

2.4.5 Coping options.

Coping options used to buffer the effects of discrimination were measured using two different measures; a global measure designed to assess the appraisal of a range of coping options and a specific four item measure designed to assess the use of individual mobility as a coping option.

2.4.5.1 Coping options.

The appraisal of six possible coping options to buffer against discrimination was measured using the 23-items scale designed and used by Outten et al. (2009) to assess whether appraisal of coping options buffer against the negative effects of discrimination for Black Americans. The six coping options are computed by asking participants about their appraisal of problem-focused coping and emotion-focused coping at the individual, intragroup and intergroup level. The scale was amended for use with homeless people. For example, ‘I avoid interacting with people who I know would not accept me because of my history of homelessness’. Participants responded to each item on a seven point scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores for each coping option were summed. Higher scores indicate higher appraisal of that coping option. Cronbach alphas for the six coping options ranged from .66 for the individual problem-focused subscale to .88 for the intergroup problem-focused subscale when used with 120 Black Americans (Outten et al., 2009). Test-retest reliability or validity were not reported. The measure was selected as it is the only measure to assess appraisal of coping options at different levels of identity. However, the authors highlight that their measure of coping options is not completely parallel at the three levels of identity, especially in relation to individualistic coping strategies. In comparison to the intergroup and intragroup coping strategies, the items measuring individual coping focus on altering one’s relationship with discrimination rather than social mobility, as predicted by SIT. Thus, another measure of coping was used to specifically measure the use of individual mobility.

2.4.5.2 Individual mobility.

Individual mobility was measured with four items previously used by Blanz, Mummendey, Mielke and Klink (1998) to measure strategies of identity management for East Germans relative to West Germans. The four items form part of a larger measure to assess 12 identity management strategies, which were derived from descriptions of theoretical constructs in the literature. Items were amended for use with homeless people. For example, ‘I make every effort to be considered as a person who is not homeless’. Participants responded to each item on a five point scale from 1 (*do not agree at all*) to 5 (*fully agree*). Scores for each item were summed. Higher scores indicate higher use of individual mobility. The scale has been used with 560 West Germans where the Cronbach alpha was .86 (Blanz et al., 1998). Test-retest reliability or validity have not been reported. The scale was used due to its brevity and face validity.

2.4.6 Psychological outcome measures.

Three measures were used to assess psychological outcomes, which were self-esteem, perceived stress and psychological distress. Each of these outcomes has been previously used as a measure of the effects of perceived discrimination on mental health (Pascoe & Smart Richman, 2009).

2.4.6.1 Self-esteem.

The SSEE (Beech, Fisher, & Beckett, 1999) was used to measure self-esteem. It consists of eight items such as ‘Do you ever wish you were someone else?’. Participants answer either yes or no to each item. Scores for each item were summed. Higher scores indicate higher self-esteem. The Cronbach’s alpha was .84 when used with a sample of 1,376 males serving a prison sentence for a sexual offence (Webster, Mann, Thornton, & Wakeling, 2007) and .82 when used with 190 homeless adults (Tully, 2011). The test-retest reliability was .90 when used in the same prison population (Webster et al., 2007). The measure was chosen as it has been previously used with homeless people (Tully, 2011).

2.4.6.2 Perceived Stress.

Perceived stress was assessed using the PSS (Cohen, & Williamson, 1988). This is a 10-item instrument designed to measure the degree to which situations in one’s life are appraised as stressful in the past 30 days (Cohen, Kamarack, & Mermelstein, 1983). The PSS can also be used as an outcome measure of experienced levels of stress (Cohen et al., 1983). An example is ‘In the last month, how often have you felt nervous and stressed?’. Participants responded to each item on a scale from 0 (*never*) to 4 (*very often*). Scores for each item were summed. Higher scores indicate higher perceived stress. The PSS has good internal consistency, with a Cronbach alpha of .78 based on a sample of 2,387 adults (Cohen,

& Williamson, 1988) and .87 when used with 190 homeless adults (Tully, 2011). The measure also has good construct validity with PSS scores moderately related to responses on other measures of appraised stress as well as experience of stressful events (Cohen, & Williamson, 1988). The PSS has previously been used in published research with homeless participants, although participant numbers were small and scores for reliability were not reported (de Vicente, Muñoz, Pérez-Santos, & Santos-Olmo, 2004). It was chosen as the scale measures overall stress appraisal and can therefore be used to assess whether factors known to moderate stress, such as social support, operate through its influence on stress appraisal or through some other pathway (Fischer & Corcoran, 2007) and also due to its previous use with homeless adults (Tully, 2011).

2.4.6.3 Psychological distress.

The BSI-18 was used to measure psychological distress, which was designed to serve as a screen for psychological distress and psychiatric disorders in medical and community populations (Derogatis, 2001). The BSI-18 is made up of 18 symptoms which assess three equal dimensions: somatisation, depression and anxiety. The somatisation dimension measures distress caused by the perception of bodily dysfunction. The depression dimension measures symptoms of disaffection and low mood as well as self-depreciation, loss of hope and suicidal ideation. Finally, the anxiety dimension measures symptoms such as nervousness, tension, motor restlessness and apprehension. Alternatively, all 18 items can be summed to provide an overall global severity index (GSI) which represents the respondent’s current level of psychological distress and is the single best indicator of their overall emotional state compared to the three dimensions (Derogatis, 2001). In completing the BSI-18 participants rate the level to which the list of 18 symptoms has distressed or bothered them in the past 7 days from 0 (*not at all*) to 4 (*extremely*). Higher scores indicate higher distress. The BSI-18 has been found to have high convergence with the SCL-90-R suggesting strong external validity. It has good internal validity with Cronbach alpha scores for the somatisation, depression, anxiety dimensions and the GSI of .74, .84, .79 and .89 respectively based on a community sample of 1,134 participants (Derogatis, 2001) and .81, .83, .86 and .92 respectively when used with 190 homeless adults (Tully, 2011). The BSI-18 was scored using norm-based scoring. This was achieved by performing a linear transformation of the scale scores so that they reflect the scores reported by a representative sample of 1,112 American adults. A representative sample of English adults was not available. It was chosen due to its brevity, face validity and previous use with homeless adults (Tully, 2011).

2.5 Procedure

2.5.1 Ethics approval.

Ethical approval for the research was sought and granted from The University of Leeds' LIHS/LIGHT/LIMM Joint REC ethics committee (see Appendix 4). The application highlighted a number of potential ethical issues as well as the steps taken to address these.

One identified issue was that some participants may find some of the questions distressing as they related to topics including homelessness, perceived discrimination and psychological distress. A number of steps were taken to reduce any potential distress and ensure appropriate support for participants who did experience distress. The information sheet (see Appendix 2) explicitly stated that the participant may find some questions distressing to ensure that participants were aware of this prior to beginning. Participants were told that they could decline to participate, decline to answer single questions or stop participating at any time. All participants were advised prior to the survey and at the end that they should discuss any concerns they had with staff in the service. That participants would be referred to staff in the service was agreed with each service in advance to ensure that the service were willing and able to provide this support. In conducting the questionnaire, the researcher maintained a positive, safe, non-judgemental environment to minimise any possible discomfort for the participant. Finally, the researcher had prepared a specific distress de-escalation protocol to support participants who said they were or appeared distressed. This protocol involved stopping the survey and depending on the participant's preferences, agreeing that they would speak to staff and/or seek appropriate support from the Samaritans, their GP or NHS direct.

The issue of sharing information relevant to risk was also highlighted as one of the items on the BSI-18 asks whether participants have had thoughts of ending their life in the past week. To address this issue, participants were informed via the information sheet that where they answered positively to this statement, this information would be passed on to the appropriate staff member to ensure that the participant could access appropriate support and participants were explicitly asked for their consent to share this information via the consent sheet (see Appendix 2). Services were made fully aware of this procedure prior to data collection. For those participants who reported that they had thoughts of ending their life in the past seven days, the method of communicating this to an appropriate staff member was discussed with the participant. In all instances this information was passed on to the appropriate staff member.

Compensation of a £5 grocery voucher was provided to all participants. The voucher compensated participants for any loss of services incurred as a result of participation (such as a missed lunch) and for their time in completing the research. In deciding the amount, consideration was given to the cost of reimbursing the participant for a missed lunch or dinner and the duration of the survey, which was approximately 25 minutes. The use of compensation is in line with previous research with homeless participants (e.g. Lawless & Corr, 2005; Toro et al., 2008). Moreover, research has found that homeless participants recommend the use of compensation and that compensation does not encourage young homeless people to participate who would have not done so in the absence of compensation (Ensign, 2006). Research has yet to examine whether homeless adults would differ in their view of compensation or the effect it may have on participation.

To ensure data confidentiality, the storage and use of all the data collected complied with the University's Policy on Safeguarding Data and Research Data Policy, the University's Code of Practice on Data Protection and the Security Protocol for Professional Doctorate of Clinical Psychology Training Programme.

2.5.2 Gaining access to services to recruit participants.

All access to participants was conducted through host services and required a two-fold recruitment campaign; the first to recruit host services, the second for participants using those services. The use of services to recruit participants has been previously employed in research with homeless people and has been found to provide a sample which is representative of the homeless population (Toro et al., 1999).

To recruit services, agencies providing services for homeless people in Yorkshire were approached by the researcher and asked if they would be willing to participate. These services were identified through two sources: the *Children and Families Resource Directory* published by Leeds City Council (2004), which contains information on services providing to homeless families and adults and the website www.homelessuk.org managed by Homeless Link, which lists all services for homeless people in England. A total of 63 potential services were identified from these sources. Of these services, 44 were contacted. Whether a service was contacted was based on their proximity to Leeds, their size, the age of their service users (for example, services who only accepted people over 18 years were prioritised over services accepting people aged 16 to 21, as all service users would be potentially eligible to participate) and the service provided. As the needs of homeless people vary depending on the setting that they are encountered in, the researcher attempted to access a range of services from which participants could be drawn. A total of 22 services agreed to participate. These projects provided a range of services including short and longer term accommodation, drop-in services, food and advice. There were mainly based in Doncaster, Rotherham, Harrogate, Leeds and Sheffield. Between 1 and 19 participants were recruited from each service. Figure 5 displays the recruitment process. The services that did not participate did not differ from those recruited in terms of the type of services they offered.

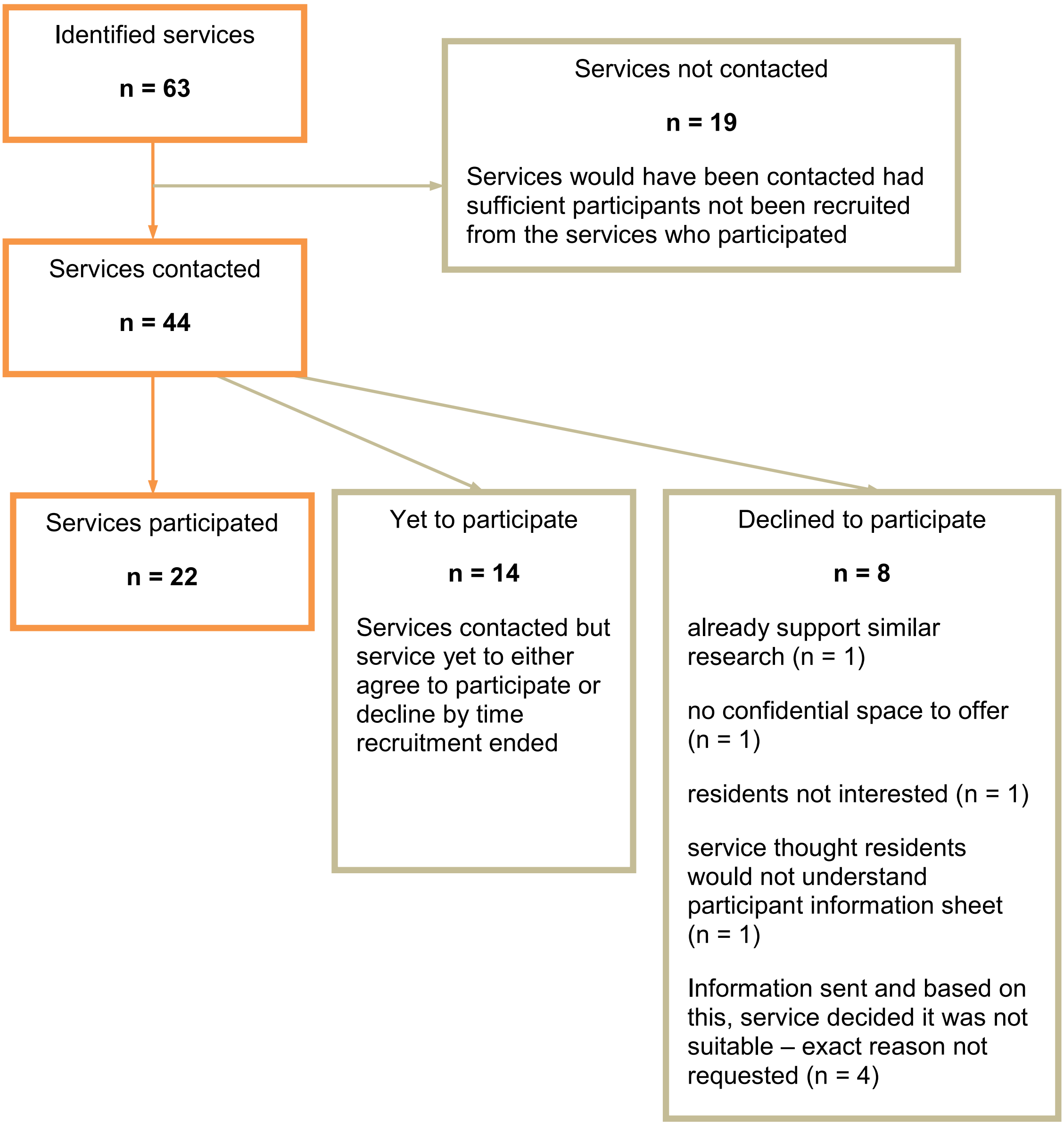


Figure 5: Flow diagram showing service recruitment process

Once identified, the researcher first phoned the service and asked to speak to the relevant staff member, generally the manager. The researcher introduced themselves, explained the nature of the research and the potential participants being recruited. Services were asked whether they considered that their service users would be potentially suitable and whether the service would be willing to support the research. Where the service said that they might be in a position to assist, then written information was emailed to the service. This included the participant information sheet and a letter outlining the aim of the research and what participation in the research would consist of. This was followed up with a telephone call to arrange a suitable date to meet to discuss recruitment or, to meet with participants where the details had been discussed over the phone.

2.5.3 Recruiting participants from services.

Once a service was recruited then potential participants accessing that service were recruited. How potential participants were recruited and by whom depended on the service’s preference, which was discussed and agreed in advance with the service. Depending on their preferences, the following strategies were used:

- Staff working in the service approached service users to inform them of the research and asked whether they would be interested in participating. Where service users expressed an interest in participating then staff agreed a time and date for the participant to meet with the researcher in the future.
- The researcher attended the service at their invitation, approached potential participants and explained that they were conducting research. The information sheet on the research was given to the potential candidate, which was explained at their request. Potential candidates were also informed that staff were aware of the research and available to discuss it with them also. This strategy was only used in communal areas of the host service which were supervised by staff.
- Potential participants became aware of the research through being informed by another service user and approached a staff member or the researcher to express interest in participating. If the service user approached a staff member then the staff member explained the research to the potential participant and referred the person to the researcher. Where the service user approached the researcher then they were given the information sheet and were told that staff were aware of the research and available to discuss it with them if they wished.
- Finally, the service invited the researcher to a residents’ meeting to explain the research to potential participants, answer questions they may have and agree times and dates to meet if they so wished.

2.5.4 Survey Procedure.

All surveys were conducted in the host service. Where the service agreed suitable times and dates with potential participants then the researcher attended at these times to conduct the surveys. Where the researcher attended the service but they had not agreed times and dates with potential participants (i.e. potential participants were informed that day about the research) then all surveys were conducted upon recruitment, which reflected the preference of the participants and service. This was agreed in advance with each service.

To complete the research, the participant and researcher met in a confidential space within the service, which was agreed in advance with the staff. This was often a meeting room. Independent of the method of recruitment, prior to all data collection, the researcher asked the potential participant their age, current accommodation and how long they had lived in the UK to ensure that they met the inclusion criteria. The researcher also checked that the potential participant had received the written information on the research, offered to read aloud all written information given to the candidate and answered any questions they had. Only when this was completed and the candidate was satisfied that they understood what was being asked of them and was still interested in completing the research did the researcher seek written consent. Again, the research offered to read aloud the consent sheet for all participants

A structured survey was used to collect data from each participant (see Appendix 3). To allow for literacy difficulties, the researcher read aloud all questions on the survey and recorded the participant's answers using paper and pen. This method of data collection was explained to each participant prior to commencing the survey and was employed to standardise the method of data collection across participants with varying literacy abilities. A separate booklet was given to the participants, which contained a copy of the response scale for each item. Each response scale was printed on a separate page using a large font (font size 20 and above). The research also read aloud the response categories at the beginning of each measure. Participants were asked whether they preferred for the researcher to read aloud the response scales for each item.

A minority of participants sought an explanation of some of the items in the standardised measures. This was especially in relation to the hierarchical multicomponent measure used to assess homeless social identity and Doosje et al.'s (1995) identity measure. This mainly included participants asking for an explanation of the term solidarity. In these instances, the researcher explained what they considered the term to mean (i.e. solidarity was described as feeling united with or connected to). In addition, in relation to the measure of family identity and perceived support from family, certain participants did not appear to distinguish between the particular items of the scale and tended to answer questions with the same response category. This was based on the speed to which participants responded to these questions and the similarity of responses. In support of this, with the exception of the global severity index, the Cronbach alpha levels for the scale measuring family identity and perceived support from family sources were the highest.

At all times, participants were able to see what the researcher was recording. The survey took 25 minutes to complete on average. Once complete, the researcher asked each participant how they had found the survey, thanked them for their participation and handed them the £5 grocery voucher. It was not necessary to use the distress de-escalation protocol as no participant said or appeared to be distressed during the survey. For participants who had reported thoughts of ending their life in the past week, it was discussed with them how they would like this information to be passed on to the appropriate staff member. In one instance, the participants asked that they be accompanied to the staff member by the researcher at the end of the survey to discuss this further. The staff member was already aware of this as they had discussed it previously with the participant. In another instance, the participant said that they would be unable to discuss that they had experienced thoughts of ending their life with the staff member unless the staff member was to bring up the issue first. It was agreed with the participant that this information would also be given to the appropriate staff member, who said that they would discuss this with the participant. With the exception of these two instances, it was agreed with all other participants who reported thoughts of ending their life that this information would be shared on the same day and once all surveys in the particular service were complete. All data was collected between 3rd June 2013 and 31st January 2014.

2.5.5 Determining sample size.

A sample of 200 participants was sought. This was based on the original plan to use structural equation modelling to analyse the data, which requires large sample sizes. For example, Anderson and Gerbing (1988) state that problems may occur with samples of less than 150 participants when using structural equation modelling and Kline (2011) reports that the typical sample size of published studies using SEM is about 200 cases, which can be considered as a guide to the number of cases required. However, in 2013, Hayes produced an SPSS macro and accompanying book which was specifically designed for mediation and moderation. This method was preferred owing to his expertise in the area, the in-depth consideration the book gives to this topic and also because both methods provide the same results (Hayes, 2013). This method of analysis does not require as large a sample size, although Hayes considers “the more the better” (p.172) and therefore the sample size for the current research is appropriate for both methods.

2.6 Data Management and Statistical Analysis

All surveys were checked for data collection errors or inconsistencies. Prior to data entry, coding was developed which provided instructions for each of the questions included in the survey. All the raw data was entered into the IBM SPSS Statistics 21 package and checked for input errors. Following this, the data was recoded where necessary and subscale and total scores were calculated according to the instructions for each measure. Questionnaires and consent forms were stored securely and all electronic information was entered on to an encrypted drive operated by the University of Leeds.

Missing responses, either through participants choosing to not answer questions or collection errors, were coded accordingly and the results presented are adjusted for missing data. With the exception of Outten et al.’s (2009) coping options scale where 4.8% of the data was missing (equivalent to nine participants), all other measures had less than 2% missing data. That the amount of missing data was highest for the coping options scale was due to some participants choosing not to answer the questions as they did not perceive any discrimination towards them and therefore did not consider the questions relevant. Tabachnick and Fidell (2007) state that missing data of less than 5% does not cause concern and any procedure to handle missing values will yield similar results. For the current research missing data was omitted from all analyses on a pairwise deletion basis for all analyses except for mediation analyses, where a listwise deletion basis is considered most appropriate (Hayes, 2013).

2.6.1 Internal reliability of survey measures.

Cronbach's alphas were calculated for each measure. Score of 0.7 or greater were considered to be good. All scales had Cronbach alphas in excess of 0.7 except the individual problem-focused subscale of the coping measure ($\alpha = .53$) and the individual mobility scale ($\alpha = .59$). Removing items from the scales did not improve their reliability and therefore no amendments were made. Blanz et al. (1998) reported an acceptable Cronbach alpha for the individual mobility scale ($\alpha = .86$) and therefore, the reason for the current alpha score is unknown. Outten et al. (2009) reported a similarly low, albeit higher Cronbach alpha for the individual problem-focused scale ($\alpha = .66$). The correlation coefficients of scales are also reported where scales or subscales had only two items. Table 26 in Appendix 1 provides the Cronbach alphas for all scales and subscales and the correlation coefficients where relevant.

2.6.2 Normality.

Table 27 in Appendix 1 presents the numerical normality data for each measure. Normality was assessed using values for skew and kurtosis, the Kolomogorov-Smirnov statistic and the shape of the histograms and normal Q-Q plots. Two criteria were considered in determining whether parametric or non-parametric statistics would be the most appropriate. These were a rule-of-thumb of between plus and minus one for skew and kurtosis and that Z scores for skew and kurtosis (the score divided by the standard error) were less than 3.29, which is based on sample size (Fife-Schaw, n.d.). Scales and subscales were considered to be normally distributed if they met both criteria, marginally normally distributed if they met one rule and to have a non-normal distribution if they met neither rule.

Based on the criteria for assessing normality 11 scales or subscales were considered normally distributed, six were in the marginal range and eight did not meet either criteria. As a result of the majority of the data meeting both criteria, the overall data was considered not to violate the assumptions of normality and therefore it was considered appropriate to use parametric statistics. To further ensure that the use of parametric statistics was appropriate, two additional steps were employed. Preliminary analyses were conducted to ensure that the data did not violate the assumptions of normality, linearity, multicollinearity and homoscedasticity for multiple regressions. Secondly, bias corrected bootstrap analyses, based on 5,000 bootstrap draws were used to examine mediated models. This analysis does not rely on the assumption that the data is normally distributed (Hayes, 2013).

2.6.3 Analytic approach.

The IBM SPSS Statistics 21 package was used to complete all analyses. Pearson product-moment correlation coefficients were calculated for descriptive purposes. Hierarchical multiple regressions were used to assess for significant direct relationships between variables, while controlling for covariates (gender and age in the present research). Standardized regression coefficients were reported for multiple regressions, which are the expected differences in the dependent variable, in standard deviations, between two cases that differ by one standard deviation on the predictor variable (Hayes, 2013). In contrast unstandardized regression coefficients report the expected difference in the dependent variable, in terms of the variable's original units, between two cases that differed by one unit on the predictor variable. As recommended by Hayes (2013) unstandardized coefficients were reported for all indirect effects as he considers that standardized results to be less meaningful when testing for mediation. The coefficient of determination (R^2) was also reported, which is the percentage of variation in the dependent variable explained by the predictor variables (Hinton, 2004).

To examine for indirect effects (i.e. mediated effects), Hayes' (2013) PROCESS macro was used. This macro is an add-on to SPSS which uses path analysis (a statistical method of testing for cause and effect relationships) to test for moderation and mediation. Only the mediation function was used for the current research, which examines whether variables are significantly associated with one another through their relationship with other variables.

For mediation models, multiple mediator variables can be specified where the predictor variable is modelled as influencing the dependent variable directly as well as indirectly through two or more mediators, which operate in parallel. The macro uses ordinary least square path analysis to generate unstandardized model coefficients and confidence intervals for the direct (the effect of the predictor variable on the outcome variable, e.g. for RQ2 the relationship between perceived discrimination and psychological outcomes), the total indirect (the mediated effect of the predictor variable on the outcome variable through all mediators, e.g. for RQ2 the relationship between perceived discrimination and psychological outcomes mediated by all homeless social identity components), as well as the specific indirect effects (the mediated effect of the predictor variable on the outcome variable through each mediator individually, e.g. for RQ2 the relationship between perceived discrimination and psychological outcomes mediated by each identity component separately). Bias corrected (BC) bootstrapping was used to assess whether indirect effects were significant. These are constructed "by taking a random sample with replacement of size *n* from the sample, estimating each specific indirect effect...in the resulting data, and repeating this resampling and estimation many times.” (Hayes, 2013, p. 139). By estimating each specific indirect effect thousands of times, endpoints of the confidence interval can be calculated. If the confidence interval does not cross zero then the indirect effect is considered to be significantly different from zero. For the current research 5,000 bootstrap samples were used with a 95% confidence interval. Hayes (2013) notes that using BC bootstrapping is the preferred approach to determine significance as it is more powerful than the normal theory approach and, as mentioned above, does not rely on the assumption of normally distributed data.

While the research involves multiple analyses, the results of these analyses were only used to inform the variables to be included in the six models which were tested to answer the five research questions and determine the overall percentage of variance accounted for. The Process Macro used in the research can estimate the direct and indirect effects of multiple variables in each model simultaneously, Therefore, while the research includes multiple analyses, the main results are informed by six larger analyses. Therefore, the p value was not adjusted to account for multiple analyses.

3. Results

3.1 Chapter Overview

This chapter presents the results of the study, which are organised into three sections. The first section reports the participant demographics. The second section summarises the findings in relation to each of the variables studied. These were perceived discrimination, social identity, perceived social support, coping options, self-esteem, perceived stress and psychological distress. The third section presents the results of the five RQs.

3.2 Participant Demographics

A total of 205 participants were recruited to complete the survey. Seventeen were subsequently excluded from analyses as it was found that they did not meet the inclusion criteria. Sixteen participants did not meet the criteria for homelessness used within the study. One participant was excluded as they had become homeless on the day the research was being conducted and had yet to spend a night homeless. Of the 188 participants whose data was included in the analyses, the majority were male (74.5%), White British (86.7%) and single (77.1%). Table 1 summarises their demographic information.

Table 1: Participant demographics

Demographic	**Participants (n = 188)**
Gender	
Male, n (%)	140 (74.5)
Female, n (%)	48 (25.5)
Age	
Mean age, years (SD)	33.43 (11.31)
Age range, years	18 – 62
Ethnicity	
White British, n (%)	163 (86.7)
Other, n (%)	23 (12.2)
Missing, n (%)	2 (1.1)
Relationship status	
Single, n (%)	145 (77.1)
Married / In a relationship, n (%)	27 (14.4)
Separated / Widowed, n (%)	16 (8.5)
Education	
Age left formal education, years (SD)	16.14 (3.08)
Highest education level	
Did not complete formal education, n (%)	66 (35.1)
Completed formal education (e.g. GCSEs), n (%)	87 (46.3)
Completed further education (e.g. diploma), n (%)	23 (12.2)
Completed higher education (e.g. degree), n (%)	9 (4.7)
Missing, n (%)	3 (1.6)
Receiving disability allowance	
Yes, n (%)	53 (28.2)
No, n (%)	134 (71.3)
Missing, n (%)	1 (0.5)

In relation to homelessness characteristics, on average participants were homeless for three years and three months. The majority of participants were in accommodation provided to homeless people (90.5%). The length of tenancies varied across services and ranged from less than a month to a maximum of two years. The remaining participants said that they were sleeping rough or in a squat. One hundred and fifty five participants (82.44%) considered themselves to be subjectively homeless. Table 2 summarises their homeless characteristics.

Table 2: Homeless characteristics of participants

Characteristic	**Participants (n = 188)**
Duration of homelessness	
Mean length, years (SD)	3.26 (4.46)
Range	1 week – 22 years
Where participant is currently staying/sleeping	
Sleeping rough / Squat, n (%)	18 (9.5)
Tenancy in homeless accommodation (varying duration)	
Less than 1 month, n (%)	24 (12.8)
1 month to less than 6 months, n (%)	77 (41)
6 months to less than 1 year, n (%)	21 (11.2)
1 year to less than 2 years, n (%)	48 (25.5)
Age of onset of homelessness	
Mean age of onset, years (SD)	26.16 (11.42)
Range, years	9 – 61
Experienced childhood homelessness, n (%)	55 (29.25)

3.3 Findings in Relation to the Variables Measured

3.3.1 Perceived discrimination.

Both perceived personal discrimination and perceived group discrimination were measured. The mean average score (calculated by dividing the mean score by the number of items) for perceived personal discrimination was 5.10 (SD = 1.88).

The mean average score for perceived group discrimination was 5.98 (SD = 1.42). There was a strong positive correlation between perceived personal and group discrimination, $r = .56$, $n = 185$, $p < .001$ with high levels of perceived personal discrimination associated with high levels of perceived group discrimination.

3.3.2 Social identity.

Two separate social identities were measured; identification with other homeless people and identification with family members. Table 3 reports the summary statistics and correlations for the five components of the measure. Length of time homeless is also reported to examine its relationship with identifying as homeless. All components were significantly positively correlated with one another. Only individual self-stereotyping was significantly associated with duration spent homeless, with an increase in duration associated with increased self-stereotyping.

Table 3: Descriptive statistics and correlations for the five homeless identity components and their relationship to length of time homeless

	Variable	1.	2.	3.	4.	5.	6.
1.	Solidarity component	-	.39***	.32***	.36***	.22**	.07
2.	Satisfaction component		-	.61***	.44***	.40***	-.07
3.	Centrality component			-	.56***	.40***	.02
4.	Individual self-stereotyping component				-	.54***	.18*
5.	In-group homogeneity component					-	-.05
6.	Length of time homeless						-
	Mean	4.99	3.39	3.80	4.34	4.70	3.26 †
	SD	1.43	1.79	1.83	1.85	1.82	4.16 †

NOTE: * significance at $p \leq .05$, ** significance at $p \leq .01$, *** significance at $p \leq .001$, † years

The mean average score for identity with family was 4.15 (SD = 0.77). Identity with family was significantly negatively associated with duration spent homeless, $r = -.21$, $n = 186$, $p = .005$ with longer durations homeless associated with lower scores for family identity.

3.3.3 Perceived social support.

Table 4 reports the summary statistics for perceived social support. Only a very small proportion of participants said they had family who were homeless, slightly less than a fifth said they had a special person in their lives who was homeless, the majority of participants said they had friends who were homeless and nearly all participants reported that they had non-homeless family. Perceived support from a special person and from homeless family were omitted from all further analyses owing to the small number of participants who reported the availability of these sources of support.

Table 4: Descriptive statistics for perceived support from both homeless and non-homeless sources

	Homeless sources			**Non-homeless sources**
	Special person	**Friends**	**Family**	**Family**
Mean (SD)	6.52 (0.73)	5.09 (1.52)	4.32 (2.07)	3.99 (2.24)
n (%)	35 (18.62)	162 (86.17)	7 (3.72)	177 (94.15)

3.3.4 Coping options.

Two different measures were used to assess coping options. Table 5 reports the summary statistics for both measures. Thecoping option scale measures the appraisal of both problem and emotion-focused coping at the individual, intragroup and intergroup level. Individual mobility as a coping option was also measured. Individual mobility was significantly correlated with only the individual problem-focused coping subscale. This measure was not included in any further analyses to ensure that it did not cancel out any effects associated with the individual problem-focused coping subscale, which can occur as multiple mediation models only quantify the unique association between mediators and outcome variables (Hayes, 2013).

Table 5: Descriptive statistics and correlation coefficients for the individual mobility scale and the six subscales of the coping option scale

	Variable	1.	2.	3.	4.	5.	6.	7.
1.	Individual emotion-focused coping	-	.16*	.17*	.10	.34***	.17*	.01
2.	Individual problem-focused coping		-	.25***	.12	.03	.20**	.22**
3.	Intragroup emotion-focused coping			-	.69***	.22**	.54***	.03
4.	Intragroup problem-focused coping				-	.39***	.49***	-.03
5.	Intergroup emotion-focused coping					-	.45***	-.02
6.	Intergroup problem-focused coping						-	.07
7.	Individual mobility measure							-
	Mean	5.08	4.88	5.09	4.87	4.71	5.23	4.37
	SD	1.59	1.44	1.60	1.49	1.58	1.43	0.70

NOTE: * significance at $p \leq .05$, ** significance at $p \leq .01$, *** significance at $p \leq .001$

3.3.5 Psychological outcome measures.

Three variables were employed to assess psychological outcomes. These were self-esteem, perceived stress and psychological distress,. Table 6 reports the summary statistics as well as their correlation coefficients. The measures were significantly correlated with one another, with lower scores for self-esteem associated with increased scores for perceived stress and psychological distress. Increased scores for perceived stress were also associated with increased scores for psychological distress.

No normative data are available for the measure of self-esteem or perceived stress and therefore it is not possible to interpret the scores. In contrast, the BSI-18 was designed to be interpreted at three distinct but related levels. These are the global level, measured by the GSI, which measures the respondent's current level of psychological distress, the dimensional level which provides information on psychological distress associated with somatisation, depression or anxiety and the discrete symptom level.

Table 6: Descriptive statistics and correlation coefficients for self-esteem, perceived stress and psychological distress

Variable	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**
1. Self-esteem	-	-.62***	-.73***	-.58***	-.42***	-.64***
2. Perceived stress		-	.69***	.64***	.54***	.69***
3. Depression subscale			-	.79***	.70***	.90***
4. Anxiety subscale				-	.77***	.94***
5. Somatisation subscale					-	.89***
6. Global severity Index						-
Mean	3.95	24.27	10.76	10.40	7.41	28.57
SD	2.43	8.23	6.72	7.08	6.38	18.37

NOTE: * significance at $p \leq .05$, ** significance at $p \leq .01$, *** significance at $p \leq .001$

To determine the clinical range for the BSI-18, the raw scores were transformed based on community norms for 1,134 adult Americans. Community norms for British adults have not yet been published. Derogatis (2001) suggests that participants with a transformed total GSI score of 63 or higher, or participants with any two transformed subscale scores of 63 or higher, should be considered to be in the clinical range. Following these guidelines, 62% of the sample fell into the clinical range. At the discrete symptom level, 59 participants (31%) reported having thoughts of ending their life in the past week. Table 7 summarises the number and percentage of participants falling into the clinical range for both the GSI and each dimension level.

Table 7: Number of participants in clinical range for overall distress and three dimensions of the BSI-18

BSI-18 Scale	Number of participants	%
GSI (or scored in clinical range on two of three subscales)	117	62.23
Depression subscale	129	68.62
Anxiety subscale	116	61.70
Somatisation subscale	96	51.06

3.4 Examining the Five Research Questions (RQs)

Each RQ is analysed separately below. RQ two to five involve testing mediated models. For each model four separate questions were posed and answered. The first question asked whether the predictor variable(s) and the dependent variable(s) were significantly associated. The second question asked whether the predictor variable(s) and the mediator variables were significantly associated. The third question asked whether the mediator variables and dependent variable(s) were significantly associated. The fourth question asked whether the relationship between the predictor variable(s) and dependent variable(s) was significantly mediated by the mediator variables.

3.4.1 Results for RQ 1: Examining the perceived discrimination mental health link.

Three hierarchical multiple regressions tested whether perceived personal and group discrimination were significantly associated with self-esteem, perceived stress and psychological distress, after controlling for the effects of age and gender. To be included in the regression analyses, gender was coded into a dichotomous variable with females arbitrarily categorised as zero, and males as one. To control for their effects, age and gender were entered as covariates at Step 1. They explained 1.9% of the variance in self-esteem, 8.3% of the variance in perceived stress and 9.9% of the variance in psychological distress. Perceived personal and group discrimination were then entered as covariates in Step 2. Table 8 reports the standardized coefficients (β) and *p* values for Step 2 of the three multiple regressions as well as the total amount of variance accounted (R^2).

Table 8: Results from Step 2 of the hierarchical regressions examining the relationship between perceived discrimination and psychological outcomes

Variable	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	β	***p***	**β**	***p***	**B**	***p***
Gender	.11	.161	**-.23**	**.002**	**-.28**	**<.001**
Age	.06	.469	-.11	.142	.07	.357
Personal discrimination	-.13	.159	**.27**	**.002**	**.23**	**.007**
Group discrimination	.02	.842	-.04	.634	.03	.741
R^2	.03	.200	**.14**	**<.001**	**.16**	**<.001**

NOTE: Females coded as 0, males 1

For self-esteem, the addition of both discrimination measures explained a further 1.3% of the variance. This was not statistically significant, R^2 change = .01, *F* change (2, 178) = 1.24, *p* = .293. Neither perceived personal nor perceived group discrimination were significantly associated with self-esteem after controlling for the effects of age and gender.

For perceived stress, the addition of both discrimination measures explained a further 5.8% of the variance, which was statistically significant, R^2 change = .01, *F* change (2, 180) = 6.05, *p* = .003. After controlling for the effects of age and gender, perceived group discrimination was not significantly associated with perceived stress. However perceived personal discrimination was, with higher perceived personal discrimination significantly associated with increased perceived stress.

For psychological distress, the addition of both discrimination measures explained a further 5.7% of the variance, which was statistically significant, R^2 change = .01, *F* change (2, 179) = 5.99, *p* = .003. Again, after controlling for age and gender, perceived group discrimination was not significantly associated with psychological distress. However perceived personal discrimination was, with higher perceived personal discrimination associated with increased psychological distress.

Overall, the three hierarchical multiple regressions found that, after controlling for the effects of age and gender, only perceived personal discrimination was significantly associated with the dependent variables, with higher perceived personal discrimination associated with both increased perceived stress and psychological distress. Overall, the four covariates explained a statistically significant amount of variance in perceived stress and psychological distress but not for self-esteem.

3.4.2 Results for RQ 2: Examining the RIM.

The RIM predicts that perceived discrimination will be directly negatively associated with psychological outcomes, directly positively associated with social identity and will be indirectly associated with positive psychological outcomes mediated by social identity. The RIM is displayed visually in Figure 6. The first part of this model, whether perceived discrimination is associated with psychological outcomes, was analysed above.

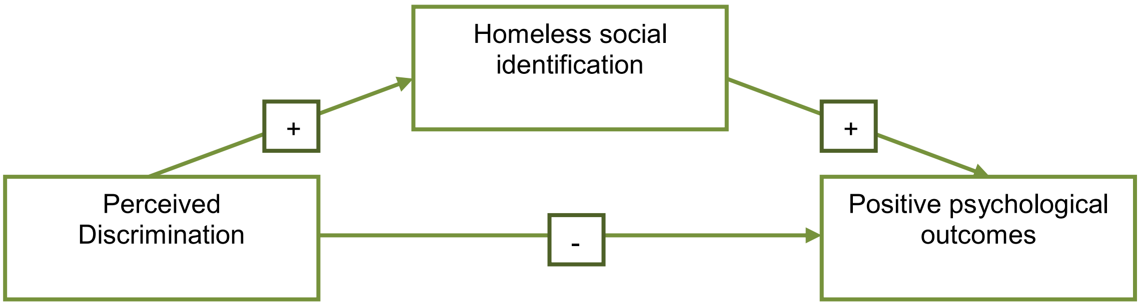


Figure 6: The Rejection Identification Model (RIM)

3.4.2.1 Is perceived discrimination associated with homeless social identity?

To examine the relationships between perceived discrimination, both personal and group, and identity with other homeless people and family, six hierarchical multiple regressions were calculated. For each multiple regression, age and gender were entered as covariates at Step 1 to control for their effects. Perceived personal and group discrimination were then entered as covariates in Step 2. The dependent variables were the five components measuring identity with homeless people and the measure of family identity. Table 9 reports the results for Step 2.

Table 9: Results from Step 2 of the hierarchical regressions examining the relationship between perceived discrimination and social identity

Variable	**Homeless identity**										**Family identity**	
	Solidarity		**Satisfaction**		**Centrality**		**Self-stereotyping**		**Ingroup homogeneity**		**Total scale**	
	β	***p***	**β**	***p***	**β**	***p***	**β**	***p***	**β**	***p***	**β**	***p***
Gender	.02	.828	**-.24**	**.002**	.10	.177	**.18**	**.017**	.06	.434	.08	.325
Age	.03	.680	-.01	.880	-.12	.122	-.04	.604	.02	.785	.07	.337
Personal disc.	.15	.101	.02	.819	.11	.214	**.24**	**.006**	.09	.352	**-.20**	**.030**
Group disc.	.10	.247	-.08	.347	.04	.688	-.04	.674	.04	.667	.11	.184
R^2	**.05**	**.045**	**.06**	**.021**	.05	.074	**.10**	**.001**	.02	.483	.04	.109

NOTE: Females coded as 0, males 1

For the solidarity component, the results from Step 1 found that age and gender explained 0.6% of the variance. The addition of both discrimination measures explained a further 4.6% of the variance, which was statistically significant, R^2 change = .05, F change (2, 180) = 4.40, p = .014. After controlling for the effects of age and gender, neither personal nor group discrimination were significantly associated with the solidarity component.

For the satisfaction component, the results from Step 1 found that age and gender explained 5.7% of the variance. The addition of both discrimination measures explained a further 0.5% of the variance, which was not statistically significant, R^2 change = .01, F change (2, 179) = 0.50, p = .606. After controlling for the effects of age and gender, neither personal nor group discrimination were significantly associated with the satisfaction component.

For the centrality component, the results from Step 1 found that age and gender explained 2.9% of the variance. The addition of both discrimination measures explained a further 1.7% of the variance, which was not statistically significant, R^2 change = .02, F change (2, 180) = 1.62, p = .202. After controlling for the effects of age and gender, neither personal nor group discrimination were significantly associated with the centrality component.

For the individual self-stereotyping component, the results from Step 1 found that age and gender explained 4.8% of the variance. The addition of both discrimination measures explained a further 4.8% of the variance, which was statistically significant, R^2 change = .05, F change (2, 180) = 3.55, p = .009. After controlling for the effects of age and gender, only perceived personal discrimination was significantly associated with the self-stereotyping component, with higher perceived discrimination associated with increased self-stereotyping.

For the ingroup homogeneity component, the results from Step 1 found that age and gender explained 0.7% of the variance. The addition of both discrimination measures explained a further 1.2% of the variance, which was not statistically significant, R^2 change = .01, F change (2, 180) = 1.07, p = .347. After controlling for the effects of age and gender, neither perceived personal nor group discrimination was significantly associated with ingroup homogeneity.

For identity with family, the results from Step 1 found that age and gender explained 1.5% of the variance. The addition of both discrimination measures explained a further 2.6% of the variance, which was not statistically significant, R^2 change = .03, F change (2, 180) = 2.40, p = .094. After controlling for the effects of age and gender, only perceived personal discrimination was significantly associated with identity with family, with higher perceived discrimination associated with reduced identity with family.

Overall, the six hierarchical multiple regressions found that, after controlling for the effects of age and gender, only perceived personal discrimination was significantly associated with any of the dependent variables, with increased perceived personal discrimination associated with increased self-stereotyping and decreased identity with family. Overall, the four covariates explained a statistically significant amount of variance in only solidarity, satisfaction and self-stereotyping.

3.4.2.2 Is social identity associated with positive psychological outcomes?

Three separate hierarchical multiple regressions were used to examine whether identity with both homeless people and family was associated with self-esteem, perceived stress and psychological distress, after controlling for the influence of gender and age. In all three regressions, gender and age were entered at Step 1, and the five identity component scores, as well as the score for family identity were entered at Step 2. Table 10 reports the reports the results for Step 2.

Table 10: Results from Step 2 of the hierarchical regressions examining the relationship between social identity and psychological outcomes

Variable	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	β	***p***	**β**	***P***	**β**	***p***
Gender	.13	.092	**-.28**	**<.001**	**-.29**	**<.001**
Age	.04	.656	-.09	.252	.10	.194
Solidarity	-.14	.096	**.23**	**.003**	.08	.294
Satisfaction	.06	.549	-.08	.401	-.01	.923
Centrality	.08	.455	-.05	.585	.07	.506
Self-stereotyping	-.03	.764	.20	.283	.08	.425
Ingroup homogeneity	-.03	.708	-.07	.403	-.05	.603
Identity with family	**.18**	**.016**	-.07	.315	**-.14**	**.048**
R^2	.07	.110	**.15**	**<.001**	**.14**	**.001**

NOTE: Females coded as 0, males 1

For self-esteem, the results from Step 1 found that age and gender explained 1.9% of the variance. The addition of the five components measuring identity with homeless people and the overall scale measuring identity with family explained a further 5.1% of the variance, which was not statistically significant, R^2 change = .05, F change (6, 175) = 1.61, p = .148. After controlling for the effects of age and gender, only identity with family was significantly associated with self-esteem, with higher levels of family identity associated with increased esteem.

For perceived stress, the results from Step 1 found that age and gender explained 8.3% of the variance. The addition of the five component measuring identity with homeless people and the overall scale measuring identity with family explained a further 6.2% of the variance, which was not statistically significant, R^2 change = .06, F change (6, 176) = 2.13, p = .052. After controlling for the effects of age and gender, only solidarity with homeless people was significantly associated with perceived stress, with higher levels of solidarity associated with increased perceived stress.

For psychological distress, the results from Step 1 found that age and gender explained 9.9% of the variance. The addition of the five components measuring identity with homeless people and the overall scale measuring identity with family explained a further 4.4% of the variance, which was not statistically significant, R^2 change = .04, F change (6, 175) = 1.49, p = .183. After controlling for the effects of age and gender, only identity with family was significantly associated with psychological distress, with higher levels of family identity associated with reduced psychological distress.

Overall, the three hierarchical multiple regressions found that, after controlling for the effects of age and gender, solidarity with homeless people was associated with increased perceived stress and identity with family was associated with increased self-esteem and reduced psychological distress. Overall, the eight covariates explained a statistically significant amount of variance in perceived stress and psychological distress but not self-esteem.

3.4.2.3 Does homeless social identity mediate the relationship between perceived discrimination and positive psychological outcomes?

The PROCESS macro for SPSS (Hayes, 2013) was used to examine whether identity significantly mediated the relationship between perceived discrimination and the psychological outcomes. To be included in the models, predictor variables (perceived discrimination) needed to be associated with either a mediator variable (identity component) or a dependent variable (psychological outcome measure) at a level of p = .10 or less. For dependent variables to be included in the model they needed to be associated with either a predictor variable or mediator variable again at a level of p = .10 or less. All mediators were included in the models. Based on this condition, perceived group discrimination was omitted from all further analyses. While identity with family was found to be significantly associated with dependent variables, it was also omitted as the RIM specifically tests minority identities. Identity with family was included in later analyses.

Three separate mediation models were calculated. In each model, perceived personal discrimination was the predictor variable and the five components measuring homeless identity were included as mediators. For each model, age and gender were entered as covariates that were controlled for on both the dependent and mediator variables. For this model, and all future models, indirect relationships between variables were considered significant when the 95% bias corrected confidence intervals based on 5,000 bootstrap draws did not contain zero.

Table 11 reports the unstandardized coefficients (B) and the lower and upper bias-corrected 95% confidence intervals (95% BC CI) for the indirect effects for the three psychological outcome variables. The three columns represent the separate dependent variables for the three models. The five rows represent the mediator variables, which show the results for each indirect relationship. For example the row titled solidarity reports the results of the indirect relationship between perceived discrimination and each of the psychological outcome variables, mediated by solidarity. Finally, the total indirect effect is reported, which examines the relationship between the predictor variable (perceived discrimination) and each of the dependent variables through all mediators.

Table 11: Unstandardized coefficients and 95% BC CI of the indirect effects of perceived discrimination on psychological outcomes mediated by homeless identity

	Self-esteem		**Perceived stress**		**Psychological distress**	
	B	**95% BC CI**	**B**	**95% BC CI**	**B**	**95% BC CI**
Solidarity	-0.02	-0.06, 0.01	**0.09**	**0.02, 0.25**	0.04	-0.10, 0.25
Satisfaction	0.00	-0.02, 0.01	0.00	-0.03, 0.06	-0.01	-0.15, 0.06
Centrality	0.01	-0.01, 0.05	-0.02	-0.15, 0.03	0.05	-0.07, 0.28
Self-stereotyping	-0.00	-0.04, 0.03	0.03	-0.06, 0.17	0.05	-0.15, 0.35
Ingroup homogeneity	-0.00	-0.03, 0.01	-0.02	-0.13, 0.01	-0.03	-0.24, 0.04
Total indirect effects	-0.01	-0.06, 0.03	0.08	-0.06, 0.24	0.11	-0.16, 0.41

NOTE: Females coded as 0, males 1

As Table 11 shows, there was only one significant indirect effect which was that perceived discrimination was indirectly associated with perceived stress, mediated by solidarity with homeless people. Thus, increased perceived discrimination is directly associated with increased stress and indirectly associated through its relationship with solidarity. This is displayed visually in Figure 7 where non-significant relationships are represented in broken lines, significant relationships are represented with unbroken lines and significant indirect relationships represented by the colour red.

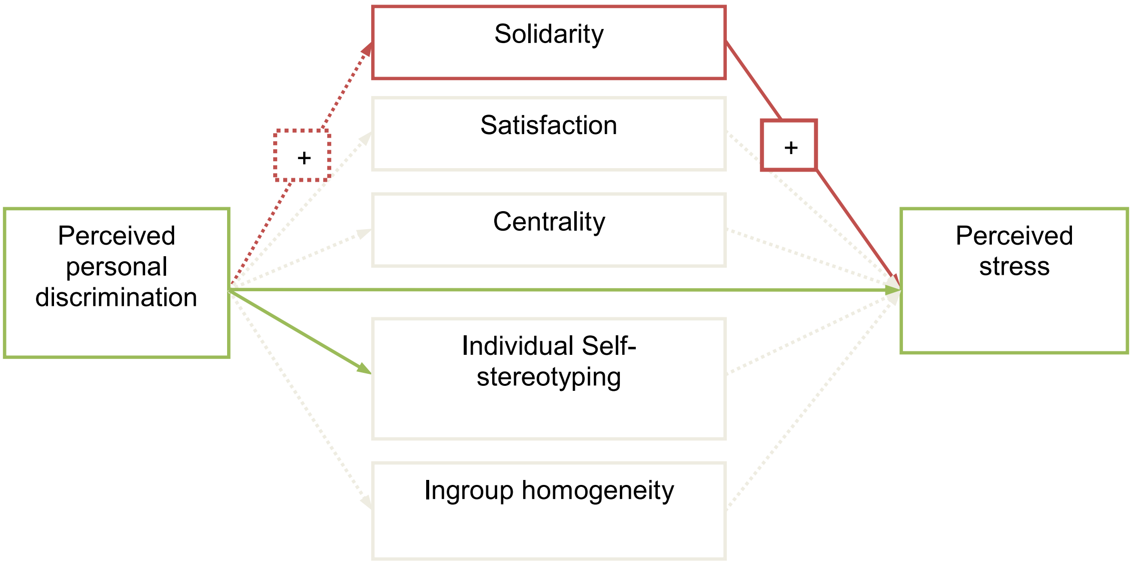


Figure 7: Graphical representation of the RIM with perceived personal discrimination as the predictor variable and perceived stress as the dependent variable

3.4.2.4 Summary of findings in relation to the RIM.

A summary of the key findings is presented in Table 12.

Table 12: Summary of findings related to the RIM

RQ 2:	Is perceived discrimination associated with increased homeless identity and indirectly associated with positive psychological outcomes, mediated by this increased identity as predicted by the RIM?
Key findings:	▪ Perceived personal discrimination is significantly positively associated with the individual self-stereotyping component and significantly negatively associated with family identity. ▪ The solidarity component is significantly positively associated with perceived stress. Family identity is significantly positively associated with self-esteem and significantly negatively associated with perceived stress. The relationships between all other components measuring identity and psychological outcomes were not significant. ▪ When testing the mediated models, only one significant indirect effect was found; perceived discrimination is indirectly associated with perceived stress, mediated by the solidarity component. Thus, increased perceived discrimination is directly associated with increased stress and indirectly associated through its relationship with solidarity.

3.4.3 Results for RQ 3: Examining the SIT/SCT model of stress.

The SIT/SCT model predicts that social identity will be directly associated with positive psychological outcomes and perceived ingroup social support, and indirectly associated with positive psychological outcomes, mediated by perceived ingroup support.

The first part of this model, whether homeless and family social identity is significantly associated with positive psychological outcome, was analysed in section 4.3.2.2. The SIT/SCT model is displayed visually in Figure 8.

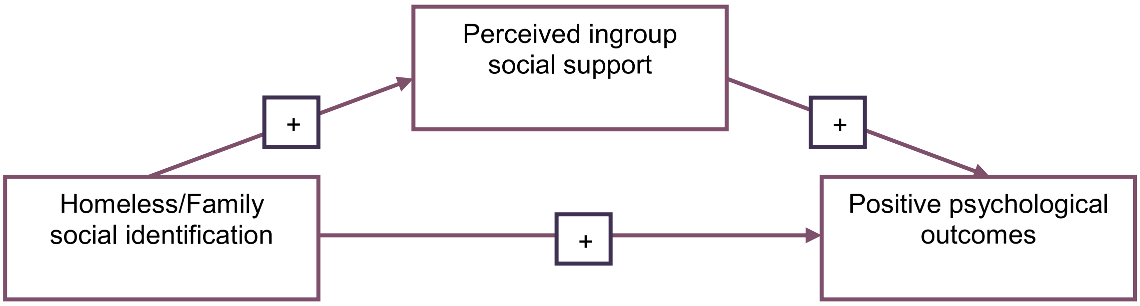


Figure 8: The SIT/SCT model of stress

3.4.3.1 Is social identity significantly associated with perceived support?

Two separate hierarchical multiple regressions were used to examine whether the five components measuring identity with homeless people as well as identity with family were associated with perceived support from both homeless friends and non-homeless family, after controlling for the influence of gender and age. In both regressions, gender and age were entered at Step 1, and the five homeless identity components as well as family identity score entered at Step 2. Table 13 reports the reports the results for Step 2.

Table 13: Results from Step 2 of the hierarchical regressions examining the relationship between social identity and perceived support from two sources

Variable	**Perceived support from homeless friends**		**Perceived support from non-homeless family**	
	β	***p***	**β**	***p***
Gender	-.01	.878	.07	.194
Age	-.11	.151	.00	.973
Solidarity	.09	.276	-.05	.344
Satisfaction	.20	.052	-.07	.314
Centrality	**.25**	**.015**	.12	.058
Self-stereotyping	-.11	.263	-.07	.257
Ingroup homogeneity	-.01	.935	.11	.068
Family	.06	.424	**.77**	**<.001**
R^2	**.17**	**<.001**	**.63**	**<.001**

NOTE: Females coded as 0, males 1

For perceived support from homeless friends, the results from Step 1 found that age and gender explained 2% of the variance. The addition of the five homeless identity components as well as family identity score explained a further 15.1% of the variance, which was statistically significant, R^2 change = .15, F change (6, 152) = 4.61, $p < .001$. After controlling for the effects of age and gender, only the centrality component was significantly associated with perceived support from this source, with higher scores for centrality associated with increased perceived support from homeless sources.

For perceived support from non-homeless family, the results from Step 1 found that age and gender explained 2.7% of the variance. The addition of the five homeless identity components as well as family identity score explained a further 60.2% of the variance, which was statistically significant, R^2 change = .60, F change (6, 168) = 45.44, $p < .001$. After controlling for the effects of age and gender, only identity with family was significantly associated with perceived support from this source, with higher scores for identity associated with increased perceived support from non-homeless family.

Overall, the two hierarchical multiple regressions found that, after controlling for the effects of age and gender, the centrality component was significantly associated with perceived support from homeless friends and the family identity scale was significantly associated with perceived support from non-homeless family. Overall, the eight covariates explained a statistically significant amount of variance in both sources of perceived support.

3.4.3.2 Is perceived social support associated with positive psychological outcomes?

Three separate hierarchical multiple regressions were used to examine whether perceived support from both homeless friends and non-homeless family were associated with self-esteem, perceived stress and psychological distress, after controlling for the influence of gender and age. To control for their effects, gender and age were entered as covariates at Step 1. They explained 1.9% of the variance in self-esteem, 8.3% of the variance in perceived stress and 9.9% of the variance in psychological distress. Perceived support from homeless friends and non-homeless family were then entered as covariates in Step 2. Table 14 reports the reports the results for Step 2.

Table 14: Results from Step 2 of the hierarchical regressions examining the relationship between perceived support and psychological outcomes

Variable	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	β	***p***	**β**	***p***	**β**	***p***
Gender	.13	.128	**-.26**	**.002**	**-.30**	**<.001**
Age	.04	.640	-.05	.514	.13	.114
Perceived support: homeless friends	.09	.294	.03	.726	.00	.982
Perceived support: non-homeless family	.06	.491	-.08	.313	-.14	.082
***R*²**	.03	.323	**.09**	**.007**	**.12**	**.001**

NOTE: Females coded as 0, males 1

For self-esteem, the addition of both sources of support explained a further 1.1% of the variance, which was not statistically significant, R^2 change = .01, *F* change (2, 151) = .84, *p* = .434. For perceived stress, the addition of both sources of support explained a further 0.7% of the variance, which was not statistically significant, R^2 change = .01, *F* change (2, 151) = .55, *p* = .576. For psychological distress, the addition of both sources of support explained a further 1.8% of the variance, which was not statistically significant, R^2 change = .02, *F* change (2, 151) = 1.54, *p* = .218. After controlling for the effects of age and gender, neither source of perceived support was significantly associated with self-esteem, perceived stress or psychological distress. Overall, the four covariates explained a statistically significant amount of variance in both perceived stress and psychological distress but not self-esteem.

3.4.3.3 Does perceived social support mediate the relationship between social identity and positive psychological outcomes?

The PROCESS macro for SPSS (Hayes, 2013) was used. To be included in the models, predictor variables (identity components) needed to be associated with either a mediator variable (perceived support) or a dependent variable (psychological outcome measure) at a level of *p* = .10 or less. For dependent variables to be included in the model they needed to be associated with either a predictor variable or mediator variable again at a level of *p* = .10 or less. Based on these conditions, solidarity, satisfaction, centrality, ingroup homogeneity and family identity were included as predictor variables and all three psychological outcome measures were included as dependent variables. Perceived support from both sources were included as mediator variables.

Fifteen separate mediation models were calculated; each model specified one of the identity measures as the predictor variable and one of the psychological outcomes as the dependent variable. Both perceived support from homeless friends and non-homeless family were entered as mediators in all models. For each model, age and gender were entered as covariates that were controlled for both on the dependent and mediator variables. In addition, the identity measures which were not set as the predictor variable were included as covariates to control for their effect.

As Table 15 shows, the fifteen mediation analyses found only one indirect effect where the bias-corrected bootstrap confidence intervals did not contain zero; perceived support from non-homeless family partially mediated the relationship between identity with family and self-esteem. However, in contrast to the positive relationship between family identity and self-esteem reported above, where higher identity was associated with greater self-esteem, the mediated effect via perceived support from non-homeless family was significantly associated with lower self-esteem. This is displayed visually in Figure 9. All other bias-corrected bootstrap confidence intervals contained zero.

Table 15: Unstandardized coefficients and 95% BC CI of the indirect effects of homeless and family identity on psychological outcomes mediated by perceived support

Identity component/Source of perceived support	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	B	**95%BC CI**	**B**	**95%BC CI**	**B**	**95%BC CI**
Solidarity						
Perceived support: non-homeless family	0.01	-0.00, 0.52	-0.01	-0.10, 0.32	-0.02	-0.21, 0.08
Perceived support: friends homeless	0.00	-0.01, 0.31	-0.00	-0.07, 0.02	-0.01	-0.18, 0.04
Total indirect effects	0.02	-0.00, 0.05	-0.01	-0.10, 0.05	-0.03	-0.22, 0.12
Satisfaction						
Perceived support: non-homeless family	0.00	-0.00, 0.02	-0.00	-0.04, 0.01	-0.00	-0.18, 0.05
Perceived support: friends homeless	0.01	-0.01, 0.21	-0.01	-0.07, 0.03	-0.03	-0.18, 0.04
Total indirect effects	0.01	-0.00, 0.03	-0.01	-0.07, 0.03	-0.03	-0.18, 0.04
Centrality						
Perceived support: non-homeless family	-0.01	-0.04, 0.00	0.01	-0.02, 0.07	0.01	-0.07, 0.17
Perceived support: friends homeless	0.01	-0.00, 0.04	-0.01	-0.09, 0.04	-0.04	-0.24, 0.07
Total indirect effects	-0.00	-0.03, 0.02	-0.00	-0.08, 0.08	-0.03	-0.23, 0.12
Ingroup homogeneity						
Perceived support: non-homeless family	-0.01	-0.05, 0.00	0.01	-0.06, 0.04	0.01	-0.07, 0.20
Perceived support: friends homeless	0.00	-0.01, 0.02	-0.00	-0.06, 0.04	-0.00	-0.15, 0.08
Total indirect effects	-0.01	-0.05, 0.00	0.01	-0.05, 0.10	0.01	-0.13, 0.21
Identity with family						
Perceived support: non-homeless family	**-0.06**	**-0.12, -0.01**	0.05	-0.13, 0.25	0.06	-0.35, 0.52
Perceived support: friends homeless	0.00	-0.00, 0.01	-0.00	-0.03, 0.01	-0.01	-0.09, 0.01
Total indirect effects	**-0.06**	**-0.12,- 0.01**	0.05	-0.14, 0.25	0.05	-0.36, 0.52

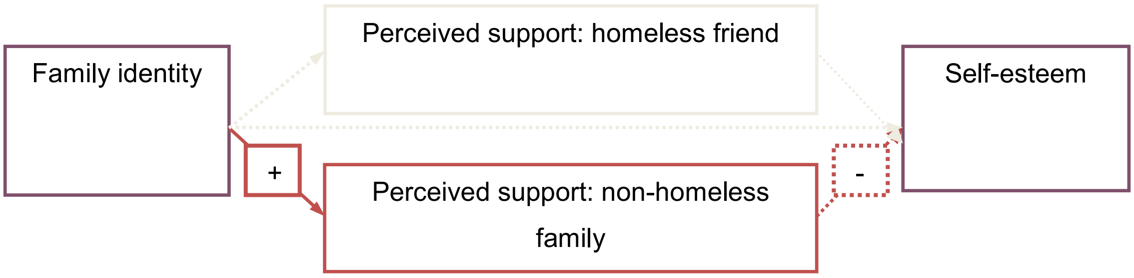


Figure 9: Graphical representation of the SIT/SCT model with family identity as the predictor variable and self-esteem as the dependent variable

3.4.3.4 Summary of findings in relation to the SIT/SCT model.

A summary of the key findings is presented in Table 16.

Table 16: Summary of findings for the SIT/SCT model

RQ 3:	Is homeless and/or family identity both directly associated with positive psychological outcomes and indirectly positively associated, mediated by perceived social support as predicted by the SIT/SCT model of stress?
Key findings:	▪ The centrality component is significantly positively associated with perceived support from homeless friends and family identity is significantly positively associated with perceived support from non-homeless family. ▪ Perceived support, whether it was from homeless friends or non-homeless family was not significantly directly associated with any psychological outcome measure. ▪ When testing the mediated models, only one significant indirect effect was found, which is perceived support from non-homeless family partially mediated the relationship between family identity and self-esteem. However, in contrast to the positive relationship between family identity and self-esteem, the mediated effect via perceived support from non-homeless family was significantly associated with lower self-esteem.

3.4.4 Results for RQ 4: Examining the social identity / coping options mediated model.

The social identity / coping options mediated model is an extension of the RIM and predicts that social identity will be directly positively associated with positive psychological outcomes and directly positively associated with coping options, and indirectly associated with positive psychological outcomes, mediated by coping options. The first part of this model, i.e. whether social identity is associated with positive psychological outcomes was analysed in section 4.3.1. This model is displayed visually in Figure 10.

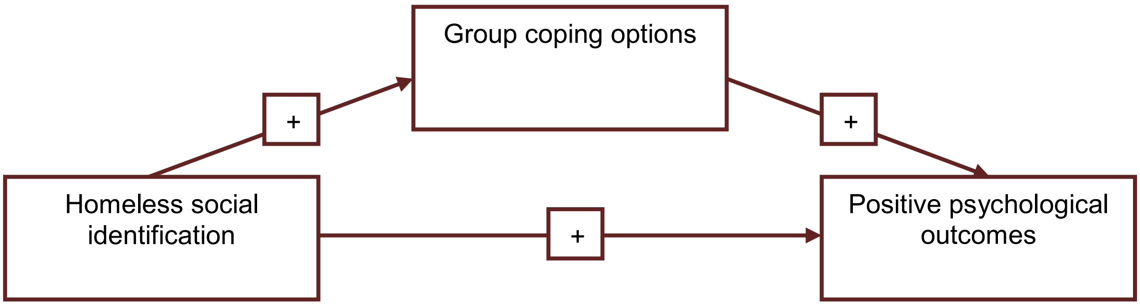


Figure 10: The social identity / coping options mediated model

3.4.4.1 Is homeless social identity significantly associated with coping options?

Six separate hierarchical multiple regressions were used to examine whether the five components measuring identity with homeless people were associated with the six possible coping options, after controlling for the influence of gender and age. In all six regressions, gender and age were entered at Step 1, and the five identity components entered at Step 2. Table 17 reports the reports the results for Step 2.

Table 17: Results from Step 2 of the hierarchical regressions examining the relationship between social identity components and coping options

Variable	**Individual emotion-focused**		**Individual problem-focused**		**Intragroup emotion-focused**		**Intragroup problem-focused**		**Intergroup emotion-focused**		**Intergroup problem-focused**	
	β	***p***	**β**	***p***	**β**	***p***	**β**	***p***	**β**	***p***	**β**	***p***
Age	.05	.543	**.23**	**.003**	.05	.509	.00	.966	-.04	.594	.04	.563
Gender	.14	.073	-.10	.201	-.09	.217	-.02	.752	.01	.904	.01	.945
Solidarity	-.06	.456	.05	.561	**.31**	**<.001**	**.25**	**.001**	.12	.137	**.26**	**.001**
Satisfaction	.09	.383	-.05	.585	.05	.592	**.20**	**.034**	**.28**	**.005**	**.21**	**.032**
Centrality	-.02	.844	-.02	.817	.02	.800	.03	.745	-.11	.273	-.04	.673
Self-stereotyping	-.11	.270	.10	.309	.09	.297	-.02	.866	-.09	.333	-.01	.952
Ingroup homogeneity	**.21**	**.020**	**.20**	**.025**	**.23**	**.004**	**.17**	**.041**	**.26**	**.003**	.14	.100
R^2	.06	.122	**.13**	**.001**	**.29**	**<.001**	**.23**	**<.001**	**.17**	**<.001**	**.19**	**<.001**

NOTE: Females coded as 0, males 1

For individual emotion-focused coping, the results from Step 1 found that age and gender explained 2.1% of the variance. The addition of the five components measuring identity with homeless people explained a further 4.2% of the variance, which was not statistically significant, R^2 change = .04, F change (5, 173) = 1.56, p = .173. After controlling for the effects of age and gender, only the ingroup homogeneity component was significantly associated with individual emotion-focused coping, with higher levels of ingroup homogeneity associated with higher scores for this coping option.

For individual problem-focused coping, the results from Step 1 found that age and gender explained 7.1% of the variance. The addition of the five components measuring identity with homeless people explained a further 6.1% of the variance, which was statistically significant, R^2 change = .06, F change (5, 172) = 2.40, $p = .039$. After controlling for the effects of age and gender, only the ingroup homogeneity component was significantly associated with the coping option, with higher levels of ingroup homogeneity associated with increased scores for individual problem-focused coping.

For intragroup emotion-focused coping, the results from Step 1 found that age and gender explained 1.9% of the variance. The addition of the five components measuring identity with homeless people explained a further 26.8% of the variance, which was statistically significant, R^2 change = .27, F change (5, 171) = 12.84, $p < .001$. After controlling for the effects of age and gender, both the solidarity and ingroup homogeneity components were significantly associated with the coping option, with higher levels of both associated with increased scores for intragroup emotion-focused coping.

For intragroup problem-focused coping, the results from Step 1 found that age and gender explained 0.6% of the variance. The addition of the five components measuring identity with homeless people explained a further 22.4% of the variance, which was statistically significant, R^2 change = .22, F change (5, 171) = 9.95, $p < .001$. After controlling for the effects of age and gender, the solidarity, satisfaction and ingroup homogeneity components were significantly associated with the coping option, with higher scores for the components associated with increased scores for intragroup problem-focused coping.

For intergroup emotion-focused coping, the results from Step 1 found that age and gender explained 0.4% of the variance. The addition of the five components measuring identity with homeless people explained a further 16% of the variance, which was statistically significant, R^2 change = .16, F change (5, 172) = 6.61, $p < .001$. After controlling for the effects of age and gender, both the satisfaction and ingroup homogeneity components were significantly associated with the coping option, with higher scores for both components associated with increased scores for intragroup emotion-focused coping.

For intergroup problem-focused coping, the results from Step 1 found that age and gender explained 0.5% of the variance. The addition of the five components measuring identity with homeless people explained a further 18.5% of the variance, which was statistically significant, R^2 change = .19, F change (5, 173) = 7.89, $p < .001$. After controlling for the effects of age and gender, both the solidarity and satisfaction components were significantly associated with the coping option, with higher score for both components associated with increased scores for intragroup problem-focused coping.

Overall, the six hierarchical multiple regressions, after controlling for the effects of age and gender, found a number of significant relationships between identity component scores and coping options. The solidarity component was associated with increased scores in both of the intragroup coping options as well as intergroup problem-focused coping. The satisfaction component was associated with intragroup problem-focused coping as well as both intergroup options. The ingroup homogeneity component was significantly associated with all coping options except intergroup problem-focused coping. Overall, the seven covariates explained a statistically significant amount of variance in all coping options except individual emotion-focused coping.

3.4.4.2 Are coping options significantly associated with positive psychological outcomes?

Three hierarchical multiple regressions tested whether the six coping options were significantly associated with self-esteem, perceived stress and psychological distress, after controlling for the effects of age and gender. To control for their effects, age and gender were entered as covariates at Step 1. The six coping options were then entered as covariates in step 2. Table 18 reports the reports the results for Step 2.

Table 18: Results from Step 2 of the hierarchical regressions examining the relationship between coping options and psychological outcome measures

Variable	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	β	***p***	**β**	***p***	**β**	***p***
Age	.06	.419	-.08	.287	.12	.105
Gender	.07	.368	**-.23**	**.002**	**-.27**	**<.001**
Individual emotion-focused coping	**.31**	**<.001**	**-.22**	**.005**	**-.31**	**<.001**
Individual problem-focused coping	-.11	.178	.09	.224	.04	.618
Intragroup emotion-focused coping	-.13	.225	-.08	.464	-.06	.579
Intragroup problem-focused coping	-.01	.945	.24	.175	.15	.136
Intergroup emotion-focused coping	.02	.786	-.09	.305	-.02	.846
Intergroup problem-focused coping	.10	.307	.04	.686	-.02	.845
R^2	**.13**	**.002**	**.16**	**<.001**	**.20**	**<.001**

NOTE: Females coded as 0, males 1

For self-esteem, the results from Step 1 found that age and gender explained 1.9% of the variance. The addition of the six coping options explained a further 11% of the variance, which was statistically significant, R^2 change = .11, F change (6, 169) = 3.57, p = .002. After controlling for the effects of age and gender, only individual emotion-focused coping was significantly associated with self-esteem, with greater scores in this coping option associated with increased self-esteem.

For perceived stress, the results from Step 1 found that age and gender explained 8.3% of the variance. The addition of the six coping options explained a further 7.4% of the variance, which was statistically significant, R^2 change = .07, F change (6, 169) = 2.49, p = .025. After controlling for the effects of age and gender, again only individual emotion-focused was significantly associated with perceived stress, with greater scores in this coping option associated with reduced perceived stress.

For psychological distress, the results from Step 1 found that age and gender explained 9.9% of the variance. The addition of the six coping options explained a further 10.5% of the variance, which was statistically significant, R^2 change = .11, F change (6, 169) = 3.72, p = .002. After controlling for the effects of age and gender, again only individual emotion-focused was significantly associated with psychological distress, with greater scores in this coping option associated with reduced distress.

Overall, the three hierarchical multiple regressions found that, after controlling for the effects of age and gender, only individual emotion-focused coping was significantly associated with any outcome, with higher scores in this coping option associated with increased scores for self-esteem and lower scores for perceived stress and psychological distress. Overall, the eight covariates explained a statistically significant amount of variance in all three psychological outcome measures.

3.4.4.3 Do coping options mediate the relationship between homeless social identity and positive psychological outcomes?

The PROCESS macro for SPSS (Hayes, 2013) was used. To be included in the models, predictor variables (identity components) needed to be associated with either a mediator variable (coping options) or a dependent variable (psychological outcome measure) at a level of p = .10 or less. For dependent variables to be included in the model they needed to be associated with either a predictor variable or mediator variable again at a level of p = .10 or less. All mediators were included in the models. Based on this condition, solidarity, satisfaction and ingroup homogeneity were included as predictor variables and all three psychological outcome variables were included as dependent variables.

Nine separate mediation models were calculated; each model specified one of the identity measures as the predictor variable and one of the psychological outcomes as the dependent variable. For each model, age and gender were entered as covariates that were controlled for both on the dependent and mediator variables. In addition, the two identity components which were not set as the predictor variable were included as covariates to control for their effect. The models are discussed below, grouped by the predictor variable.

Table 19 reports the results of the three models examining whether the six coping options mediate the relationship between the solidarity component and the three psychological outcome measures. As all of the confidence intervals contained zero then coping options were not found to significantly mediate the relationship between solidarity and self-esteem, perceived stress and psychological distress.

Table 19: Unstandardized coefficients and 95% BC CI of the indirect effects of solidarity component on psychological outcomes mediated by coping options

Coping option	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	B	**95% CI**	**B**	**95% CI**	**B**	**95% CI**
Individual emotion-focused	-0.01	-0.05, 0.02	0.03	-0.03, 0.14	0.10	-0.11, 0.42
Individual problem-focused	-0.00	-0.03, 0.00	0.01	-0.01, 0.08	0.01	-0.04, 0.13
Intragroup emotion-focused	-0.02	-0.08, 0.02	-0.08	-0.28, 0.07	-0.16	-0.57, 0.16
Intragroup problem-focused	0.00	-0.04, 0.04	0.06	-0.03, 0.25	0.14	-0.06, 0.51
Intergroup emotion-focused	0.00	-0.01, 0.03	-0.02	-0.12, 0.01	-0.02	-0.19, 0.05
Intergroup problem-focused	0.02	-0.01, 0.05	0.00	-0.10, 0.11	-0.04	-0.27, 0.16
Total indirect effects	-0.02	-0.08, 0.04	0.01	-0.16, 0.19	0.04	-0.39, 0.46

Table 20 reports the results of the three models examining whether the six coping options mediate the relationship between the satisfaction component and the three psychological outcome measures. As all of the confidence intervals contained zero then coping options were not found to significantly mediate the relationship between satisfaction and self-esteem, perceived stress and psychological distress.

Table 20: Unstandardized coefficients and 95% BC CI of the indirect effects of satisfaction component on psychological outcomes mediated by coping options

Coping option	Self-esteem		Perceived stress		Psychological distress	
	B	95% CI	B	95% CI	B	95% CI
Individual emotion-focused	0.00	-0.02, 0.02	-0.01	-0.07, 0.03	-0.04	-0.19, 0.10
Individual problem-focused	0.00	-0.00, 0.02	-0.01	-0.05, 0.01	-0.00	-0.08, 0.02
Intragroup emotion-focused	-0.00	-0.03, 0.00	-0.01	-0.09, 0.01	-0.02	-0.18, 0.03
Intragroup problem-focused	0.00	-0.02, 0.02	0.03	-0.01, 0.12	0.07	-0.03, 0.23
Intergroup emotion-focused	0.00	-0.01, 0.02	-0.02	-0.09, 0.01	-0.02	-0.16, 0.07
Intergroup problem-focused	0.01	-0.00, 0.03	0.00	-0.04, 0.05	-0.02	-0.14, 0.07
Total indirect effects	0.01	-0.01, 0.04	-0.02	-0.10, 0.07	-0.03	-0.23, 0.17

Table 21 reports the results of the three models examining whether the six coping options mediate the relationship between the ingroup homogeneity component and the three psychological outcome measures. As all of the confidence intervals contained zero then coping options were not found to significantly mediate the relationship between ingroup homogeneity and self-esteem, perceived stress and psychological distress.

Table 21: Unstandardized coefficients and 95% BC CI of the indirect effects of ingroup homogeneity component on psychological outcomes mediated by coping options

Coping option	Self-esteem		Perceived stress		Psychological distress	
	B	95% CI	B	95% CI	B	95% CI
Individual emotion-focused	0.03	0.00, 0.09	-0.07	-0.21, 0.00	-0.24	-0.63, -0.00
Individual problem-focused	-0.01	-0.05, 0.01	0.05	-0.02, 0.18	0.03	-0.15, 0.26
Intragroup emotion-focused	-0.02	-0.08, 0.03	-0.08	-0.31, 0.07	-0.16	-0.60, 0.15
Intragroup problem-focused	0.00	-0.03, 0.04	0.06	-0.02, 0.21	0.12	-0.04, 0.48
Intergroup emotion-focused	0.01	-0.02, 0.04	-0.04	-0.17, 0.02	-0.04	-0.32, 0.12
Intergroup problem-focused	0.01	-0.00, 0.05	0.00	-0.06, 0.03	-0.02	-0.23, 0.07
Total indirect effects	0.01	-0.05, 0.08	-0.10	-0.31, 0.09	-0.31	-0.82, 0.09

3.4.4.4 Summary of findings in relation to the social identity / coping options mediated model.

A summary of the key findings is presented in Table 22.

Table 22: Summary of findings for the coping options mediated model

RQ 4:	Does problem and emotion-focused coping at the individual, intragroup and intergroup level mediate the putative relationship between social identity and positive psychological outcomes?
Key findings:	▪ The solidarity, satisfaction and ingroup homogeneity components are significantly associated with coping options. Where significant relationships exist, higher scores for the identity components are associated with higher scores for coping options. The centrality and self-stereotyping components are not associated with any coping option. ▪ Individual emotion-focused coping was the only coping option to be significantly associated with any of the three psychological outcome variables. Increased scores in this coping option are associated with increased self-esteem and reduced perceived stress and psychological distress. ▪ When testing the mediated models, no significant indirect effects were found in any of the nine mediated models as all the confidence intervals contained zero. This means that coping options did not significantly mediate the relationships between homeless social identity and any psychological outcomes.

3.4.5 Results for RQ 5: Examining the perceived social support / coping options mediated model.

The perceived social support / coping options mediated model predicts that perceived ingroup social support will be directly positively associated with positive psychological outcomes and directly positively associated with coping options and indirectly associated with positive psychological outcomes, mediated by coping options. The first part of this model, whether perceived social support is associated with positive psychological outcomes and the third part of the model, whether coping options are associated with positive psychological outcomes was analysed in sections 4.3.3.2 and 4.3.4.2 respectively. This model is displayed visually in Figure 11.

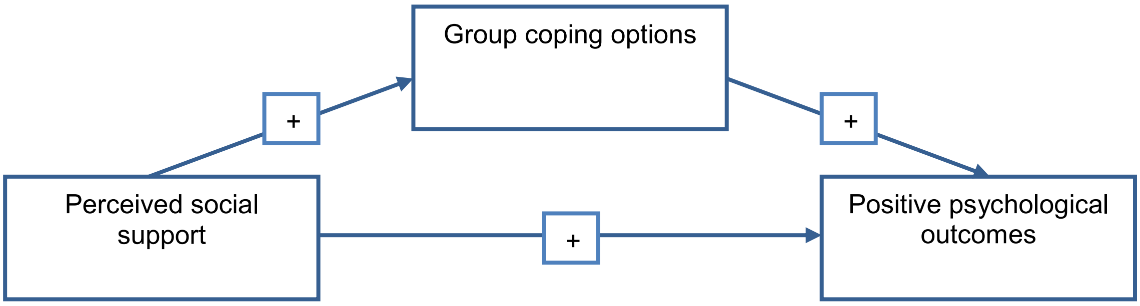


Figure 11: The perceived social support / coping options mediated model

3.4.5.1 Is perceived social support associated with coping options?

Six separate hierarchical multiple regressions were used to examine whether perceived support from both homeless friends and non-homeless family were associated with the six possible coping options, after controlling for the influence of gender and age. In all six regressions, gender and age were entered at Step 1, and the two sources of perceived support entered at Step 2. Table 23 reports the reports the results for Step 2.

Table 23: Results from Step 2 of the hierarchical regressions examining the relationship between perceived social support and coping options

Variable	**Individual emotion-focused**		**Individual problem-focused**		**Intragroup emotion-focused**		**Intragroup problem-focused**		**Intergroup emotion-focused**		**Intergroup problem-focused**	
	β	***p***	**β**	***p***	**β**	***p***	**β**	***p***	**β**	***p***	**β**	***p***
Age	.04	.650	**.28**	**<.001**	.14	.055	.08	.311	-.03	.762	.09	.288
Gender	.13	.108	-.08	.325	-.10	.185	-.05	.533	-.01	.893	-.03	.674
Perceived support homeless friends	.08	.309	**.18**	**.022**	**.40**	**<.001**	**.45**	**<.001**	**.22**	**.006**	**.27**	**.001**
Perceived support non-homeless family	.04	.640	.03	.678	**.15**	**.040**	.05	.476	-.04	.646	.11	.179
R^2	.03	.345	**.11**	**.002**	**.21**	**<.001**	**21**	**<.001**	**.05**	**.079**	**.09**	**.006**

NOTE: Females coded as 0, males 1

For individual emotion-focused coping, the results from Step 1 found that age and gender explained 2.1% of the variance. The addition of both sources of perceived support explained a further 0.01% of the variance, which was not statistically significant, R^2 change = .01, F change (2, 151) = 0.66 p = .518. After controlling for the effects of age and gender, neither source of perceived support was significantly associated with this coping option.

For individual problem-focused coping, the results from Step 1 found that age and gender explained 7.1% of the variance. The addition of both sources of perceived support explained a further 3.4% of the variance, which was not statistically significant, R^2 change = .03, F change (2, 151) = 2.85, p = .061. After controlling for the effects of age and gender, only perceived support from homeless friends was significantly associated with the coping option, with higher levels of perceived support associated with increased scores for individual problem-focused coping.

For intragroup emotion-focused coping, the results from Step 1 found that age and gender explained 1.9% of the variance. The addition of both sources of perceived support explained a further 18.7% of the variance, which was statistically significant, R^2 change = .19, F change (2, 151) = 17.78, $p < .001$. After controlling for the effects of age and gender, perceived support from both homeless friends and non homeless family was significantly associated with the coping option, with higher levels of both associated with increased scores for intragroup emotion-focused coping.

For intragroup problem-focused coping, the results from Step 1 found that age and gender explained 0.6% of the variance. The addition of both sources of perceived support explained a further 20.2% of the variance, which was statistically significant, R^2 change = .20, F change (2, 151) = 19.28, $p < .001$. After controlling for the effects of age and gender, only perceived support from homeless friends was significantly associated with the coping option, with higher levels of perceived support associated with increased scores for intragroup problem-focused coping.

For intergroup emotion-focused coping, the results from Step 1 found that age and gender explained 0.4% of the variance. The addition of both sources of perceived support explained a further 5% of the variance, which was statistically significant, R^2 change = .05, F change (2, 151) = 3.93, p = .022. After controlling for the effects of age and gender, only perceived support from homeless friends was significantly associated with the coping option, with higher levels of perceived support associated with increased scores for intragroup emotion-focused coping.

For intergroup problem-focused coping, the results from Step 1 found that age and gender explained 0.5% of the variance. The addition of both sources of perceived support explained a further 8.7% of the variance, which was statistically significant, R^2 change = .09, F change (2, 151) = 7.26, p = .001. After controlling for the effects of age and gender, only perceived support from homeless friends was significantly associated with the coping option, with higher levels of perceived support associated with increased scores for intragroup problem-focused coping.

Overall, the six hierarchical multiple regressions, after controlling for the effects of gender and age, found a number of significant relationships between both sources of perceived support and coping options. Perceived support from non-homeless family was significantly associated with increased scores for intragroup emotion-focused coping. Perceived support from homeless friends was significantly associated with all coping options except individual emotion-focused coping, with higher levels of perceived support from this source associated with higher scores for coping options. Overall, the four predictor variables explained a statistically significant amount of variance in all coping options except individual emotion-focused coping.

3.4.5.2 Do coping options mediate the relationship between perceived social support and positive psychological outcomes?

The PROCESS macro for SPSS (Hayes, 2013) was used. To be included in the models, predictor variables (sources of perceived support) needed to be associated with either a mediator variable (coping option) or a dependent variable (psychological outcome variables) at a level of p = .10 or less. For dependent variables to be included in the model they needed to be associated with either a predictor variable or mediator variable again at a level of p = .10 or less. Based on these conditions both sources of perceived support were included as predictor variables and all three psychological outcome measures were included as dependent variables. All six coping options were included as mediator variables.

Six separate mediation models were calculated; each model specified one source of perceived support as the predictor variable and one of the psychological outcomes as the dependent variable. All six coping options were entered as mediators in all models. For each model, age and gender were entered as covariates that were controlled for both on the dependent and mediator variables. In addition, the perceived support which was not set as the predictor variable was included as covariates to control for its effect.

As Table 24 shows, the six mediation analyses found only one indirect effect where the bias-corrected bootstrap confidence intervals did not contain zero; intragroup problem-focused coping mediated the relationship between perceived support from homeless sources and psychological distress, where higher support was associated with higher levels of psychological distress mediated by increased intragroup problem-focused coping. This is displayed visually in Figure 12. All other bias-corrected bootstrap confidence intervals contained zero.

Table 24: Unstandardized coefficients and 95% BC CI of the indirect effects of perceived support on psychological outcomes mediated by coping options

Source of perceived support / coping option	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	B	**95%BC CI**	**B**	**95%BC CI**	**B**	**95%BC CI**
Perceived support homeless						
Individual emotion-focused	0.01	-0.00, 0.04	-0.02	-0.11, 0.01	-0.07	-0.30, 0.02
Individual problem-focused	-0.01	-0.03, 0.00	0.02	-0.02, 0.09	-0.01	-0.12, 0.10
Intragroup emotion-focused	-0.03	-0.08, 0.13	-0.02	-0.21, 0.14	-0.06	-0.38, 0.27
Intragroup problem-focused	-0.01	-0.08, 0.04	0.10	-0.05, 0.31	**0.31**	**0.01, 0.76**
Intergroup emotion-focused	0.00	-0.01, 0.02	-0.03	-0.12, 0.02	-0.02	-0.18, 0.13
Intergroup problem-focused	0.01	-0.01, 0.04	0.01	-0.05, 0.09	0.00	-0.14, 0.16
Total indirect effects	-0.03	-0.07, 0.01	0.05	-0.09, 0.19	0.15	-0.16, 0.45
Perceived support family						
Individual emotion-focused	-0.00	-0.01, 0.01	0.00	-0.03, 0.03	0.00	-0.08, 0.10
Individual problem-focused	-0.00	-0.01, 0.00	0.00	-0.01, 0.04	-0.00	-0.05, 0.03
Intragroup emotion-focused	-0.00	-0.02, 0.00	-0.00	-0.05, 0.02	-0.01	-0.10, 0.03
Intragroup problem-focused	0.00	-0.01, 0.01	-0.00	-0.05, 0.02	-0.01	-0.11, 0.06
Intergroup emotion-focused	-0.00	-0.01, 0.00	0.01	-0.01, 0.06	0.01	-0.04, 0.10
Intergroup problem-focused	0.00	-0.00, 0.01	0.00	-0.01, 0.03	0.00	-0.03, 0.04
Total indirect effects	-0.00	-0.02, 0.01	0.01	-0.05, 0.06	-0.01	-0.14, 0.12

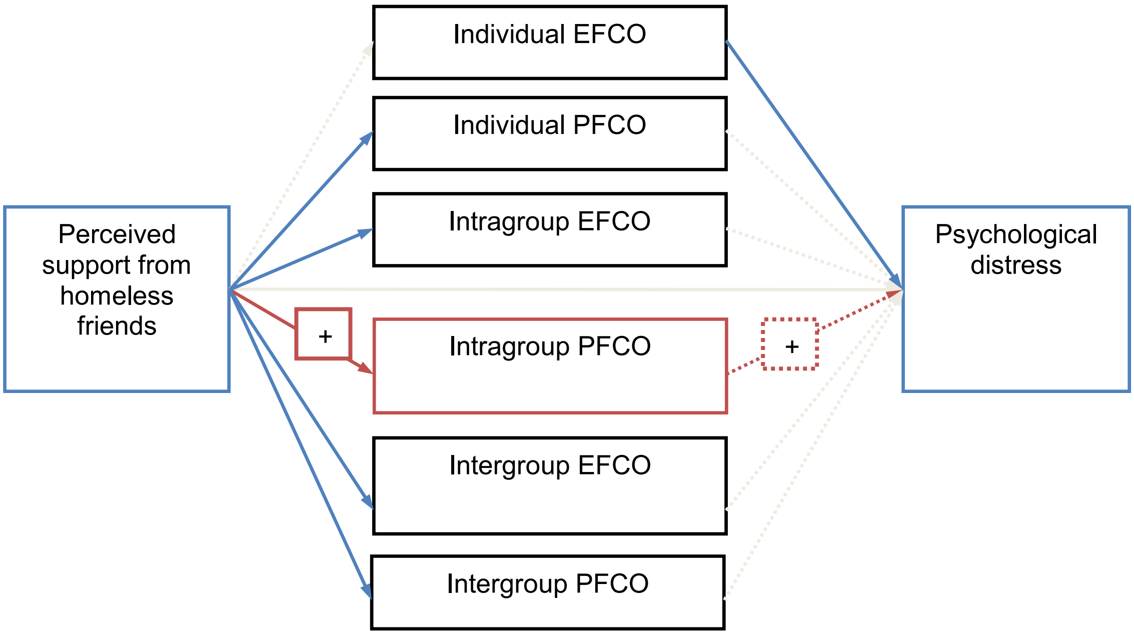


Figure 12: Graphical representation of the perceived social support / coping options mediated model

3.4.5.3 Summary of findings in relation to the perceived social support / coping options mediated model.

A summary of the key findings is presented in Table 25.

Table 25: Summary of findings examining whether coping options mediate the relationship between perceived support and psychological outcomes

RQ 5:	Does problem and emotion-focused coping at the individual, intragroup and intergroup level mediate the putative relationship between perceived social support and positive psychological outcomes?
Key findings:	▪ Perceived support from homeless sources is significantly associated with all coping options except individual emotion-focused coping, with higher levels of perceived support associated with increased scores for coping options. Perceived support from family was only significantly associated with individual emotion-focused coping, again with higher perceived support associated with greater scores for this coping option. ▪ When testing the mediated models, only one significant indirect effect was found: perceived support from homeless friends is significantly associated with psychological distress mediated by intragroup problem-focused coping, where higher support was associated with higher levels of psychological distress mediated by increased intragroup problem-focused coping.

3.4.6 Overall Percentage of Variance Accounted For by Perceived Discrimination, Social Identity, Perceived Social Support and Coping Options.

While the analyses above examine the relationships between the psychological outcome variables and the social psychological variables of interest, they consider these variables in isolation. As a result, they are unable to report on whether perceived discrimination, social identity, perceived support and coping options account for a meaningful amount of variance in self-esteem, perceived stress and psychological distress. To answer this question, three hierarchical multiple regressions were calculated with one of the three psychological outcome measures as the dependent variable for each regression. For each multiple regression, age and gender were entered as covariates at Step 1 to control for their effects. To reduce the number of predictor variables in each model, all previous multiple regressions with a psychological outcome as a dependent variable were reviewed and any predictor variable which was associated with the dependent variable at a level of p = .10 or less was included in the current regression. Based on this review, solidarity with other homeless people, social identity with family and individual emotion focused coping were associated with self-esteem at a level of p = .01 or less in the multiple regressions above and were included in the regression. For perceived stress, the dependent variables where were previously associated at a level of p = .01 or less were perceived personal discrimination, solidarity with other homeless people and individual emotion focused coping. For psychological distress, the identified predictor variables were perceived personal discrimination, identity with family, perceived support from non-homeless family and individual emotion focused coping. These predictor variables were entered at Step 2. Table 26 reports the results of Step 2 for the three multiple regressions.

Table 26: Results from Step 2 of the hierarchical regressions examining the percentage of variance accounted for in psychological outcome variables

Variable	**Self-esteem**		**Perceived stress**		**Psychological distress**	
	β	***p***	**β**	***p***	**β**	***p***
Gender	.06	.389	**-.20**	**.005**	**-.22**	**.002**
Age	.01	.875	-.07	.335	.13	.083
Personal discrimination	-	-	**.15**	**.038**	**.16**	**.033**
Solidarity	-.09	.184	**.164**	**.021**	-	-
Identity with family	**.17**	**.016**	-	-	-.11	.328
Perceived support, non-homeless family	-	-	-	-	-.15	.882
Individual emotion focused coping	**.289**	**.000**	**-.21**	**.002**	**-.27**	**.000**
R^2	**.14**	**<.001**	**.19**	**<.001**	**.21**	**<.001**

NOTE: Females coded as 0, males 1

For self-esteem, the results from Step 1 found that gender and age explained 1.5% of the variance. The addition of the solidarity subscale measuring identity with other homeless people, identity with family and individual emotion focused coping explained a further 12.4% of the variance after controlling for the effects of gender and age, which was statistically significant, R^2 change = .12, F change (3, 174) = 8.34, $p < .001$.

For perceived stress, the results from Step 1 found that gender and age explained 7.3% of the variance. The addition of perceived personal discrimination, the solidarity subscale measuring identity with other homeless people and individual emotion focused coping explained a further 11.3% of the variance after controlling for the effects of gender and age, which was statistically significant, R^2 change = .11, F change (3, 175) = 8.12, $p < .001$.

For psychological distress, the results from Step 1 found that gender and age explained 9.1% of the variance. The addition of perceived personal discrimination, identity with family, perceived support from non-homeless family and individual emotion focused coping explained a further 12.2% of the variance after controlling for the effects of gender and age, which was statistically significant , R^2 change = .12, F change (4, 166) = 6.41, $p < .001$.

4. Discussion

4.1 Aim of the Study

The present research used a social identity approach to enhance our understanding of the relationship between homelessness and mental health, focusing on the roles of perceived discrimination, social identity, social support and coping options. As such, it provides valuable insight into an area that is poorly understood and of considerable importance owing to the prevalence of homelessness and the consistent findings that it is associated with poor mental health (Busch-Geertsema et al., 2010; FEANTSA, 2006a; Jones & Pleace 2010; Muñoz & Vázquez, 1999; Rees, 2009).

To further our understanding of this area, five specific RQs were considered. The first asked whether the link between homelessness and mental health could be explained by perceived discrimination experienced by homeless people. The second asked whether homeless people increasingly identify as homeless as a result of this discrimination and whether this is associated with positive psychological outcomes, as it can be for other stigmatized minorities. The mechanisms by which minority identity buffers the negative effects of discrimination is as yet unknown, however two main ideas have been posited to explain the relationship; through providing access to increased ingroup support or through making group level coping strategies possible. Therefore, the third question asked whether any relationship between minority identity and mental health was mediated by social support from ingroup members and the fourth question asked whether this relationship was mediated by appraisal of group level coping strategies as predicted by SIT. Finally, social support is theorised to subsume a number of coping strategies, including those at a group level, however this has yet to be tested. Therefore the fifth question asked whether appraisal of coping options mediated any relationship between perceived support and psychological outcomes.

4.2 Key Findings

The following section summarises the key findings and considers these in relation to current theories and previous research findings. The section begins with a general summary. Following this, findings in relation to participant characteristics are discussed. The section then discusses the findings in relation to each RQ in greater detail and concludes with an overall consideration of these findings.

4.2.1 Overall summary.

The current research found that homeless people do perceive discrimination as a result of their stigmatized group membership and that this is associated with higher perceived stress and psychological distress. In addition, this research found that females reported significantly higher perceived stress and psychological distress. However, unlike other stigmatized minorities, while perceived discrimination is associated with increased homeless identity, this identity did not buffer the negative effects of discrimination and was found to be indirectly associated with increased perceived stress. To understand these contrary findings the research examined the use of coping resources and strategies perceived to arise from group membership. These were perceived social support and coping options at the individual, intragroup and intergroup level. Identity with, and perceived support from, family were also examined. While increased social identity with homelessness was associated with increased perceived support from other ingroup members and appraisal of all coping options except individual emotion-focused coping, neither ingroup support nor coping options ameliorated the negative link between minority identity and mental health. With regard to family, while identity with family was directly associated with perceived family support, increased self-esteem and reduced distress, it was indirectly associated with reduced self-esteem mediated by perceived family support. This suggests that, while the overall association between identity and family is positive, a more detailed examination reveals that this is not universally so. Finally, whether the perception of support from homeless people was associated with the appraisal of individual, intragroup and intergroup coping options was examined. Similar to the findings in relation to the homeless social identity, perceived support from homeless people was significantly associated with all coping options except individual emotion-focused coping. However, perceived support was found to be indirectly associated with increased psychological distress, mediated by intragroup problem-focused coping. Thus, participants who reported higher levels of perceived support also reported higher appraisal of intragroup problem-focused coping and this was associated with greater levels of psychological distress. Overall these findings highlight the negative association between homelessness and health via social identity related processes.

4.2.3 Summary of findings for RQ 1: Examining the perceived discrimination mental health link.

Overall, this research found that the homeless people sampled experience high levels of psychological distress. These high rates of distress are consistent with the elevated rates of psychological distress and mental illness reported internationally (Busch-Geertsema et al., 2010; Fazal et al., 2008) and in other English homeless populations (FEANTSA, 2006b; Gill et al., 1996; Jones & Pleace 2010). With regard to discrimination, the current study found that higher perceived personal discrimination was significantly associated with increased perceived stress and psychological distress. Perceived group discrimination was not associated with any psychological outcome.

The findings that higher levels of perceived personal discrimination were associated with increased perceived stress and psychological distress is in line with previous research conducted with other stigmatised minorities (e.g. Cassidy et al., 2004; Pascoe & Smart Richman, 2009; Sellers et al., 2003; Thoits, 2010) and with unpublished research examining this relationship with homeless adults (Tully, 2011). This finding is also as expected given that homeless people are likely to experience discrimination frequently and across contexts and for which they are considered to be somewhat personally responsible for by the general public (Toro et al., 2007), which are all factors associated with increased negative outcomes (Crocker & Major, 1989; Schmitt & Branscombe, 2002). In addition, homelessness for most people involves a transition from a valued identity to a devalued one (Boydell et al., 2000), thus increasing the likelihood that they accept the outgroup's negative attitudes towards their group. Again, this is associated with increased negative outcomes (Crocker & Major, 1989).

The finding that perceived group discrimination was not associated with psychological outcomes is contrary to previous research which found a significant association between perceived group discrimination and higher self-esteem (Armenta & Hunt, 2009; Bourguignon et al., 2006), although neither study involved homeless participants. However, both studies posited that perceiving the group to be the target of the discrimination reduces perceived personal responsibility. While research has not specifically examined whether homeless people who perceive the group to be a target of the discrimination also experience reduced personal responsibility, this is unlikely given that homeless people are generally considered to be, to some extent, personally responsible for their stigmatised condition by society at large. They may also consider themselves to be responsible since they are likely to accept the outgroup's negative attitude as described above.

4.2.4 Summary of findings for RQ 2: Examining the RIM.

The RIM predicts that perceiving discrimination towards one's ingroup will have negative psychological consequences. However, in response to this perceived discrimination, group members will increase their identity with their stigmatised ingroup, which will buffer some of these negative effects. While the model does not account for other social identities, such as family identity, this was included in some of the relationships to control for its effect and also to examine its relationship to psychological outcomes.

The current research found mixed support for the RIM. Together, both sources of perceived discrimination explained a significant amount of variance in only the solidarity and individual self-stereotyping components measuring homeless identity. Females also reported significantly higher scores in the satisfaction and self-stereotyping components of homeless identity When the specific relationships were examined, only perceived personal discrimination showed any significant relationships with measures of identity, with higher perceived personal discrimination associated with increased self-stereotyping but decreased family identity. In addition, this increase in social identity was not associated with positive psychological outcomes. Taken together, the five homeless identity components, as well as family identity, did not explain a significant amount of variance in any of the three psychological outcome measures. Furthermore, an examination of the specific relationships between social identity and the three psychological outcome measures revealed that only the solidarity component was significantly associated with perceived stress and only family identity was significantly associated with both self-esteem and psychological distress. While increased family identity was associated with increased self-esteem and reduced psychological distress, solidarity was associated with increased perceived stress, a finding which runs contrary to the RIM.

When the overall model was examined using the five homeless identity components, only one indirect effect was found to be significant. The relationship between perceived individual discrimination and perceived stress was significantly mediated by the solidarity component. Thus, in addition to the direct relationship between perceived personal discrimination and increased perceived stress, it was also indirectly associated through the positive relationship between solidarity and discrimination. Again this finding runs contrary to the RIM with minority identity associated with increased distress rather than reduced distress as predicted.

When the current results are considered in terms of previous research findings a mixed picture emerges. The findings that both forms of discrimination together were significantly associated with the solidarity component and that perceived personal discrimination was significantly associated with only individual self-stereotyping is not in line with previous research which used the same measure of identity. Leach and colleagues (Leach et al., 2008; Leach, Mosquerea, Vliek, & Hirt, 2010) found that perceived personal discrimination was associated with only increased ingroup satisfaction when measuring ingroup identity with Europeans and University students for two samples of students (ibid.). However, the current finding is in line with research conducted by Latrofa, Vaes, Pastore and Cadinu (2009) who found that perceived discrimination was significantly associated with increased self-stereotyping for Southern Italians although they did not use the same measure.

Leach et al. (2010) propose that, when faced with perceived discrimination, increases in individual self-stereotyping suggest individuals are using the ingroup identity to see themselves as more similar to other ingroup members and sharing common circumstances and thereby avoiding feeling isolated in their suffering. Given that the homeless identity is not associated with positive outcomes, and that qualitative research finds that people’s coping strategies change over time from distancing oneself from the group to greater embracement (Farrington & Robinson, 1999; Snow & Anderson, 1987), an alternative view may be that perceiving discrimination towards oneself as a result of being homeless over time reinforces the view that, despite your best efforts to try to remain separate from the group, and indeed to escape from the group, you share similarities and commonalities with others who are homeless.

The finding that homeless identity was not associated with a significant amount of variance in any psychological outcome does run contrary to the RIM and some previous findings (e.g. Branscombe et al., 1999; Crabtree et al., 2010; Schmitt et al., 2003). However, the majority of research examining the buffering effects of identity report null findings (Pascoe & Smart Richman, 2009). That solidarity was significantly associated with perceived stress and also mediated the relationship between perceived discrimination and increased stress is also contrary to the RIM, although a minority of previous research has found that higher identification was associated with greater perceived stress and depression and lower self-esteem or well-being for minority groups including women, Latino Americans and African American adolescents (McCoy & Major, 2003; Pascoe & Smart Richman, 2009; Sellers, Copeland-Linder, Martin, & Lewis, 2006). Published research has not yet examined the RIM with homeless participants and therefore whether this finding holds for other homeless populations is unknown.

Research has not yet come to fully understand why some stigmatised identities buffer and some exacerbate the negative effects of perceived discrimination on psychological well-being (Barreto & Ellemers, 2010). This may depend on the power and resources available to the discriminated against group. That the homeless identity does not provide stress buffering resources to members who identify with their stigmatised group may explain this contrary finding. This is discussed further below.

4.2.5 Summary of findings for RQ 3: Examining the SIT/SCT model of stress.

The SIT/SCT model of stress predicts that ingroup members who socially identify with their group will benefit from increased ingroup support and that this will mediate the relationship between social identity and positive mental health. The current research examined both identity with, and support from, homeless sources and non-homeless family concurrently as research has found a relationship between both sources of support and psychological outcomes for homeless people (Bates & Toro, 1999; Toro et al., 2007).

Again, the current research found mixed support. As predicted family identity was associated with reduced psychological distress and increased perceived support. However, perceived support from family sources was not directly associated with better psychological outcomes and when the indirect effects were examined, higher family identity was found to be indirectly associated with reduced self-esteem mediated by perceived family support. With regard to homeless identity and support, while higher levels of homeless identity were significantly associated with perceiving support from homeless friends, solidarity with homeless people was significantly associated with increased perceived stress, which runs contrary to the model.

The finding that family identity is indirectly associated with reduced self-esteem mediated by perceived support from family is contrary to the majority of research which finds a positive link between perceived social support and mental health in the general population (Barrera, 1986; Cohen & Wills, 1985; Schwarzer & Leppin, 1991; Thoits, 2011) as well as unpublished research conducted with homeless participants which found that perceived family support was positively associated with mental health (Tully, 2011). However, this research did not consider the impact on self-esteem. As a result the current findings are somewhat unexpected and their reasons unknown. One explanation is that homeless people who reported a high level of family identity and also perceived a high level of support from this source felt most disappointed about their homeless status and themselves as a result. Homelessness is generally associated with reduced family support (Firdion & Marpsat, 2007) but if homeless people identify with, and perceive support from, other family members then this may possibly lead to homeless people experiencing a higher level of self-blame for their homeless status and therefore lower esteem. Future research is required to examine whether this relationship holds for other homeless populations and also to determine when family identity and perceived support from non-homeless family is helpful or harmful to the self-esteem of homeless people.

The finding that perceived support from homeless sources was not associated with psychological outcomes is at variance with the majority of research with the general population as well as with homeless people, where perceived support has been associated with improved outcomes (Bates & Toro, 1999; Toro et al., 2008). However, previous research used a general measure of perceived support and did not differentiate between perceived support from different ingroups. When the SIT/SCT model was previously examined with homeless participants and perceived support from homeless ingroup members was explicitly measured, the research found that perceived support from homeless sources was associated with increased psychological distress and socially identifying with other homeless people was indirectly associated with distress, mediated by perceived ingroup support (Tully, 2011). However, the current research findings are also at variance with this finding. One possible explanation is that the previous research considered both perceived support from homeless friends and significant others when testing the model, whereas the current research only considered the perceived support from homeless friends. This was due to the small percentage of homeless people in the current research who said that they had a significant other. Research, although not with homeless people, has found that the relationship between social support and well-being is moderated by the source of that support. For example, Walen and Lachman (2000) found that while social support from both friends and a significant other was associated with positive psychological outcomes, only strain from significant others was associated with negative psychological outcomes. If perceived support from significant others also comes with high levels of strain then this may have affected the relationship between support and psychological outcomes in the previous study but not for the current study.

4.2.6 Summary of findings for RQ 4: Examining the social identity / coping options mediated model.

The coping options model is an extension of the RIM and posits that group identity fosters appraisal of emotion and problem-focused coping at the individual, intragroup and intergroup level, which mediate the relationship between social identity and well-being (Outten et al., 2009).

Once again, the current findings provide mixed evidence for this model. Higher levels of identity with homelessness were significantly associated with increased appraisal of all coping options except individual emotion-focused coping. Appraisal of the six coping options was significantly associated with all three psychological outcome measures, with higher appraisals of coping associated with better psychological outcomes. However, when the overall model was examined, no significant indirect relationships were found meaning that appraisal of coping options did not mediate the relationships between homeless identity and any of the three psychological outcome variables. An examination of the specific relationships illuminates these null findings. Endorsement of individual emotion-focused coping was the only coping option to be significantly associated with any of the psychological outcome measures. However, it was also the only coping option where the five homeless identity components did not explain a statistically significant amount of variance in the score.

The results of the current research can be considered in relation to Outten et al.'s (2009) findings using the same measure. They found that, for African Americans, racial identification was significantly associated with increased appraisal of all six coping options. Moreover, appraisal of individual emotion-focused coping and both intergroup coping options (i.e. social creativity and social competition) was associated with better psychological outcomes and also mediated the positive relationship between identity and well-being.

However, appraisals of individual problem-focused coping and both intragroup coping options (i.e. ingroup social support) were not associated with improved outcomes.

The current findings that individual emotion-focused but not problem-focused coping was associated with improved outcomes is in line with Outten et al.'s (2009) findings and provide further evidence that stigmatised group members can benefit from reappraising the emotional consequences of discrimination but not through attempting to resolve the discrimination alone. The current finding that intergroup coping was not associated with improved outcomes is contrary to Outten et al.'s findings. Although these findings are at variance, this may reflect differences between the two groups surveyed. While African Americans have engaged in both social creativity (e.g. Black is beautiful) and social competition (e.g. collective protests during the Civil Rights Movement) (Outten et al., 2009), the use of these coping options has not been observed in homeless people (Farrington & Robinson, 1999). That both studies found that intragroup coping options were not associated with positive outcomes suggests that appraising that one can rely on ingroup members to counter the effects of discrimination does not protect mental health. These null findings are also in line with the majority of research examining the mediating effects of coping options on the perceived discrimination-mental health relationship (Pascoe & Smart Richman, 2009) although these studies did not differentiate between individual, intragroup and intergroup coping and did not involve homeless participants.

With regard to the specific relationships between the identity components and coping options, the ingroup homogeneity component was associated with increased appraisal of all coping options except intragroup problem-focused coping. This component is conceptualised as seeing the whole group as coherent and cohesive. Thus, its relationship to emotion and problem-focused coping at the individual and intragroup levels may be because individuals who see the group as homogenous, on the one hand perceive other homeless people as equally in need of or lacking resources and on the other hand, perceive the group to be cohesive. As a result, they engage in both individual coping as they are aware that other ingroup members cannot provide the assistance necessary and intragroup coping strategies, as equally they know that others are in need of assistance. Farrington and Robinson (1999) noted somewhat similar patterns used by people who had experienced homelessness for longer than five years where participants both differentiated themselves from other ingroup members but also showed a high level of sharing with ingroup members. This rationale may also explain the increased appraisal of intergroup emotion but not intergroup problem-focused coping as the former requires group cohesion but not resources whereas the latter requires both cohesion and resources so that the group can engage in social competition.

The significant relationship between the solidarity component and both forms of intragroup coping is expected as both are dependent on the presence of a psychological bond between ingroup members. That solidarity is associated with appraisal of intergroup problem-focused (i.e. social competition) but not intergroup emotion-focused (i.e. social creativity) coping may reflect that the former requires group members to work together to counter discrimination whereas the latter does not require a bond and instead requires ingroup members to use ingroup norms to regulate their emotional reaction to discrimination.

Finally, the significant relationship between satisfaction and both intergroup coping options may reflect that satisfaction is conceptualised as the positive feelings one has towards the group, which is likely to be a necessary condition for these coping options as they involve social creativity and social competition which both require an assertion of the positive values of the group. While these explanations are in line with SIT and the limited research available, they should be accepted with caution as they are vulnerable to the 'cum hoc ergo propter hoc' fallacy (i.e., that correlation does not imply causation).

4.2.7 Summary of findings for RQ 5: Examining the perceived social support / coping options mediated model.

Whether appraisal of coping options mediated the putative relationship between perceived ingroup support and psychological outcomes was examined. The question was posed as social support is best considered as a coping resource which makes certain coping options possible (Thoits, 1995, 2011) and also because the measure of coping options used would benefit from a consideration of the specific sources of support (Outten et al., 2009).

The current research found that perceived support from both homeless friends and non-homeless family was associated with a significant amount of variance in each of the coping options at the intragroup and intergroup level but not at the individual level. When the specific relationships between perceived support and coping options were examined, perceived support from family was only significantly associated with intragroup emotion-focused coping, with increased perceived support associated with increased appraisal of this coping option. Perceived support from homeless friends was significantly associated with all coping options except individual emotion-focused coping. Again, where the relationship was significant, higher levels of perceived support were associated with higher appraisals of coping options. When the overall model was examined, only one indirect effect was found to be significant. The relationship between perceived support from homeless friends and psychological distress was significantly positively mediated by intragroup problem-focused coping. Thus, participants who perceived higher levels of support from homeless friends and also appraised the use of problem-focused ingroup support as a viable coping option also reported higher levels of psychological distress.

As Thoits (1995, 2011) outlined social support is not a coping option in itself but is a coping resource which makes possible certain coping strategies when encountering a stressor. Thus, the perception that one can avail of social support from ingroup members should make intragroup and intergroup coping options possible. The current research findings are in line with this. Higher perceived support from homeless people was associated with increased scores in emotion and problem-focused coping at both the intragroup and intergroup levels.

The finding that greater perceived support from homeless people was also associated with increased appraisal of individual problem-focused coping is somewhat unexpected although the absence of previous research examining this specific relationship makes this finding hard to interpret. One possible explanation is that the items which measured this coping option focused on whether participants coped by avoiding (e.g., I avoid interacting with people who I know would not accept me because of my history of homelessness). Thus, people who controlled whether they encountered discrimination by avoiding people who were not homeless possibly spent more time with other homeless people as a result, for example by spending the majority of their time in services for homeless people. Consequently, they may have had greater opportunity to become friendly with other homeless people and perceive support from this group. The finding that perceived family support was associated with increased appraisal of intragroup emotion-focused coping was also unexpected. One possible explanation is that coping has been considered a trait (Lazarus, 1999) and thus, individuals who perceive high levels of support from one source are also likely to perceive high levels of support from other sources.

The finding that people who reported higher perceived support from homeless friends also report increased appraisal of intragroup problem-focused coping and higher levels of psychological distress is also unexpected. There are a number of ways that this finding could be interpreted. People experiencing higher levels of psychological distress who have access to social support from homeless friends may attempt to use this resource in a problem-focused way to reduce the distress caused by discrimination. However, other findings do not appear to corroborate this interpretation; the direct relationship between this coping option and psychological distress was not significant and perceived social support was significantly associated with increased appraisal of all coping options except individual emotion-focused coping. Thus, it is difficult to understand why the use of intragroup problem-focused coping would be associated with increased psychological distress only for those participants who report perceiving social support from other homeless people given that this support is associated with all other coping options bar one.

An alternative interpretation is that homeless people who perceive social support from other homeless people and also appraise the use of this support as a viable coping option end up experiencing greater psychological distress. This finding can be considered in terms of Lazarus and Folkman's (1984) transactional model of stress. According to this model, perception of stress depends on the outcome of a two-phase process of appraisal. In the primary appraisal, the person determines whether a particular stressor is potentially harmful; in the secondary appraisal, they evaluate what, if anything can be done to overcome the stressor (Folkman, Lazarus, Gruen, & DeLongis, 1986). Owing to the reciprocal relationship between primary appraisal (is this stressful?) and secondary appraisal (can I cope?) as outlined by the transactional model, this increase in psychological distress may be due to the coping option being ineffectual in buffering against the negative effects of perceived discrimination. Alternatively, perceived discrimination may be reappraised as more harmful if ingroup members consider intragroup problem-focused coping to be ineffective as a buffer.

The current finding runs contrary to findings reported by Noh and Kaspar (2003) who found that problem-focused coping moderated the effects of discrimination but emotion-focused coping was associated with higher levels of depression for Korean immigrants in Canada. Lazarus (1999) describes the aim of problem-focused coping as gaining information about the situation and how to change it. In contrast, the aim of emotion-focused coping is to regulate the emotional reactions to the situation without changing the reality of the situation. He highlights that, as coping is context dependent, there is no universally effective or ineffective strategy. Therefore, for the Korean immigrants, problem-focused coping may have been adaptive as it is illegal to discriminate on the ground of race (Canadian Human Rights Act, 1985) and therefore it was possible to challenge discrimination. However, for homeless people, it may not yet be possible to challenge discrimination and therefore coping with the emotional effects of discrimination may be more adaptive. Ultimately, these findings may reflect a societal view that racism is more unacceptable, and therefore more open to being challenged, than discrimination towards homeless people.

4.2.8 Overall consideration of the five research questions and overall percentage of variance accounted for in psychological outcomes.

When taken together, the findings in relation to the RIM, SIT/SCT model and appraisal of coping options models suggest that, while discrimination is associated with increased homeless identity and that this increase in identity is associated with increased coping resources in the form of social support and group coping options, these resources and strategies are ineffectual in ameliorating the negative perceived discrimination mental health link. Thus, homeless people in the current research who identified more strongly as homeless also perceived greater support from homeless friends and appraised group coping options to a greater degree. However, these were not significantly associated with positive psychological outcomes. Moreover, where significant relationships existed between perceived support and coping options these were negatively associated with psychological outcomes. In addition, significant relationships between family identity and support were not always associated with positive psychological outcomes. This suggests that, unlike other stigmatised minorities, the homeless identity does not provide access to resources to buffer the negative effects and therefore, increasing one's homeless identity in response to discrimination will not be protective. Given that a small selection of the most predictive variables associated with perceived discrimination, social identity, perceived social support and coping options accounted for over ten percent of the variance in the three psychological outcome measures, after controlling for the effects of gender and age, then this suggests that these variables are of importance in understanding the psychological health of people who are homeless.

4.3 Limitations

There are a number of limitations in the present study. These are categorised into limitations associated with the methodology and theoretical limitations.

4.3.1 Methodological limitations.

The number and demographic profile of homeless people in Yorkshire is unknown and therefore it is not possible to ensure that the sample is representative of the population in terms of key demographics. To overcome this difficulty, previous research on homelessness has used probability sampling which involves estimating the population of homeless people based on surveys of services for homeless people and key informants and then randomly sampling individual participants from these services to match the estimated population (Toro et al., 1999). However, due to time and resource constraints, a similar method was not employed and therefore whether the sample reflects the population of homeless people in Yorkshire is unknown. Thus, results should be generalised with caution. A further limitation related to the use of convenience sampling from services is that this design tends to over-represent people who have been homeless for long periods as people homeless for shorter periods have left the sampling frame (Shinn et al., 1991). This overrepresentation may lead to findings of poorer health and higher disability than would be found using a longitudinal research design. In addition, the current study employed a cross-sectional design and while causal mechanisms were considered in testing and interpreting models, these could not be directly tested.

There are a number of methodological limitations associated with the measures used. A shorter scale was used to measure family identity compared to homeless identity. This scale is a recommended measure of identity and has been used frequently in research

(Haslam, 2004). However, this scale considers identity to be a unitary concept which both theory and research highlight is not the case (Leach et al., 2008). In addition, the current research did not measure the use of specific coping options related to the family as it did with homelessness and therefore whether choice of coping options mediated the relationship between perceived support from family and psychological outcomes is unknown. Moreover, as highlighted by Outten et al. (2009) the measure of coping options assesses appraisals of coping options and not actual coping behaviour. Whether appraising what can be done translates into enacting coping strategies is unknown. Furthermore, the measures of perceived discrimination, while previously used in research, is short and only comprise of two-items each. Both the individual problem-focused subscale of the coping measure and the individual mobility scale had lower than ideal Cronbach alphas. Therefore whether the items that comprise each scale are measuring the same underlying construct is questionable. A measure of psychological distress was used and while it can be transformed to give clinical cut-off scores, the transformation was completed using a relatively small sample of American adults. Whether using a clinical cut-off based on responses of American adults would apply equally for English respondents is unknown and so it is possible that the measure may have overestimated or underestimated the proportion of homeless people experiencing clinical levels of distress. Raw and not transformed scores were used in the analyses to avoid this limitation. The use of a general measure of mental health (e.g. as provided by the 12 item Short Form Health Survey; Ware, Kosinski, Turner-Bowker, & Gandek, 2002) would also have been beneficial as this could only be inferred from participants' reports of self-esteem, perceived stress and psychological distress.

An overall limitation with the research was associated with the use of standardised measures. Standardised measures were chosen as homeless research has been criticised for its used of unstandardized measures (e.g. Philippot et al., 2007). However, the use of such measures meant that they could not be tailored to the literacy needs of the group. As a result, some participants found the language difficult to understand and some items required paraphrasing by the researcher, which will most likely have affected the standardisation. In addition, participants appeared not to distinguish between individual items in the standardised measures associated with family, which suggests that participants were using specific response sets and therefore the measure may have been affected by halo error which can increase item homogeneity and can artificially increase reliability (Chang, 1994).

4.3.2 Theoretical limitations.

There are also a number of theoretical limitations. One such limitation is that the research only examined the relationship between perceived discrimination and mental health and did not examine the effects of internalised stigma - the negative self-perceptions that people hold (Corrigan & Watson, 2002). Moderate to high levels of internalised stigma have been found in other stigmatised groups, for example people diagnosed with bipolar disorder (Ellison, Mason, & Scior, 2013). Another limitation is that the current research did not examine all possible coping options available to homeless people. For example, both Snow and Anderson (1987) and Farrington and Robinson (1999) highlight that homeless people use multiple coping options including fictive storytelling and creating a comparison group from other ingroup members. However, these were not examined. A further limitation is that the current research did not include measures of drug and alcohol misuse. Multiple studies report a significant link between mental health, drug and alcohol misuse for people who are homeless (Busch-Geertsema et al., 2010; Jones & Pleace 2010; Philippot et al., 2007; Fazal et al., 2008). However, these measures were omitted from the current research as they were not the main focus of the study, which was to examine putative relationships between social psychological factors and mental health. While the inclusion of drug and alcohol misuse measures would have further added to the current research, they were also considered to significantly lengthen the time participants would have to spend completing the survey and were therefore omitted in favour of survey brevity and to ensure that a longer survey did not compromise participant recruitment. In addition, rates of substance and alcohol misuse have been found to vary from 4.5% to 54.2% and 8.1% to 58.5% respectively (Fazal et al., 2008) and therefore will not be equally relevant to all participants. As a result of the omission of these measures, it was not possible to examine the relationship between alcohol and drug misuse and mental health in the current research and whether alcohol and/or drug use mediated the perceived discrimination mental health relationship.

In addition, the current research considered self-esteem as an outcome variable however, previous research has also conceptualised it as a resource to buffer stress, where it is associated with greater problem-focused coping (Thoits, 2010). Similarly, it is also likely that ingroup identity, self-esteem and perceived discrimination are reciprocally related (McCoy & Major, 2003). This was not taken into account in the current research.

4.4 Strengths

While there are a number of limitations in the current research, there are also a number of strengths. A multicomponent measure was used to assess homeless social identification which is important in understanding the relationship between discrimination and identity (Leach et al., 2010). The research also made use of a specific definition of homelessness which is conceptually sound and also used standardised and/or previously used measures. The majority of research in Europe has been criticised for lacking these two characteristics (Philippot et al., 2007). There are also a number of strengths associated with participant recruitment. A large sample of participants was recruited from a variety of different services across Yorkshire which provided a range of services. Toro et al. (1999) in research examining recruitment procedures with homeless participants found that recruiting participants from services for homeless people can provide a representative sample. In addition, the recruitment strategy controlled for literacy by meeting with all participants, reading aloud all questions and recording their answers. Finally, the analysis was completed using the most up to date statistical procedures to assess for mediated effects (Hayes, 2013).

4.5 Practical and Clinical Implications

This research highlights that homeless adults in Yorkshire experience high levels of psychological distress and, owing to the high number of participants who reported current suicidal ideation, are also a high risk group. As a result, it is imperative that both homeless specific services, general mental health services and the wider society consider, and work towards, meeting the needs of this vulnerable group. Thus, the current research suggests a number of practical and clinical implications.

The current research highlights that homelessness is not just a problem of housing but has psychological consequences. Thus, services working to maintain and improve the health and well-being of homeless people need to consider the psychological needs of their services users, as well as their practical needs, which are generally the focus (Philippot et al., 2007). This is particularly the case for females, who report both higher perceived distress and psychological distress. Depending on the level of intervention, this could include speaking to service users about their mental health needs and assessing any possible risks, which could include using standardised measures to identify services users at risk, so that appropriate steps can be taken and referrals made to mental health services. To support this process, services for homeless people should develop and maintain strong links with primary and secondary level mental health services to provide ready access for their client group if this is not already the case. In addition, the current findings suggest that it would be beneficial to increase the psychological awareness of homeless service staff, who may have little or no mental health training, so that they can be more confident about responding appropriately to mental health needs, be cognisant of factors which affect mental health, such as social identity and be able to offer more psychologically informed approaches. Such approaches might include group based work which increases homeless people’s awareness of the relationship between homelessness and mental health as a normalising intervention, teaches mental health survival skills and provides an opportunity for peer support. This could be done through training and/or ongoing consultation with psychologists or other mental health care staff. Given the strong association between homelessness and mental health, it may be prudent to employ staff with specialist mental health training who could work individually with services users and/or run groups, consult to teams and also coordinate research which informs future interventions and guides evidence based practice. One added benefit is that, while interventions aimed at improving the mental health of homeless adults are justified in their own right, they may also support homeless adults in adjusting to and transitioning from homelessness. Given that mental ill-health is a known risk factor for becoming homeless and that homelessness is associated with mental ill-health through social identity related processes, then interventions should assist in breaking any mutually reinforcing cycle.

With regard to implications for mental health services, of benefit would again be to develop and maintain strong links with services for homeless people. In a similar vein, owing to previous findings that homeless people do not access healthcare for fear of stigma and discrimination (Pleace et al., 2000) then it is particularly important that mental health services work to reduce this barrier, especially as a minority of homeless people may not be accessing other services and may be particularly vulnerable as a result. This is especially the case as this research finds that people who perceive greater levels of discrimination also report significantly higher perceived stress and psychological distress. This could include ensuring that referral criteria do not unintentionally preclude access for homeless people, for example by considering alternative routes to treatment if the services require a referral from a GP, which is a known gap for this vulnerable group (Warnes et al., 2003). Also of benefit would be to ensure that people are not continually bounced between services when they change accommodation if services are organised by geographical boundaries. One possibility to ensure appropriate access would be to develop specialist teams within mental health services to cater to homeless people. During a time of reduced funding this is unlikely to be possible in places other than larger cities with a large homeless population. However, it may be possible to have homeless champions or similar roles in mental health teams. The development of specific teams and/or leads would also allow services to develop expertise with this client group, the importance of which is outlined below.

In addition to facing the physical stressors associated with homelessness, this research found that homeless people also experience identity and stigma related stressors. Overall, the research finds that social psychological variables, such as discrimination, identity, perceived support and coping options account for a meaningful amount of variance in the psychological outcomes of people who are homeless. Unlike other stigmatised minorities, such as ethnic minority groups and people with learning disabilities, the homeless identity is not necessarily permanent, and therefore interventions associated with changing these factors may be of benefit. Moreover, the coping options associated with identifying more strongly with the group, a strategy available to other stigmatised minorities, does not ameliorate the negative association for homeless people As a result, it is important that mental health professionals working with homeless people are aware of the complex relationships between social identity, perceived ingroup support and coping options and that these coping options may be less effective in protecting mental health compared to other stigmatised groups. In addition, it is important that clinicians have a greater understanding of the specific issues facing homeless people to ensure that they do not make invalid assumptions, for example, by overestimating the potential effectiveness of ingroup support or presupposing that identity with, and perceived support from, family is always beneficial. In addition, the current findings suggest that the use of formulations which take account of social inequalities (e.g. Miller & McLelland, 2006), those arising from community psychology (e.g. Burton, 2008) and those based on social constructionism (Harper & Spellman, 2006; White & Epston, 1990) may also be of specific benefit as they take account of the effects of social inequalities on mental health as well as individual and collective attempts at resistance (Miller & McLelland, 2006).

In addition to suggesting practical and clinical interventions for homeless, and healthcare, services at the individual and service level, the current findings suggest that interventions aimed at changing society's view of homelessness may also have a beneficial impact. Such interventions should aim at reducing stigma and discrimination towards homeless people. Research has not examined the efficacy of interventions aimed at tackling stigma towards homeless people. However, research with other stigmatised groups has reported a beneficial effect. For example, brief indirect contact interventions via film have been found to have a beneficial impact on changing people's attitudes towards inclusion and social distancing towards people with intellectual disabilities (Walker & Scior, 2013) and with reduced stigma towards people with a mental illness (Corrigan, Larson, Sells, Niessen, & Watson, 2007). Such interventions could be based around protesting against inaccurate representations, educating the public on the societal causes of homelessness and promoting more positive attitudes and increasing positive contact between homeless and non-homeless groups; strategies which have been proposed for other stigmatised groups (Corrigan & Watson, 2002).

4.6 Future research

As has been mentioned numerous times above, there is a paucity or research which examines, and not just documents, the relationship between homelessness and mental health and therefore future research in this area is vital. To start, there are a number of analyses that were possible and would have added to the current findings but were not completed owing to word limits and time constraints. For example, the current research did not consider how choice of coping options was related to durations spent homeless as has been considered in previous research (Farrington & Robinson, 1999; Snow & Anderson, 1987) and instead concentrated on examining their relationship to psychological outcomes. In addition, the current research did not examine all the factors that may be associated with developing and maintaining a homeless or family identity, such as whether participants had experienced homelessness as a child and whether they had family who were homeless. Also, the research did not examine whether the participants' current accommodation use, or lack thereof, was associated with their health. This is likely to have an impact as people who are sleeping rough are known to have poorer health (Busch-Geertsema et al., 2010) and the quality of the services used by homeless people is also associated with health outcomes (FEANTSA, 2006a). These analyses remain possible in the future.

In addition, future research would benefit from employing measures that are specifically designed for homeless populations. These measures should be tailored to the specific forms of discrimination that homeless people might perceive and also take account of a range of literacy abilities. The inclusion of measures of drug and alcohol misuse would also be of benefit to account for their relationship to mental health. Their inclusion would also allow future research to examine whether alcohol and/or drug use mediate the perceived discrimination mental health relationship. Future research would also benefit from employing different methodologies. Longitudinal research could examine the temporal and causal relationships between perceived discrimination, social identity, social support, coping options and mental health. Such research would, for example, clarify whether mental ill-health is caused by perceived discrimination or whether people who are experiencing mental illness perceive greater levels of discrimination. In addition, qualitative research could further our understanding of how homeless people view the homeless identity, their ingroup members and the availability and use of coping options as well as their identity with and support from family. Such research could explain why, for example, support from homeless people is not associated with beneficial psychological effects and why perceived support from family is associated with reduced self-esteem when people see themselves as sharing an identity with other family members. Without this research we may know that certain factors are associated with one another but not fully understand *why* this is so.

While increasing our understanding of the relationship between homelessness and mental health is an important goal, what is vital is that this understanding is put to use and leads to health improvements. Thus, it is essential that future research develop and evaluate interventions to support the mental health of homeless people. Given that this research finds that social identity related processes are significantly associated with mental health, this suggests that social identity based interventions may be beneficial. These interventions are based on the concept that how people relate to their health and health related behaviours is fundamentally influenced by how they self-categorise in terms of their group membership (Tarrant, Hagger, & Farrow, 2012). In addition, future research could provide evidence to counteract any discourses in wider society that consider homelessness as the consequence of mental illness only and highlight to the wider society that their views of, and actions towards, homeless people can be detrimental to their health to the extent that even the perception of discrimination is associated with homeless people reporting higher stress and psychological distress.

In relation to furthering our theoretical knowledge of the relationship between social identity related process and mental health for stigmatised groups, there are a number of findings in the current research which run contrary to expectations and merit further study. For example, research could examine whether the appraisal of intragroup problem-focused coping is associated with psychological distress for other stigmatised groups who perceive support from ingroup members. The finding that family identity was directly positively associated with self-esteem and indirectly negatively associated, mediated by perceived support from family members also needs further investigation into whether this holds for other groups of homeless people and/or other stigmatised groups who may not share this identity with their family.

One important point to highlight is that, in conducting future research with homeless people, it is vital that researchers do not continue to add to a ‘thin’ description (Geertz, 1994) of homelessness. Thin descriptions are generally generated by others, can be problem saturated, are overly simple and ignore the contexts and complexities of life and allow little space for the individual to put forward their own particular meanings of their action (Morgan, 2000). They can lead to negative effects and identities and often obscure the broader power relations which give rise to them (ibid.). Snow and Anderson (1987) highlight that stigmatized groups are generally discussed in terms of the characterological failings they are considered to possess, the difficulties they are thought to cause for society at large or the issues associated with their material survival, such as access to food and accommodation. This has occurred throughout history and still continues today for homeless people, for example through professional literature’s focus on the characteristics and individual deficits of homeless people, albeit in a more scientific form (Buck et al., 2004). In our attempt to understand and support the mental health needs of homeless people it is crucial that we do not add to this.

4.7 Conclusion

While homelessness is associated with mental illness, what is not fully understood is how these are connected. The current research finds that a social identity approach may be particularly beneficial theory in which to understand this relationship. Such an explanation adds further evidence to the hypothesis that the relationship between homelessness and mental health is not just unidirectional, where people with mental health difficulties are at greater risk of becoming homeless, but is bidirectional, linked though psychological processes in general and social identity related processes in particular. As a result, this research highlights that professionals and services working to maintain and improve the mental health of people who are homeless need to work at both a psychological and practical level. Yet there is a paucity of evidence based psychological interventions specifically aimed at assisting members of this devalued group. If we are to adopt a more psychological approach, then we will require research which informs and tests appropriate interventions. The current research suggests that interventions based on a social identity approach may be particularly relevant in meeting this need.

References

Allport, G. W. (1954). *The Nature of Prejudice.* Cambridge, MA: Addison-Wesley

Armenta, B. E., & Hunt, J. S. (2009). Responding to societal devaluation: Effects of perceived personal and group discrimination on the ethnic group identification and personal self-esteem of Lationo/Latina adolescents. *Group Processes and Intergroup Relations, 12*, 23–39.

Barrera, M. (1986). Distinctions between social support concepts, measures and models. *American Journal of Community Psychology, 14*, 413–445.

Barreto, M., & Ellemers, N. (2010). Current issues in the study of social stigma: Some controversies and unresolved issues. *Journal of Social Issues, 66*, 431–445.

Bates, D. S., & Toro, P. A. (1999). Developing measures to assess social support among homeless and poor people. *Journal of Community Psychology, 27*, 137–156.

Beech, A., Fisher, D., & Beckett, R. (1999). *Step 3: An Evaluation of the Prison Sex Offender Treatment Programme.* Retrieved from National Police Library Catalogue website: http://library.npia.police.uk/docs/homisc/occ-step3.pdf

Blanz, M., Mummendey, A., Mielke, & Klink (1998). Responding to negative social identity: A taxonomy of identity management strategies. *European Journal of Social Psychology, 28*, 697–729.

Bourguignon, Seron, E., Yzerbyt, V., & Herman, G. (2006). Perceived group and personal discrimination: Differential effects on personal self-esteem. *European Journal of Social Psychology, 36*, 773–789.

Boydell, K., Goering, P., & Morrell-Bellai, T. L. (2000). Narratives of identity: Re-presentation of self in people who are homeless. *Qualitative Health Research, 10*, 26–38.

Branscombe, N. R., Fernandez, S., Gomez, A., & Cronin, T. (2012). Moving toward or away from a group identity. Different strategies for coping with pervasive discrimination. In J. Jetten, C. Haslam, & S.A. Haslam (Eds.), *The Social Cure. Identity, Health, and Well-being* (pp. 116–131). Hove: Psychology Press.

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.

Buck, P. O., Toro, P. A., & Ramos, M. A. (2004). Media and professional interest in homelessness over 30 years (1974–2003). *Analyses of Social Issues and Public Policy, 4,* 151–171.

Burton, M. (2008). *Societal case formulation.* Retrieved from: http://www.academia.edu/1745654/Societal_case_formulation

Busch-Geertsema, V., Edgar, W., O'Sullivan, E. and Pleace, N. (2010). *Homelessness and Homeless Policies in Europe: Lessons from Research.* Brussels: FEANTSA.

Canadian Human Rights Act 1985 (R.S.C., 1985, c.H-6). Retrieved from the Justice Laws Website: http://laws-lois.justice.gc.ca/eng/acts/h-6/

Carlen, P. (1996) *Jigsaw: A Political Criminology of Youth Homelessness*. Buckingham: Open University Press.

Cassidy, C., O'Connor, R. C., Howe, C., & Warden, D. (2004). Perceived discrimination and psychological distress: The role of personal and ethnic self esteem. *Journal of Counseling Psychology, 51,* 329-339.

Chang, L. (1994). A psychometric evaluation of 4-point and 6-point Likert-type scales in relation to reliability and validity. *Applied Psychological Measurement, 18,* 205–215.

Clara, I. P., Cox, B. J., Enns, M. W., Murray, L. T., & Torgrudc, L. J. (2003). Confirmatory factor analysis of the multidimensional scale of perceived social support in clinically distressed and student sample. *Journal of Personality Assessment, 81*, 265–270.

Cohen, S., & Williamson, G. M. (1988). Perceived Stress in a Probability Sample of the United States. In S. Spacapan, & S. Oskamp (Eds.), *The Social Psychology of Health* (pp. 31–67). Newbury Park, CA: Sage.

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

Cohen, S., Kamarack, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behaviour, 24*, 385–396.

Corrigan, P. W., & Watson, A. C. (2002).Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1,* 16–20.

Corrigan, P. W., Larson, J., Sells, M., Niessen, N., & Watson, A. C. (2007). Will filmed presentations of education and contact diminish mental illness stigma? *Community Mental Health Journal, 43,* 171–181.

Coyne, J. C., & Downey, G. (1991). Social factors and psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology, 42*, 401–425.

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

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review, 96,* 608–630.

de Vicente, A., Muñoz, M., Pérez-Santos, E., & Santos-Olmo, A. B. (2004). Emotional disclosures in homeless people: A pilot study. *Journal of Traumatic Stress, 17*, 439–443.

Department for Communities and Local Government. (2013). *Statutory Homelessness: October to December Quarter 2013 England*. Retrieved from Government Digital Service website: https://www.gov.uk/government/publications/statutory-homelessness-in-england-october-to-december-2013

Department for Communities and Local Government. (2014). *Rough Sleeping Statistics England – Autumn 2013 Official Statistics.* Retrieved from The National Archives website:https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284024/Rough_Sleeping_Statistics_England_-_Autumn_2013.pdf

Derogatis, L. R. (2001). *Brief Symptom Inventory 18: Administration, Scoring, and Procedures Manual.* Minneapolis, MN: NCS Pearson, Inc.

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.

Ellemers, N., Kortekaas, P., & Ouwerkerk, J. A. (1999). Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology, 29,* 371–389.

Ellison, N., Mason, O., & Scior, K. (2013). Bipolar disorder and stigma: A systemic review of the literature. *Journal of Affective Disorders, 151,* 805–820.

Ensign, B. J. (2006). Perspectives and experiences of homeless young people. *Journal of advanced nursing, 54*, 647–652.

ETHOS (n.d.) *European Typology of Homelessness and housing exclusion.* Retrieved from FEANTSA website: http://www.feantsa.org/files/freshstart/Toolkits/Ethos/Leaflet/EN.pdf

Eyrich-Garg, K. M., O'Leary, C., & Cottler, L. B. (2008). Subjective versus objective definitions of homelessness: Are there differences in risk factors among heavy-drinking women? *Gender Issues, 25*, 173–192.

Eyrich-Garg, K. M., Pollio, D. E., & North, C. S. (2003). An exploration of alienation and replacement theories of social support in homelessness. *Social Work Research, 27*, 222–231.

Farrington, A., & Robinson, W. P. (1999). Homelessness and strategies of identity maintenance: A participant observation study. *Journal of Community & Applied Social Psychology, 9*, 175–194.

Fazel. S., Khosla, V., Doll, H., & Geddes, J. (2008). The prevalence of mental disorders among the homeless in western countries: Systematic review and meta-regression analysis. *PLOS Medicine, 5*, 1670–1681.

FEANTSA (2006a). *Annual European Report 2006. The Right to Health is a Human Right: Ensuring Access to Health for People who are Homeless.* Retrieved from: http://www.feantsa.org/spip.php?article153&lang=en

FEANTSA (2006b). *Questionnaire for the FEANTSA Annual Theme. The Right to Health is a Human Right: Ensuring Access to Health for Homeless people. UK submission.* Retrieved from: http://www.feantsa.org/spip.php?article153&lang=en

FEANTSA (2014). *United Kingdom FEANTSA Country Fiche 2014.* Retrieved from http://www.feantsa.org/spip.php?article853&lang=en

Fife-Schaw, C. (n.d.). Statistics FAQ [Web log post]. Retrieved from https://www.surrey.ac.uk/psychology/current/statistics/

Firdion, J. M. & Marpsat, M. (2007). A research program on homelessness in France. *Journal of Social Issues, 63*, 567–588.

Fischer, J., & Corcoran, K. (2007). *Measures for Clinical Practice and Research: A Sourcebook* (4th ed). Vol 2. Adults. Oxford: Oxford University Press.

Fischer, P. J., & Breakey, W. R., (1991). The epidemiology of alcohol, drug, and mental disorders among homeless persons. *American Psychologist, 46*, 1115–1128.

Fitzpatrick-Lewis, D., Ganann, R., Krishnaratne, S., Ciliska, D., Kouyoumdjian, F., & Hwang, S. W. (2011). Effectiveness of interventions to improve the health and housing status of homeless people: a rapid systematic review. *BMC Public Health, 11*, 638.

Folkman, S., Lazarus, R. S., Gruen, R., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology, 50*, 572–597.

Geertz, C. (1994). Thick description: Toward an interpretive theory of culture. *Readings in the Philosophy of Social Science*, 213-231.

Gilchirst, G., & Morrison, D. S. (2005). Prevalence of alcohol related brain damage among homeless hostel dwellers in Glasgow. *European Journal of Public Health, 15*, 587–588.

Gill, B., Meltzer, H., Hinda, K., & Petticrew, M. (1996). *Psychiatric Morbidity Among Homeless People.* London: ONS.

Goodman, L., Saxe, L., & Harvey, M. (1991). Homelessness as psychological trauma. *American Psychologist, 46*, 1219–1225.

Haney, C., Banks, C., & Zimbardo, P. (1973). Interpersonal dynamics in a simulated prison. *International Journal of Criminology and Penology, 1*, 69–97.

Harper, D., & Spellman, D. (2006). Social constructionist formulation: Telling a different story. In L. Johnstone & R. Dallos (Eds.), *Formulation in Psychology and Psychotherapy* (pp. 98–125). Hove: Routledge.

Haslam, S. A. & Reicher, S. D. (2012). When prisoners take over the prison: A social psychology of resistance. *Personality and Social Psychology Review, 16*, 154–179.

Haslam, S. A. (2004). *Psychology in Organisation: The Social Identity Approach* (2nd ed.). Sage Publications: London.

Haslam, S. A., & Reicher, S. (2006). Stressing the group: Social identity and the unfolding dynamics of responses to stress. *Journal of Applied Psychology, 91*, 1037–1052.

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., & 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. Haslam (Eds.), *The Social Cure. Identity, Health, and Well-being* (pp. 157–176). Hove: Psychology Press.

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A regression based approach.* London: Guilford Press.

Hinton, P. R. (2004). *Statistics Explained* (2nd ed.). Routledge: London.

Homeless Link (2010) *The Health and Wellbeing of People who are Homeless,* London: Homeless Link .

Homelessness (Priority Need for Accommodation) (England) Order 2002 (Order no. 2051 of 2002). Retrieved from The National Archives website: http://www.legislation.gov.uk/uksi/2002/2051/article/1/made

Homelessness Act 2002 (c.7). Retrieved from The National Archives website: http://www.legislation.gov.uk/ukpga/2002/7/contents

Housing Act 1996 (c.52). Retrieved from the National Archive Website: http://www.legislation.gov.uk/ukpga/1996/52/contents

Hwang, S. W., Tolomiczenko, G., Kouyoumdjian, F. G., & Garner, R. E. (2005). Interventions to improve the health of the homeless: a systematic review. *American Journal of Preventive Medicine, 29,* 311-317.

Jetten, J., Haslam, S. A., & Haslam, C. (2012). The case for a social identity analysis of health and well-being. In J. Jetten, C. Haslam, & S.A. Haslam (Eds.), *The Social Cure. Identity, Health, and Well-being* (pp. 3–21). Hove: Psychology Press.

Jones, A., & Pleace, N. (2010). *A Review of Single Homelessness in the UK 2000-2010.* London: Crisis.

Kline, R. B. (2011). *Principles and Practice of Structural Equation Modelling* (3rd ed.). New York: The Guilford Press.

Klonoff, E. A., & Landrine, H. (1995). The schedule of sexist events. *Psychology of Women Quarterly, 19*, 439–472.

Latrofa, M., Vaes, J., Pastore, M., & Cadinu, M. (2009). “United we stand, divided we fall”! The protective function of self-stereotyping for stigmatised members’ psychological well-being. *Applied Psychology: An International Review, 58*, 84–104.

Lawless, M., & Corr, C. (2005). *Drug Use Among the Homeless Population in Ireland.* Dublin: NCAD.

Lazarus, R. S. & Folkman, S. (1984). *Stress, Appraisal, and Coping.* Springer-Verlag; New York.

Lazarus, R. S. (1999). *Stress and Emotion: A New Synthesis*. London: Free Association Books.

Leach, C. W., Mosquera, P. M. R., Vliek, M. L., & Hirt, E. (2010). Group devaluation and group identification. *Journal of Social Issues, 66*, 535-552.

Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M L., Pennekamp, S. F., Doosje, B., Ouwerkerk, J.W., & Spears, R. Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology, 95*, 144–165.

Lee, R. M. (2005). Resilience against discrimination: Ethnic identity and other-group orientation as protective factors for Korean Americans. *Journal of Counseling Psychology, 52*, 36–44.

Leeds City Council (2004) *Children and Families Resource Directory.* Leeds: Leeds City Council.

Mackenzie, D., & Chamberlain, C. (2003). Homeless careers: Pathways in and out of homelessness. Retrieved from: http://www.housing.infoxchange.net.au/library/vic/homelessness/items/00081-upload-00001.pdf

Major, B., & O’Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology, 56*, 393–421.

Major, B., Kaiser, C. R., O'Brien, L. T., & McCoy, S. K. (2007). Perceived discrimination as worldview threat or worldview confirmation: Implications for self-esteem. *Journal of Personality and Social Psychology, 92*, 1068–1086.

Matheson, K. & Anisman, H. (2012). Biological and Psychosocial Responses to Discrimination. In J. Jetten, C. Haslam, & S.A. Haslam (Eds.), *The Social Cure. Identity, Health, and Well-being.* Hove: Psychology Press.

McCoy, S. K., & Major, B. (2003). Group identification moderates emotional responses to perceived prejudice. *Personality and Social Psychology Bulletin, 29*, 1005–1017.

McNeilly, M. D., Anderson, N. B., Armstead, C. A., Clark, R., Corbett, M., Robinson, E. L., Poeper, C. F., & Lepisto, E. M. (1995). The perceived racism scale: a multidimensional assessment of the experience of white racism among African Americans. *Ethnicity & disease, 6*, 154-166.

Miller, J & McClelland, L. (2006). Social inequalities formulation: Mad, bad and dangerous to know. In L. Johnstone & R. Dallos (Eds.), *Formulation in Psychology and Psychotherapy* (pp. 126–153). Hove: Routledge.

Morgan, A. (2000). *What is narrative therapy? An easy-to-read introduction*. Adelaide, Australia: Dulwich Centre Publications.

Mummendey, A., & Wenzel, M. (1999). Social discrimination and tolerance in ingroup relations: Reactions to intergroup difference. *Personality and Social Psychology Review, 3*, 158–174.

Muñoz, M., & Vázquez, C. (1999). Homelessness in Spain: Pscyhosocial aspects. *Psychology in Spain, 3*, 3–10.

Muñoz, M., Crespo, M., & Pérez-Santos, E. (2005). Homelessness effects on men's and women's health. *International Journal of Mental Health, 34*, 47–61.

Muñoz, M., Vázquez, C., Bermejo, M., & Vázquez, J. J. (1999). Stressful life events among homeless people: Quantity, types, timing, and perceived causality. *Journal of Community Psychology, 27*, 73–87.

Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation, and ethnic support. *American Journal of Public Health, 93*, 232–238.

O'Connell, M. E. (2003). Responding to homelessness: An overview of US and UK policy interventions. *Journal of Community & Applied Social Psychology, 13*, 158 – 170.

Oddy, M., Moir, J. F., Fortescue, D., & Chadwick, S. (2012). The prevalence of traumatic brain injury in the homeless community in a UK city. *Brain Injury, 26*, 1058–1064.

Outten, H. R., Schmitt, M. T., Garcia, D. M., & Branscombe, N. R. (2009). Coping options: Missing links between minority group identification and psychological well-being. *Applied Psychology: An International Review, 58*, 146–170.

Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin, 135*, 531–554.

Phelan, J., Link, B. G., Moore, R. E., & Stueve, A. (1997). The stigma of homelessness: The impact of the label "homeless" on attitudes towards poor persons. *Social Psychology Quarterly, 60*, 323–337.

Philippot, P., Lecocq, C., Sempoux, F., Nachtergael, H., & Galand, B. (2007). Psychological research on homelessness in western Europe: A review from 1970 to 2001. *Journal of Social Issues, 63*, 483–504.

Pleace, N. (2000). The new consensus, the old consensus and the provision of services for people sleeping rough. *Housing Studies, 15*, 581–594.

Pleace, N., Jones, A. and England, J. (2000) *Access to General Practice for People Sleeping Rough.* York: University of York and Department of Health.

Rees, S. (2009) *Mental Ill Health in the Adult Single Homeless Population: A review of the literature*. London: Crisis.

Romero, A. J., & Roberts, R. E. (2003). The impact of multiple dimensions of ethnic identity on discrimination and adolescents' self-esteem. *Journal of Applied Social Psychology, 33*, 2288–2305.

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., Spears, R., & Branscombe, N. R. (2003). Constructing a minority group identity out of shared rejection: The case of international students. *European Journal of Social Psychology, 33*, 1–12.

Schwarzer, R., & Leppin, A. (1991). Social support and health: A theoretical and empirical overview. *Journal of Personal and Social Relationships, 8,* 99–127.

Sellers, R. M., Caldwell, C. H., Schmeelk-Cone, K. H., & Zimmerman, M. A. (2003). Racial identity, racial discrimination, and psychological distress among African-American young adults. *Journal of Health and Social Behaviour, 43*, 302–317.

Sellers, R. M., Copeland-Linder, N., Martin, P. P., & Lewis, R. L. (2006). Racial identity matters: The relationship between racial discrimination and psychological functioning in African American adolescents. *Journal of Research on Adolescence, 16*, 187–216.

Shinn, M., Knickman, J. R., & Weitzman, B. C. (1991). Social relationships and vulnerability to becoming homeless among poor families. *American Psychologist*, *46*, 1180–1187.

Snow, D. A., & Anderson, L. (1987). Identity work among the homeless: The verbal construction and avowal of personal identities, *American Journal of Sociology, 92*, 1336–1371.

Sullivan, G., Burnam, A., & Koegel, P. (2000). Pathways to homelessness among the mentally ill. *Social Psychiatry Psychiatric Epidemiology, 35*, 444–450.

Tabachnick, B. G., & Fidell, L.S. (2007). *Using Multivariate Statistics* (5th ed.).Pearson: London.

Tajfel, H. (1978). Social categorization, social identity and social comparison. In H. Tajfel (Ed.), *Differentiation between social groups: Studies in the social psychology of intergroup relations* (pp. 61–76). London: Academic Press.

Tajfel, H. (1978). *The Social Psychology of Minorities.* London: Minority Rights Group.

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). Monterery CA: Brooks/Cole.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of Intergroup Relations* (pp. 33-48). Chicago, IL: Nelson-Hall.

Tarrant, M., Hagger, M. S., & Farrow, C. V. (2011). Promoting positive orientation towards health through social identity. in J. Jetten, C. Haslam, & S.A. Haslam (Eds.), *The Social Cure. Identity, Health, and Well-being* (pp. 39–54). Hove: Psychology Press.

Thoits, P. A. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior* [Extra Issue], 53–79.

Thoits, P. A. (2010). Stress and health major findings and policy implications. *Journal of Health and Social Behavior, 51,* 41-53.

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of Health and Social Behavior*, *52*, 145–161.

Thornicroft, G., Rose, D., Kassam, A., & Sartorius, N. (2007). Stigma: Ignorance, prejudice or discrimination? *British Journal of Psychiatry, 190*, 192–193.

Tompsett, C. J., Fowler, P. J., & Toro, P. A. (2009). Age differences among homeless individuals: Adolescence through adulthood. *Journal of Prevention and Intervention in the Community, 37*, 86–99.

Toro, P. A. (2007). Towards an international understanding of homelessness. *Journal of Social Issues, 63*, 461–481.

Toro, P. A., & Warren, M. G. (1999). Homelessness in the United States: policy considerations. *Journal of Community Psychology, 27*, 119–136.

Toro, P. A., Bellavia, C., Owens, B., Wall, D. D., Passero, J. M., & Thomas, D. M. (1995). Distinguishing homelessness from poverty: A comparative study. *Journal of Consulting and Clinical Psychology, 63*, 280–289.

Toro, P. A., Tompsett, C. J., Lombardo, S., Philippot, P, Nachtergael, H., Galand, B., ... & Harvey, K. (2007). Homelessness in Europe and the United States: A comparison of prevalence and public opinion. *Journal of Social Issues, 63*,505–524.

Toro, P. A., Tulloch, E., & Ouellette, N. (2008). Stress, social support, and outcomes in two probability samples of homeless adults. *Journal of Community Psychology, 36*, 483–498.

Toro, P. A., Wolfe, S. M., Bellavia, C. W., Thomas, D. M., Rowland, L. L., Daeschler, C.V., & McCaskill, P. A. (1999). Obtaining representative samples of homeless persons: A two-city study. *Journal of Community Psychology, 27*, 157–177.

Tully, M. (2011). *The Effects of Social Identity, Perceived Discrimination and Social Support on Well-Being, Duration, and Transitioning from Homelessness in Irish Homeless*

Adults. Unpublished manuscript. Department of Psychology, University College Dublin, Dublin, Ireland.

Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (ed.), *Social Identity and Intergroup Relations* (pp. 15–40). Cambridge: Cambridge University Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the Social Group: A Self-Categorisation Theory.* Oxford: Basil Blackwell.

Utsey, S. O. (1998). Assessing the stressful effects of racism: a review of the instrumentation. *Journal of Black Psychology, 24*, 269–288.

Vázquez, C., Muñoz, M. (2001). Homelessness, mental health, and stressful life events. *International Journal of Mental Health, 30*, 6–25.

Vázquez, C., Muñoz, M., Crespo, M., Guisado, A. B., & Dennis, M. (2003). A comparative study of the 12-month prevalence of physical diseases among homeless people in Madrid (Spain) and Washington D.C. (USA). *International Journal of Mental Health, 30*, 6–25.

Walen, H. R., & Lachman, M. E. (2000). Social support and strain from partner, family, and friends: Costs and benefits for men and women in adulthood. *Journal of Social & Personal Relationships, 17,* 5–30.

Walker, J., & Scior, K. (2013). Tackling stigma associated with intellectual disability among the general public: A study of two indirect contact interventions. *Research in Developmental Disabilities, 34*, 2200–2210.

Ware, J. E., Kosinski, M. A., Turner-Bowker, D. M., & Gandek, B. (2002). *User's Manual for the SF-12v2 Health Survey*. Linconl, RI: QualityMetric Incorporated.

Warnes, A. M., Crane, M., Whitehead, N. and Fu, R. (2003), *Homeless Fact File*, London: Crisis.

Webster, S. D., Mann, R. E., Thornton, D., & Wakeling, H. C. (2007). Further validation of the short self-esteem scale with sexual offenders. *Legal and Criminological Psychology, 12,* 207–216.

White, M. & Epston, D. (1990). *Narrative means to therapeutic ends.* London: Norton.

Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health, 93,* 200–208.

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52,* 30–41.

Appendices

Appendix 1: Internal reliability and normality data for survey measures

Table 27: Internal reliability coefficients and correlation coefficients for survey measures

Instrument	No. of items	Actual range	No. of participants	α-reliability coefficient (Correlation coefficient)
Perceived Discrimination				
Individual discrimination measure	2	2 – 14	186	.79 (.65)
Group discrimination measure	2	2 – 14	185	.79 (.66)
Family identification				
Four-Item Identity Measure	4	4 – 28	186	.92
Homeless identity				
Solidarity	3	3 – 21	186	.73
Satisfaction	4	4 – 28	185	.84
Centrality	3	3 – 21	186	.77
Individual self-stereotyping	2	2 – 14	186	.79 (.66)
Ingroup homogeneity	2	2 – 14	186	.77 (.63)
Multidimensional Scale of Perceived Social Support (MSPSS)				
Significant other (homeless)	4	15 – 28	35	.87
Friends total (homeless)	4	4 – 28	162	.86
Family total (homeless)	4	4 – 28	7	.92
Family total (non homeless)	4	4 – 28	177	.96
Coping options				
Individual EFCO	4	4 – 28	181	.81
Individual PFCO	3	3 – 21	180	.53
Intragroup EFCO	4	4 – 28	179	.86
Intragroup PFCO	4	4 – 28	179	.84
Intergroup EFCO	4	4 – 28	180	.81
Intragroup PFCO	4	4 – 28	181	.86
Individual mobility				
Individual mobility scale	5	1 – 25	185	.59
Perceived Stress Scale (PSS)				
Total scale	10	0 – 40	187	.86
Short Self-Esteem Scale (SSES)				
Total scale	8	0 – 8	185	.81
Brief Symptom Inventory (BSI 18)				
GSI	18	0 – 72	186	.94
Depression subscale	6	0 – 24	186	.86
Anxiety subscale	6	0 – 24	186	.88
Somatisation subscale	6	0 – 24	186	.81

Table 28: Normality data for survey measures

Instrument	Skew (SE)	Kurtosis (SE)	Kolomogorov-Smirnov statistic	Skew z score	Kurtosis z score	Normally distributed
Perceived Discrimination						
Perceived individual discrimination	-0.70 (.18)	-0.62 (.36)	<.001	3.89	1.72	Marginal
Perceived group discrimination	-1.54 (.18)	1.93 (.36)	<.001	8.56	5.36	No
Family identification						
Four-Item Identity Measure	-0.23 (.18)	-1.30 (.36)	<.001	1.28	3.61	No
Homeless identity						
Solidarity	-0.67 (.18)	0.11 (.36)	<.001	3.72	0.31	Marginal
Satisfaction	0.23 (.18)	-1.18 (.36)	<.001	1.28	3.28	Yes
Centrality	0.06 (.18)	-1.04 (.36)	.029	0.33	2.89	Yes
Individual self-stereotyping	-0.31(.18)	-0.94 (.36)	<.001	1.72	2.61	Yes
In-group homogeneity	-0.46 (.18)	-0.64 (.36)	<.001	2.56	1.78	Yes
Multidimensional Scale of Perceived Social Support (MSPSS)						
Significant other (homeless)	-2.14 (.40)	5.40 (.78)	<.001	5.35	6.92	No
Friends total (homeless)	-0.71 (.19)	-0.05 (.38)	<.001	3.74	0.13	Marginal
Family total (homeless)	-0.12 (.79)	-0.29 (1.59)	.200	0.15	0.18	Yes
Family total (non-homeless)	-0.54 (.18)	-1.49 (.36)	<.001	3.00	4.14	No
Coping options						
Individual EFCO	-0.79 (.18)	-0.12 (.36)	<.001	4.39	0.33	No
Individual PFCO	-0.62 (.18)	0.15 (.36)	.006	3.44	0.42	Marginal
Intragroup EFCO	-0.89 (.18)	0.17 (.36)	<.001	4.94	0.47	No
Intragroup PFCO	-0.80 (.18)	0.32 (.36)	<.001	4.44	0.89	No
Intergroup EFCO	-0.42 (.18)	-0.69 (.36)	<.001	2.33	1.92	Yes
Intragroup PFCO	-0.71 (.18)	-0.05 (.36)	<.001	3.94	0.14	Marginal
Individual mobility						
Individual mobility scale	-1.22 (.18)	1.55 (.36)	<.001	6.78	4.31	No
Perceived Stress Scale (PSS)						
Total scale	-0.54(.18)	0.20 (.36)	.005	3.00	0.56	Yes
Short Self-Esteem Scale (SSES)						
Total scale	-0.05(.18)	-1.20 (.36)	<.001	0.28	3.33	Yes
Brief Symptom Inventory (BSI 18)						
GSI	0.45 (.18)	-0.81 (.36)	<.001	2.50	2.25	Yes
Depression subscale	0.27 (.18)	-0.92 (.36)	.016	1.50	2.56	Yes
Anxiety subscale	0.39 (.18)	-0.95 (.36)	<.001	2.17	2.64	Yes
Somatisation subscale	0.64 (.18)	-0.57 (.36)	<.001	3.56	1.58	Marginal

Appendix 2: Information sheet and Consent Form

Information Sheet for Participants

Research Title: Perceived Discrimination, Coping Options and their Relationship to Psychological Distress in Homeless Adults: A Research Project

Researcher: Michael Tully, Postgraduate Doctoral Student (DClinPsychol), Department of Clinical Psychology, Charles Thackrah Building, University of Leeds.

Research Supervisor: Dr. Cathy Brennan & Dr Tracey Farragher, Leeds Institute of Health Science, University of Leeds; Dr Susan Odell, Psychological Therapy Services, Leeds and York Partnerships NHS Foundation Trust.

Dear Potential Participant,

I am currently completing a Doctorate in Clinical Psychology in the University of Leeds. As part of my qualification I am conducting research with homeless participants over 18 years of age. You are being invited to take part in this research project. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask me if there is anything that is not clear if you would like more information. Take time to decide whether or not you wish to take part. I have provided more information on the research below as well as how you can participate if you would like to do so.

What is the purpose of the research?
The aim of this research is to see whether discrimination, social identity (who you see yourself being similar to), and social support impacts upon the health of people who are homeless. The reason why these areas are being investigated is that previous studies have found that perceived discrimination can negatively affect people's health but that identity with and support from family and friends can reduce these negative effects. This study is hoping to build on this knowledge by examining whether social identity and support protect against the negative effects of discrimination for people who are homeless.

Why are you being asked to take part?
I am asking adults who are homeless and accessing services in Yorkshire to participate in the research. To participate you need to have lived in the UK for at least one year and have a reasonable standard of English so that you can understand the questions. I am hoping to recruit between 150 and 200 people in total.

Do you have to take part?
No, it is completely up to you whether you decide to take part in this research. Whether you choose to take part or not to take part in the research will not affect you or the services you receive in any way.

Can you change your mind at any stage and withdraw from the study?
You can change your mind and withdraw from the study at any time until the point of any publication generated by the study and your answers will not be used. If you wish to withdraw from the study, please write to me at the above address, email at ummt@leeds.ac.uk or alternatively, you can ask the service to contact me.

What will happen if you decide to take part in this research study?
If you are happy to take part in the study then the researcher will ask you to keep this information sheet and to read and sign a consent sheet. The researcher will be happy to read the consent sheet aloud to you and answer any questions that you have. The research will be completed in the service that you received this information in and at a time and date that is convenient for you and the service.

The research will consist of completing a one-off survey with the researcher. This will involve the researcher asking you a number of questions on the levels of discrimination you have encountered and how you cope with any potential discrimination, how you would describe your identity, the support you receive from family and friends, and your physical and mental health. There will also be questions on how long you have been homeless and what accommodation you are currently using. The survey will take about 20 minutes to complete. A £5 grocery shop voucher is provided as compensation for each participant.

What are the risks of taking part in this research study?
There are no known risks or side-effects associated with completing any of the measures used in the survey. However, you may find some of the questions personal or distressing as they relate to topics including your health, identity, friends and family. If you are concerned about any issues that arise during the survey, please discuss this with your key-worker or a member of staff within the service. They are aware that the research is being conducted and will try to support you, for example, by assisting you in contacting any appropriate services for additional help.

What are the benefits of taking part in this research study?
There are no direct benefits of taking part in this research to participants. However, the results from this research will contribute to our current knowledge of the effects of homelessness on health. Attempts will be made to publish any relevant findings in the appropriate journals and recommendations may be made to services.

How will your privacy be protected?
The only identifying information that will be recorded will be your name, which you will sign on the consent sheet. These will be held in a secure location in the University of Leeds and will be destroyed after a fixed amount of time. A unique identification number will be used to link your information to the consent sheet. This will only be done so that your information can be withdrawn should you choose to do so. All information that you give will be kept in a secure place. As well as this, any results that come from the study will talk about people in general and will only report on group information, not personal. Your information will not be passed on to any homeless service or organisation other than as general findings from the study. There is however one exclusion to this and that is if you were to say that you have thoughts on ending your life or disclose anything that suggests that you or others are at risk. If this is the case then this information will be passed on to an appropriate staff member to make sure that you can access additional supports if required. This will not be done without discussing this with you first.

What will happen to the results of the research project?
The results will be used to complete a thesis as part of a clinical doctorate with the University of Leeds. The results will also be used and reported in articles for publication. However, any information from participants will only be looked at as a group and not on an individual basis. Therefore, in all reports, no personal identifying information will be used. In addition and with your permission, the data may also be used to compare the findings with findings from other homeless people internationally.

How can you find out what happens with this research?
A summary of the findings will be sent to the service that the interview was conducted in as will copies of any publications.

If you would like further information or need to contact me, please email me at ummt@leeds.ac.uk.

I would like to take this opportunity to thank you for your time.

Michael Tully

Michael Tully,
BA, HDip, MPscyhSc

Consent to take part in research examining Perceived Discrimination, Coping Options and their Relationship to Mental Health and Psychological Distress in Homeless Adults: A	Add your initials next to the statements you agree with
I confirm that I understand the information sheet explaining the above research project and I have had the opportunity to ask questions about the project.	
I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. If I choose to withdraw, this will not affect my access to services. In addition, should I not wish to answer any particular question or questions, I am free to decline.	
I understand that my responses will be kept strictly confidential with one exception; If I were to say that I have thoughts of ending my life or disclose anything that suggests that I or others are at risk. If this is the case then I understand that this information will be passed on to a staff member to make sure that I can access additional supports if required.	
I give permission for members of the research team to have access to my anonymised responses. I understand that the results may be written up in a report, book or article or may be reported at conferences but that my name will not be linked to any of the responses, and I will not be identified or identifiable in any reports.	
I agree for the data collected from me to be used in any relevant future research.	
I agree to take part in this research project.	

Name of participant	
Participant's signature	
Date	
Name of lead researcher	
Signature	
Date*	

*To be signed and dated in the presence of the participant.

Appendix 3: Participant Survey

Perceived Legitimate Discrimination, Coping Options and their Relationship to Psychological Distress in Homeless Adults: A Research Study

Offer to read information sheet / consent to participant	
Participant understands all information that they have been given and what consent entails	
Consent signed	
Data collection and recording method explained.	
Explained info not shared except in relation to risk	
Participant is over 18 years	
Participant is covered under FETANSA definition	
Participant is not currently affected	
Remind free to stop at any time	
Remind participant to discuss concerns with staff	

Questionnaire Number:	
Date of Interview:	
City:	
Interview conducted in:	

Demographics

Gender:	Male	Female
Age (years):		
How would you describe your ethnic background?		
What is your relationship status?		
Single		
Married		
Separated		
In a relationship		
Widowed		
Do you have a current disability?	Yes	No
If yes, what does it relate to?		
What is the highest level of education that you completed?		

Homelessness

"This section will ask a few questions about your experience of homelessness"

Do you consider yourself to be homeless?	Yes	No
What type of accommodation are you currently living in (don't read options aloud):		
Emergency accommodation		
Private B & B		
With friends / relatives		
Sleeping rough		
Squat		
Transitional accommodation		
Residential Detoxification		
Long-term supported accommodation		
Other (specify):		
How old were you when you first became homeless?		
In your opinion, how long do you think you have been homeless for in total?	Years:	Months:

Social Identity – Homeless

Please indicate how strongly you agree with each statement. Responses range from:

1 = strongly disagree	2 = Moderately disagree	3 = Somewhat Disagree	4 = Neither Agree nor Disagree	5 = Somewhat Agree	6 = Moderately agree	7 = Strongly Agree

1.	I feel a bond with homeless people	1	2	3	4	5	6	7
2.	I feel solidarity with homeless people	1	2	3	4	5	6	7
3.	I feel committed to homeless people	1	2	3	4	5	6	7
4.	I am glad to be a member of the group 'homeless people'	1	2	3	4	5	6	7
5.	I think that homeless people have a lot to be proud of	1	2	3	4	5	6	7
6.	It is pleasant to be a member of the group 'homeless people'	1	2	3	4	5	6	7
7.	Being a member of the group 'homeless people' gives me a good feeling	1	2	3	4	5	6	7
8.	I often think about the fact that I am a member of the group 'homeless people'	1	2	3	4	5	6	7
9.	The fact that I am a member of the group 'homeless people' is an important part of my identity	1	2	3	4	5	6	7
10.	Being a member of the group 'homeless people' is an important part of how I see myself	1	2	3	4	5	6	7
11.	I have a lot in common with the average homeless person	1	2	3	4	5	6	7
12.	I am similar to the average homeless person	1	2	3	4	5	6	7
13.	Homeless people have a lot in common with each other	1	2	3	4	5	6	7
14.	Homeless people are very similar to each other	1	2	3	4	5	6	7

Social Identity – Family

Please indicate how strongly you agree with each statement. Responses range from:

1 = Completely Disagree	2 = Strongly Disagree	3 = Somewhat Disagree	4 = Neither Agree nor Disagree	5 = Somewhat Agree	6 = Strongly Agree	7 = Completely Agree

1	I see myself as a member of my family	1	2	3	4	5	6	7
2	I identify with other members of my family	1	2	3	4	5	6	7
3	I feel strong ties with my family	1	2	3	4	5	6	7
4	I am pleased to be a member of my family	1	2	3	4	5	6	7

Perceived discrimination

Please indicate how strongly you agree with each statement. Responses range from:

1 = strongly disagree	2 = Moderately disagree	3 = Somewhat Disagree	4 = Neither Agree nor Disagree	5 = Somewhat Agree	6 = Moderately agree	7 = Strongly Agree

1	I feel like other people look down on me because I am homeless	1	2	3	4	5	6	7
2	Other people have discriminated against me because I am homeless	1	2	3	4	5	6	7
3	People who are homeless are discriminated against	1	2	3	4	5	6	7
4	Other people who are homeless experience discrimination	1	2	3	4	5	6	7

Coping options

Please indicate how strongly you agree with each statement. Responses range from:

1 = do not agree at all	2 = somewhat disagree	3 = neither agree nor disagree	4 = somewhat agree	5 = fully agree

1	I make every effort to be considered as a person who is not homeless	1	2	3	4	5
2	I try to live as a person who is not homeless rather than a person who is homeless	1	2	3	4	5
3	In future I would like to regard myself as a person who is not homeless	1	2	3	4	5
4	It is my very wish to belong to people who are not homeless	1	2	3	4	5

Please indicate how strongly you agree with each statement. Responses range from:

1 = strongly disagree	2 = Moderately disagree	3 = Somewhat Disagree	4 = Neither Agree nor Disagree	5 = Somewhat Agree	6 = Moderately agree	7 = Strongly Agree

1.	I handle my own emotional responses when I encounter discrimination.	1.	2.	3.	4.	5.	6.	7.
2.	When I encounter discrimination, I don’t let it get to me.	8.	9.	10.	11.	12.	13.	14.
3.	I control whether discrimination affects me emotionally or not.	15.	16.	17.	18.	19.	20.	21.

4.	I don’t let other people affect how I feel about myself.	22.	23.	24.	25.	26.	27.	28.
5.	I generally avoid situations where I might be discriminated against	29.	30.	31.	32.	33.	34.	35.
6.	Much of the time, I control whether I encounter discrimination.	36.	37.	38.	39.	40.	41.	42.
7.	I avoid interacting with people who I know would not accept me because of my history of homelessness.	43.	44.	45.	46.	47.	48.	49.
8.	Talking with other people who are homeless can help me to feel better about encounters with prejudice.	50.	51.	52.	53.	54.	55.	56.
9.	I can get emotional support from other homeless people by discussing discriminatory experiences.	57.	58.	59.	60.	61.	62.	63.
10.	When I feel discriminated against, other homeless people will listen to my concerns.	64.	65.	66.	67.	68.	69.	70.
11.	Other homeless people would give me emotional support if I ever challenged discrimination.	71.	72.	73.	74.	75.	76.	77.
12.	Other homeless people help me by warning me about situations where I might face discrimination.	78.	79.	80.	81.	82.	83.	84.
13.	I can turn to other homeless people for advice about handling discrimination.	85.	86.	87.	88.	89.	90.	91.
14.	I can trust other homeless people to give me good advice about coping with discrimination.	92.	93.	94.	95.	96.	97.	98.
15.	If I encountered discrimination, other homeless people would help me to challenge it.	99.	100.	101.	102.	103.	104.	105.
16.	When encountering discrimination, homeless people generally don’t let it get them down.	106.	107.	108.	109.	110.	111.	112.
17.	Homeless people know they don’t need acceptance by society to feel good about themselves as a group.	113.	114.	115.	116.	117.	118.	119.
18.	Homeless people know they don’t need to meet society’s standards to feel good about themselves as a group.	120.	121.	122.	123.	124.	125.	126.
19.	Homeless people control how much they let society’s stereotypes affect them.	127.	128.	129.	130.	131.	132.	133.
20.	By working together, homeless people can change discriminatory practices.	134.	135.	136.	137.	138.	139.	140.
21.	By working together, homeless people can improve the economic standing of their group.	141.	142.	143.	144.	145.	146.	147.
22.	By working together as a group, homeless people can help to reduce social inequality.	148.	149.	150.	151.	152.	153.	154.
23.	By working together, homeless people can help make prejudice unacceptable.	155.	156.	157.	158.	159.	160.	161.

Perceived Social Support

I am interested in how you feel about the following statements. When I read each statement please indicate how you feel about each statement with the following options. Responses range from:

1 = very strongly disagree	*2 = strongly disagree*	*3 = mildly disagree*	*4 = neutral*	*5 = mildly agree*	*6 = strongly agree*	*7 = very strongly agree*

Is there a special person in your life who is homeless?							
There is a special person who is homeless who is around when I am in need.	1	2	3	4	5	6	7
There is a special person who is homeless with whom I can share joys and sorrows.	1	2	3	4	5	6	7
I have a special person who is homeless who is a real source of comfort to me.	1	2	3	4	5	6	7
There is a special person in my life who is homeless who cares about my feelings.	1	2	3	4	5	6	7
Do you have any friends who are homeless?							
My friends who are homeless really try to help me.	1	2	3	4	5	6	7
I can count on my friends who are homeless when things go wrong.	1	2	3	4	5	6	7
I have friends who are homeless with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
I can talk about my problems with my friends who are homeless.	1	2	3	4	5	6	7

Do you have any family who are homeless?							
My family members who are homeless really try to help me.	1	2	3	4	5	6	7
I get the emotional help and support I need from my family members who are homeless.	1	2	3	4	5	6	7
I can talk about my problems with my family members who are homeless.	1	2	3	4	5	6	7
My family members who are homeless are willing to help me make decisions.	1	2	3	4	5	6	7

Do you have any family who are not homeless?							
My family members who are not homeless really try to help me.	1	2	3	4	5	6	7
I get the emotional help and support I need from my family members who are not homeless.	1	2	3	4	5	6	7
I can talk about my problems with my family members who are not homeless.	1	2	3	4	5	6	7
My family members who are not homeless are willing to help me make decisions.	1	2	3	4	5	6	7

Perceived Stress

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate how often you felt or thought a certain way

Responses range from:

0 = Never	1 = Almost never	2 = Sometimes	3 = Fairly Often	4 = Very often

1	In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2	In the last month, how often have you felt you were unable to control the important things in your life?	0	1	2	3	4
3	In the last month, how often have you felt nervous and “stressed”?	0	1	2	3	4
4	In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5	In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6	In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
7	In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8	In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9	In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
10	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Self-Esteem

Please answer the following questions by saying ‘yes’ or ‘no’.

No	Question		
1	Do you ever wish you were someone else?	Yes	No
2	Do you like the sort of person you are?	Yes	No
3	Do you often feel ashamed of yourself?	Yes	No
4	Do you understand yourself?	Yes	No
5	Do you have a low opinion of yourself?	Yes	No
6	Do you think you can make a success of your life?	Yes	No
7	Are things all mixed up in your life?	Yes	No
8	Are you happy with the way you are	Yes	No

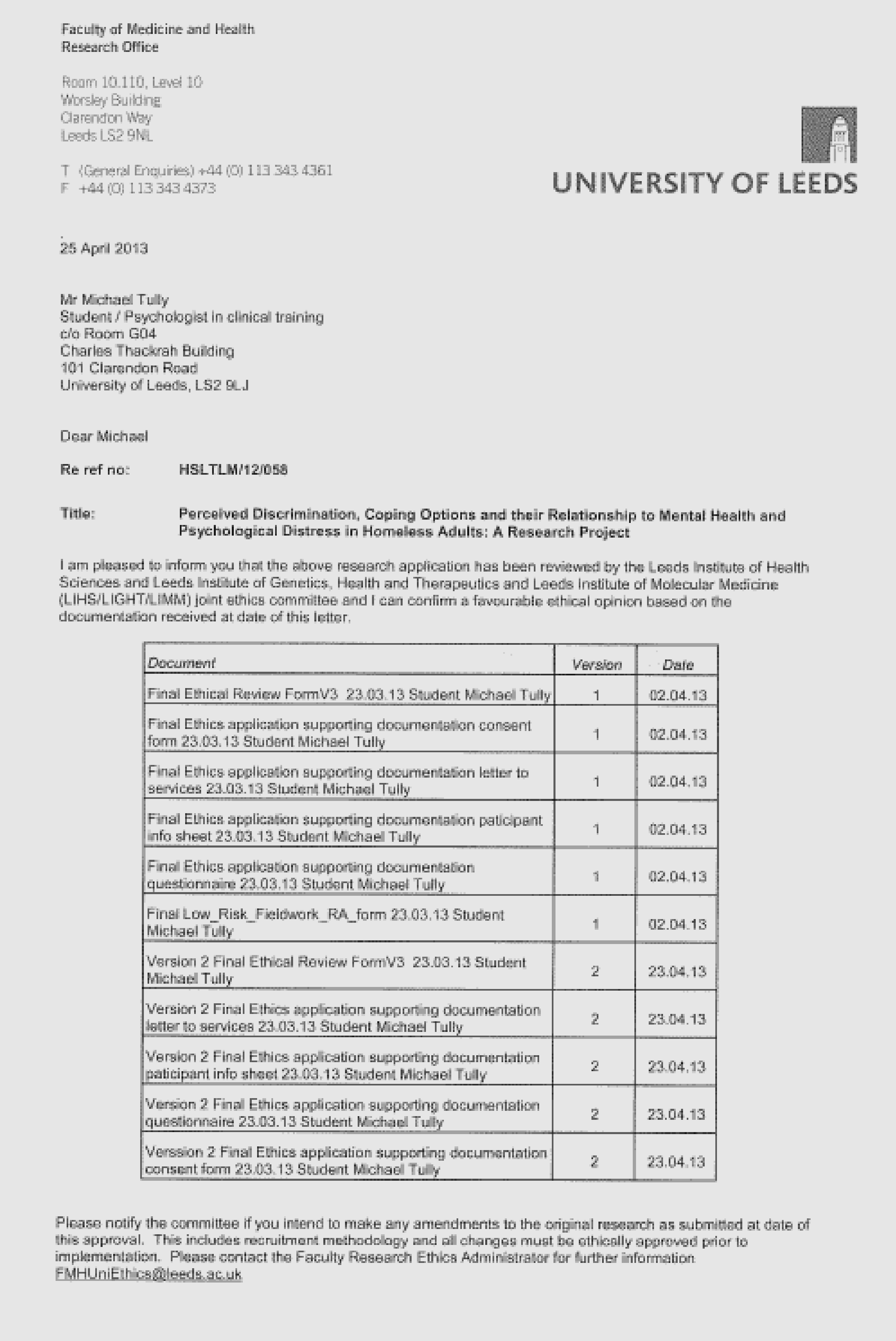
Psychological Distress

"The Brief Symptom Inventory 18 measure has been removed by the author of this thesis for copyright reasons"

0 = Not at all	1 = A little bit	2 =Moderately	3 = Quite a bit	4 = Extremely

1		0	1	2	3	4
2		0	1	2	3	4
3		0	1	2	3	4
4		0	1	2	3	4
5		0	1	2	3	4
6		0	1	2	3	4
7		0	1	2	3	4
8		0	1	2	3	4
9		0	1	2	3	4
10		0	1	2	3	4
11		0	1	2	3	4
12		0	1	2	3	4
13		0	1	2	3	4
14		0	1	2	3	4
15		0	1	2	3	4
16		0	1	2	3	4
17		0	1	2	3	4
18		0	1	2	3	4

Appendix 4: Copy of Letter Granting Ethics Approval



Faculty of Medicine and Health
Research Office

Room 10.110, Level 10
Worsley Building
Clarendon Way
Leeds LS2 9NL

T (General Enquiries) +44 (0) 113 343 4361
F +44 (0) 113 343 4373

UNIVERSITY OF LEEDS

25 April 2013

Mr Michael Tully
Student / Psychologist in clinical training
c/o Room G04
Charles Thackrah Building
101 Clarendon Road
University of Leeds, LS2 9LJ

Dear Michael

Re ref no: **HSLTLM/12/058**

Title: **Perceived Discrimination, Coping Options and their Relationship to Mental Health and Psychological Distress in Homeless Adults: A Research Project**

I am pleased to inform you that the above research application has been reviewed by the Leeds Institute of Health Sciences and Leeds Institute of Genetics, Health and Therapeutics and Leeds Institute of Molecular Medicine (LIHS/LIGHT/LIMM) joint ethics committee and I can confirm a favourable ethical opinion based on the documentation received at date of this letter.

Document	*Version*	*Date*
Final Ethical Review FormV3 23.03.13 Student Michael Tully	1	02.04.13
Final Ethics application supporting documentation consent form 23.03.13 Student Michael Tully	1	02.04.13
Final Ethics application supporting documentation letter to services 23.03.13 Student Michael Tully	1	02.04.13
Final Ethics application supporting documentation paticipant info sheet 23.03.13 Student Michael Tully	1	02.04.13
Final Ethics application supporting documentation questionnaire 23.03.13 Student Michael Tully	1	02.04.13
Final Low_Risk_Fieldwork_RA_form 23.03.13 Student Michael Tully	1	02.04.13
Version 2 Final Ethical Review FormV3 23.03.13 Student Michael Tully	2	23.04.13
Version 2 Final Ethics application supporting documentation letter to services 23.03.13 Student Michael Tully	2	23.04.13
Version 2 Final Ethics application supporting documentation paticipant info sheet 23.03.13 Student Michael Tully	2	23.04.13
Version 2 Final Ethics application supporting documentation questionnaire 23.03.13 Student Michael Tully	2	23.04.13
Verssion 2 Final Ethics application supporting documentation consent form 23.03.13 Student Michael Tully	2	23.04.13

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval. This includes recruitment methodology and all changes must be ethically approved prior to implementation. Please contact the Faculty Research Ethics Administrator for further information FMHUniEthics@leeds.ac.uk

Ethical approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

I wish you every success with the project.

Yours sincerely

Professor Darren Shickle
Acting Chair, LIHS/LIGHT/LIMM Joint REC
University of Leeds