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Situating violent ideations within the landscape of mental health: Associations between violent ideations and dimensions of mental health

Aja Louise Murray[a,*], Manuel Eisner[a], Ingrid Obsuth[a], Denis Ribeaud[b]

[a] Violence Research Centre, Institute of Criminology, University of Cambridge, Cambridge, UK
[b] Criminological Research Unit, Chair of Sociology, Swiss Federal Institute of Technology Zurich (ETH), Zurich, Switzerland

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ABSTRACT

Violent ideations occur more frequently in individuals with mental health problems. They may be of interest in clinical contexts as possible indicators of dangerousness, as corollaries of mental health problems, as candidate treatment targets and as potentially playing a role in perpetuation or onset of symptoms. In spite of their relevance to mental health, some fundamental questions about their place within the broader landscape of mental health problems remain unanswered. To provide a basic characterisation of the relations between violent ideations and dimensions of mental health and provide a foundation for future research in this area we factor analysed a measure of violent ideations and an omnibus measure of mental health dimensions in a normative sample of 1306 youth (at age 17). Results supported a separate dimension of violent ideations with a small to moderate correlation with five other dimensions of mental health: internalising, prosociality, ADHD, indirect/proactive aggression, and physical/reactive aggression. Controlling for comorbidity among mental health dimensions, all but ADHD had unique relations with violent ideations. This suggests that violent ideations are potentially of broad relevance to mental health and related behaviours and there should be a greater research effort aimed at understanding their possible role in mental health.

1. Introduction

Violent ideations can be defined as thoughts, daydreams or fantasies of inflicting harm on another. Violent ideations should be distinguished from plans or threats to commit an aggressive act, from aggressive delusions and from ideations of self-directed and sexual violence (e.g. Gellerman and Suddath, 2005; Murray et al., 2017a). Otherwise, violent ideations refer to cognitions in a general sense: they can but need not be ruminative or intrusive in nature (e.g. DeWall et al., 2011) and can include, for example, the aggressive 'script rehearsal' that is a key component of social-cognitive theories of aggressive behaviour (e.g. Huesmann, 1988).

Violent ideations defined in this way are of interest in mental health settings as possible indicators of dangerousness, as corollaries of mental health problems, and as potential treatment targets (e.g. Akerman, 2008; Monahan et al., 2000); however, there remains considerable uncertainty as to how they are situated within the broader landscape of mental health issues. In this study, we aimed to fill this knowledge gap by evaluating the associations between violent ideations and a range of mental health dimensions that are important in adolescence.

Although violent ideations are common in the general population, evidence suggests that they are elevated in psychiatric patients (e.g. Crabb, 2000; Kenrick and Sheets, 1993; Grisso et al., 2000). Grisso et al. (2000), for example, reported that violent ideations were elevated in patients hospitalised for a psychiatric disorder relative to otherwise similar individuals from the general population. Their relation to psychiatric issues appears to be relatively non-specific: studies have suggested an association with symptoms spanning a wide range of diagnostic domains, including suicidality (e.g. Brent et al., 1993), panic attacks (Korn et al., 1997), and anti-social and borderline personality disorders (Gilbert et al., 2005). They may also occur as a side effect of psychotropic medications used to treat mental health problems, although this is currently less clear (e.g. Moore et al., 2010).

Given the increasing recognition that many mental health problems are continuously distributed in the population, rather than representing the categorical entities traditionally assumed (e.g. Sanislow et al., 2010), it is not surprising that the association between violent ideations and mental health dimensions extends to samples of individuals not selected for mental health problems. Harter et al. (2003), for example, reported significant associations between depression, suicidal ideation and homicidal ideations in a community adolescent sample. In a series

* Corresponding author.
E-mail address: am2367@cam.ac.uk (A.L. Murray).

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of studies conducted in pain patients, violent ideations correlated with a broad range of mental health dimensions spanning, for example, depression, anxiety, substance abuse, and borderline traits (Bruns and Disorbio, 2000; Bruns et al., 2007; Fishbain et al., 2009).

Few studies have, however, probed the meaning and implications of the association between violent ideations and dimensions of mental health. There are numerous potential pathways by which both general and specific mental health problems could be related to violent ideations. First, mental health problems and violent ideations could have common roots. There is at least some evidence that mental health problems and violent ideations can both represent reactions to adverse experiences and stressors such as traumatic events or victimisation (e.g. Bruns and Disorbio, 2000; Harter et al., 2003; Uusitalo-Malmivaara, 2013). Second, violent ideations may occur as a result of mental health symptoms. At the broadest level, almost all mental health symptoms are associated with psychological distress; a potential general risk factor for violent ideations. However, specific characteristics of mental health dimensions such as ruminative cognitive styles associated with depression (e.g. Robinson and Alloy, 2008), poor control over maladaptive thoughts in attention-deficit hyperactivity disorder (e.g. Mowlem et al., 2016), heightened threat sensitivity in anxiety disorders (e.g. Pine, 2007) hostile attributional styles in externalising disorders (e.g. Fontaine et al., 2010); and empathy deficits associated with autism spectrum disorders (e.g. Baron-Cohen, 2002) could represent specific risk factors for violent ideations. Third, violent ideations could reinforce or engender mental health symptoms and behaviour. For example, there have been suggestions that violent ideations precede and promote aggressive behaviour (e.g. Huesmann, 1988); can trigger negative emotional responses (e.g. Auvinen-Lintunen et al., 2015); and could undermine empathy (e.g. Anderson et al., 2010). Establishing how best to conceptualise violent ideations in terms of their position within a broader landscape of mental health symptoms may, therefore, help provide further illumination on psychopathological processes and have important implications for the part they play in the diagnostic and treatment process. In this study we, therefore, conducted an exploratory analysis of the structure of and unique relations between violent ideations and mental health dimensions in a large normative sample of youth.

Previous factor analyses of mental health symptoms have provided insights into optimal ways of organising symptoms and in conceptualising mental health more broadly. For example, factor analyses of broadband measures of mental health problems have supported the idea that symptoms across multiple disorders can be organised hierarchically with 'trans-diagnostic' factors such as internalising and externalising or possibly even a 'general factor of psychopathology' at the broadest levels (e.g. Caspi et al., 2014; Krueger and Eaton, 2015). These kinds of analyses are now informing the exploration of trans-diagnostic diagnostic and treatment processes (e.g. Barlow et al., 2014). Similarly, factor analyses have been used to 'situate' particular symptoms or other characteristics relevant to mental health within a broader structure of mental health symptoms. For example, Noordhof et al. (2015) found that within a model that included both general and specific dimensions of mental health, autism spectrum disorder symptoms were subsumed by a factor distinct from those subsuming externalising, internalising and attention problem symptoms. Similarly, Eaton et al. (2011) aimed to situate borderline personality disorder within a mental health symptoms factor model. They found that it reflected both internalising and externalising. Given the information provided by factor analytic approaches about the position of particular symptoms within the broader context of mental health, we used this approach to provide initial guidance on how to conceptualise violent ideations in relation to common mental health symptoms across a range of diagnostic domains.

2. Method

2.1. Participants

Data were from the most recent main data collection wave of the Zurich Project on Social Development of children and youths (z-proso) when the participants were aged around 17. Z-proso is a longitudinal cohort study based in Zurich, Switzerland, focussed on positive youth development, anti-social behaviour and mental health. The study began when the youths were entering primary school and has gone through 7 main waves of data collection where self-reported data were obtained, the most recent in 2015. Youths were selected for participation based on attending one of 56 Zurich-based schools selected via a stratified random sampling procedure. The study included an intervention component in its early years but because this yielded no important short- or long- term effects and consistently makes no difference when included as a covariate in analyses of the data, the study is usually treated as purely observational (Averdijk et al., 2016; Malti et al., 2011). At the wave utilised in the current study, 1306 participants contributed data on the constructs of interest, representing 78% of the original target sample. Of the 1306 youth contributing data in the current wave, approximately half (659) were male. The sample was diverse in terms of social and cultural background. In terms of the birth country of the female primary caregivers of the youths, 26% were born in Switzerland and spoke German as a first language, 4% were born in Switzerland and spoke another first language, 4% were of Albanian mother tongue (born in former YU or Albania), 6% were from former Yugoslavia (other mother tongue), 2% were born in Italy, 3% were born in Sri Lanka (Tamil language), 3% were born in Turkey, 4% were born in Portugal, 1% were born in Spain, 4% were born in Germany, 3% were born in other Western European countries, 1% were born in other South/Eastern European countries, 2% were born in North Africa/Middle East, 2% were born in Sub-Saharan Africa, 4% were born in the Far East, and 4% were born in Latin America. In term of socioeconomic status, the mean household International Socio-Economic Index of Occupational Status (ISEI) for the sample was 45.36 (SD=17.781).

Initial participation in the z-proso study, when the children were aged 7, was based on parental consent. From age 13 onwards, including at the measurement wave from which the data in the current study is derived, youth gave active informed consent to participate. Participants were compensated for their contribution to the study with a financial reward worth approximately $50US.

2.2. Measures

2.2.1. Violent ideations

As our measure of violent ideations, we used the Violent Ideations Scale (VIS; Murray et al., 2017a). The VIS includes 12 items referring to thoughts of harming another individual where harm includes, for example, killing, beating up, bullying, causing pain and humiliating. The aggressive acts vary in the target referred to (e.g. a stranger, a person close to the respondent, a person despised by the respondent) as well as the seriousness of the imagined act (e.g. humiliating someone, beating someone up, killing someone). Items also refer to thoughts of both provoked and unprovoked aggression, mirroring the reactive versus proactive distinction identified in aggressive behaviour research (e.g. Raine et al., 2006).

A previous study provides an account of the development and psychometric evaluation of the scale in the current sample (Murray et al., 2017a). In brief, items were generated according to an initially broad conception of violent ideations, given the variable implicit definitions pre-existing in the literature and included references to physical, non-physical, sexual aggression and aggression towards the self. A subset of 15 items was selected based on expert review and administered in z-proso. Exploratory and confirmatory factor analyses suggested that 12 items excluding two items referring to sexual