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Effect of hopelessness on the links between psychiatric symptoms and suicidality in a vulnerable population at risk of suicide

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ABSTRACT

The aim of this study was to examine the impact of two risk factors working together on a measure of suicide probability in a highly vulnerable group who were male prisoners identified as being at risk of self harm. The first risk factor was psychiatric symptoms, including general psychiatric symptoms and symptoms of personality disorder. The second risk factor was psychological precursors of suicidal thoughts and behaviours which were defeat, entrapment, and hopelessness. Sixty-five male prisoners from a high secure prison in NW England, UK, were recruited, all of whom were considered at risk of suicide by prison staff. General psychiatric symptoms and symptoms of personality disorders predicted the probability of suicide. Hopelessness amplified the strength of the positive relationship between general psychiatric symptoms and suicide probability. These amplification effects acted most strongly on suicidal ideation as opposed to negative self evaluations or hostility. In contrast, defeat, entrapment and hopelessness did not affect the relationship between personality disorders and suicide probability. Clinical assessments of highly vulnerable individuals, as exemplified by prisoners, should include measures of a range of general psychiatric symptoms, together with measures of psychological components, in particular perceptions of hopelessness.

1. Introduction

Suicidal thoughts and behaviours are recognised as being a serious public health problem globally, and particularly so in developed countries (WHO, 2011). The prevalence of completed suicide has been reported as 10 per 100,000 in Europe (EU, 2012) and as 18 per 100,000 for people aged between 45 and 64 in the United States of America based on data collected in 2008 (CDC, 2012). It is not just completed suicide which is of concern. Thoughts about suicide are associated with considerable distress (van Spiker et al., 2011) and should be considered a target for clinical interventions (Tarrier et al., 2013). Furthermore, suicidal ideation is regarded as an initial step in the trajectory towards making concrete plans about suicide, and then, finally, to death by suicide (Brown et al., 2000; Gunnel et al., 2004; Fawgett et al., 2005). In an Australian sample of over 7000 community dwelling individuals, 11.4% of respondents reported some degree of suicidal ideation (Christensen et al., 2013). That 11% of this population reported thoughts of suicide is clearly of considerable concern. Hence, it is important to examine factors which amplify the probability of suicide, including thoughts of suicide. This is particularly important when investigating suicidality in particularly vulnerable populations, such as those who are incarcerated.

Epidemiological risk factors for suicide deaths comprise being male, unemployed, in financial difficulty, separated or divorced, and homeless (Hawton et al., 2013). These risk factors are frequently observed in incarcerated individuals who are at a heightened risk of suicide because of the complexities of both the prison environment and the often intricate personal histories of prisoners (Fazel et al., 2008; Appelbaum et al., 2011; Fazel et al., 2011; Humber et al., 2013; Hawton et al., 2014). Perhaps unsurprisingly, given these characteristics, based on data collected on 861 prison suicides in over 12 countries, the suicide deaths of prisoners has been reported as being at least three times higher than that found in the general population (Fazel et al., 2011). Data that reflect

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suicidal ideation are scarcer. However, an Australian study found that suicidal ideation occurred in up to one third of prisoners (Larney et al., 2012).

One risk factor which escalates the rates of death by suicide, suicide attempts, and thoughts about suicide is severe psychiatric illnesses (Hawton et al., 2013). The substantially elevated rates of death by suicide for those with diagnoses on the schizophrenia spectrum, and diagnoses of bipolar disorders, personality disorders, and unipolar depression, are well documented (e.g., Black et al. (2004), Fialko et al. (2006), Qin (2011), Ireland and York (2012) and Song et al. (2012)). The prevalence of psychiatric illnesses is high in prisoners (Fazel and Seewald, 2012; Fries et al., 2013), one consequence of which is that such individuals may be even more susceptible to thoughts and feelings of suicide (Pennington et al., 2015).

It is important to understand the ways in which psychiatric symptoms elevate the risk of suicide. Furthermore, it is even more important to understand interactions between psychiatric symptoms and psychological precursors of suicidal thoughts and behaviours (Ivanoff et al., 1996). Three contemporary psychological models of suicide, namely, the Schematic Appraisal Model of Suicide (SAMS) (Johnson et al., 2008), the Integrated Motivational-Volitional of Suicide (IMV) (O'Connor, 2011), and the Cry of Pain Model of Suicide (Williams, 1997), have examined which psychological components play a pivotal role in suicidal thoughts and behaviours. The psychological factors which have been identified by current psychological models of suicide, and which are central to understanding the pathways to suicide, include perceptions of being hopeless, defeated, and trapped (Taylor et al., 2011). There is a large literature, based on an older Hopelessness theory of depression, documenting the centrality of perceptions of hopelessness in the development of suicidal thoughts and feelings (Abramson et al., 1989). Later models have attempted to specify ways in which defeat, entrapment and hopelessness lead to suicidality. For example, the Cry of Pain model postulates that it is when perceptions of entrapment are perceived as applying to the future, that suicidal thoughts and behaviours intensify (Williams, 1997). Similarly, in the IMV, perceptions of being trapped trigger a feeling that there is no escape from current situations, which can be worsened by negative perceptions of the future or a lack of positive perceptions of the future, i.e., hopelessness (O'Connor, 2011). The SAMS notes conceptual overlap between hopelessness, defeat and entrapment but suggests that negative appraisals of the self, the past and the future are precursors to perceptions of defeat, entrapment, and hopelessness (Johnson et al., 2008).

These contemporary theories have not yet specified the mechanisms by which psychiatric symptoms might interact with psychological factors in the pathways to suicidal thoughts and behaviours. Some recent work has attempted to explore this issue, albeit only to some extent, by determining which, if any, of these psychological components of hopelessness, defeat, and entrapment interact with psychiatric symptoms to elevate suicidal thoughts and/or behaviours. For example, one study found that perceptions of defeat and entrapment acted on positive psychotic symptoms, particularly suspiciousness, in the mechanisms underlying suicidal ideation in those with a diagnosis of schizophrenia (Taylor et al., 2011).

Although the literature is sparse, levels of hopelessness, defeat and entrapment have been examined in incarcerated individuals both in relation to suicidality and independently of suicidal thoughts and behaviours (e.g., Gooding et al. (in preparation), Marzano, et al. (2011), Palmer and Connelly (2005) and Slade et al. (2014)). That said, the investigation of hopelessness, defeat, and entrapment in those who are imprisoned has, largely, not been guided by psychological theories of suicidality meaning that putative mechanisms have not been tested. It has also been noted that even though levels of psychiatric illnesses are known to be high in offenders, there is insufficient understanding of factors which moderate, or interact with, the relationships between psychiatric illnesses and suicidal thoughts and behaviours (Pennington et al., 2015). The psychological components of defeat, entrapment, and hopelessness are prime candidates to act as moderators in these relationships.

As far as the authors are aware, no study to date has sought to determine the ways in which the psychological perceptions of hopelessness, defeat, and entrapment amplify psychiatric symptoms to elevate suicidal probability in prisoner populations. This was the over-arching goal of the current study. It was predicted that all three psychological variables have the potential to amplify the effects of psychiatric symptoms in order to worsen the probability of suicide. A more tentative prediction, which is nevertheless backed-up by some extant literature (e.g., Allen et al. (2013), Van Orden et al. (2010)), was that the suicidal ideation component of the measure of suicide probability may be the driver of any significant amplification effects as compared to the negative self evaluation and hostility components.

2. Method

2.1. Design

A cross-sectional questionnaire design was used. The outcome variable was a measure of suicide probability. Predictor variables were psychological measures of defeat, entrapment, and hopelessness, and measures of general psychiatric symptoms and personality disorders. It should be noted that data were collected as part of a pilot two-armed RCT into the acceptability and feasibility of a psychological intervention to ameliorate suicidal thoughts and behaviours in prisoners (Pratt et al., 2015). Hence, this group of participants should be reflective of male prisoners at high risk of suicide incarcerated in UK secure prison establishments interested in participating in psychological research to address suicidality.

2.2. Participants[1]

Male prisoners from a high security prison in North West England, UK, were identified by prison staff as potential participants. Incarcerated individuals were not necessarily resident in the NW of England prior to incarceration. All participants had to have been identified as being at risk of self harm or suicide in the past month by prison staff (e.g., prison officers, health care staff, and the research assistant conducting assessments), according to the Assessment, Care in Custody and Teamwork system of the UK prison service [ACCT] (MOJ, 2012) when recruited. The ACCT system is the care planning system used by Her Majesty's Prison Service (England and Wales) to identify and manage prisoners at risk of suicidal behaviours and declaration of intent to die by suicide.

There were four additional inclusion criteria which were (i) being over 18 years of age, (ii) having sufficient English language ability to be able to understand the participant information sheet and consent form, (iii) having capacity to consent to participation, and (iv) not considered by prison staff to pose a risk to the researcher. Participants received no payment or privileges for participating which was entirely voluntary.

[1] For further details about included and excluded participants, please see Pratt et al. (2015).

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