Schizophrenia Research 150 (2013) 169–175

Contents lists available at ScienceDirect

Schizophrenia Research

journal homepage: www.elsevier.com/locate/schres

Prevalence of bullying victimisation amongst first-episode psychosis patients and unaffected controls

Antonella Trotta [a,c,*], Marta Di Forti [a], Valeria Mondelli [a], Paola Dazzan [a], Carmine Pariante [a], Anthony David [a], Alice Mulè [b], Laura Ferraro [b], Ivan Formica [c], Robin M. Murray [a], Helen L. Fisher [d]

[a] Psychosis Studies, Institute of Psychiatry, King's College London, UK
[b] Dipartimento di Biomedicina Sperimentale e Neuroscienze Cliniche, Università degli studi di Palermo, Italy
[c] Dipartimento di Scienze Umani e Sociali, Università degli studi di Messina, Italy
[d] MRC Social, Genetic and Developmental Psychiatry Centre, Institute of Psychiatry, King's College London, UK

ARTICLE INFO

Article history:
Received 10 March 2013
Received in revised form 10 June 2013
Accepted 2 July 2013
Available online 26 July 2013

Keywords:
Bullying
Victimisation
First episode
Psychosis
Schizophrenia

ABSTRACT

Background: Despite increasing evidence suggesting that childhood maltreatment is significantly associated with psychosis, the specific role of bullying in the onset of psychotic disorders is still unclear. This study aimed to examine whether bullying was more prevalent amongst individuals presenting to services for the first time with a psychotic disorder than in unaffected community controls.
Methods: Data on exposure to bullying, psychotic symptoms, cannabis use and history of conduct disorder were collected cross-sectionally from 222 first-presentation psychosis cases and 215 geographically-matched controls. Bullying victimisation was assessed retrospectively as part of the Brief Life Events schedule. Logistic regression was used to examine associations between exposure to bullying and case–control status, while controlling for potential confounders.
Results: Psychosis cases were approximately twice as likely to report bullying victimisation when compared to controls. No significant interactions between bullying and either gender or cannabis use were found. Controls reporting being a victim of bullying were approximately twice as likely to also report at least one psychosis-like symptom.
Conclusions: Our results extend previous research by suggesting that bullying victimisation may contribute to vulnerability to develop a psychotic disorder in some individuals.

1. Introduction

In attempting to better understand the aetiology of psychosis, a substantial body of research has focused on the role of psychosocial factors. A quantitative review and meta-analysis of the available empirical literature indicated that exposure to childhood adverse experiences is strongly associated with increased risk for psychosis (Varese et al., 2012). Indeed, large-scale general population studies indicate that exposure to maltreatment in childhood (such as sexual, physical and emotional abuse, and neglect) increases the risk of experiencing psychotic symptoms in adolescence as well as full-blown psychotic disorders in adulthood (Read et al., 2005; Morgan and Fisher, 2007; Schafer and Fisher, 2011).

However, the specific role of bullying in the later development of psychotic disorder is still unclear (Van Dam et al., 2012). A recent survey conducted in the UK reported that approximately 25% of children had been bullied by peers during their school years (Radford et al., in press), suggesting that bullying is a common form of early victimisation. Being a victim of bullying has been associated with a wide range of mental health problems in adolescence (Arseneault et al., 2010) as well as sub-clinical psychotic symptoms (Lataster et al., 2006; Campbell and Morrison, 2007; Kelleher et al., 2008; Nishida et al., 2008; Schreier et al., 2009; Arseneault et al., 2011; Mackie et al., 2011; Fisher et al., 2012; Kelleher et al., 2013; Mackie et al., 2013). One general population study has also reported that there is a higher prevalence of bullying victimisation in adults considered to meet criteria for probable psychosis when compared to those without such symptoms (Bebbington et al., 2004). A study of adolescent psychiatric inpatients found that victims of bullying had psychotic disorders two to three times more often than the bullies or bully-victims, but the association was not significant (Luukkonen et al., 2010). Sourander et al. (2007) studied predictive associations between bullying victimisation at age 8 years and psychiatric disorders in early adulthood. They also found no significant association between being a pure victim of bullying and psychotic disorder in adulthood.

Therefore, further investigation of the association between bullying victimisation and psychotic disorder is warranted. None of the studies

* Corresponding author at: PO52 Psychosis Studies, Institute of Psychiatry, King's College London, De Crespigny Park, London SE5 8AF, UK. Tel.: +44 2078480702.
E-mail address: antonella.a.trotta@kcl.ac.uk (A. Trotta).

0920-9964/$ – see front matter © 2013 Elsevier B.V. All rights reserved.
http://dx.doi.org/10.1016/j.schres.2013.07.001

to date has explored the association between bullying victimisation and first clinical presentation for psychotic disorders in comparison to a control group. Neither have potential modifiers been investigated. For instance, gender (Fisher et al., 2009) and cannabis use (Houston et al., 2011; Mackie et al., 2013) have been shown to modify associations between other forms of childhood adversity and psychosis, and children who have been bullied are also at risk of engaging in anti-social behaviours (Liang et al., 2007). Additionally, given the strong associations found between bullying victimisation and depression (Hawker and Boulton, 2000), it also seems important to explore whether similar associations will hold for both schizophrenia-spectrum and affective psychosis diagnoses.

Therefore, the aim of our study was to extend the literature on the association between bullying victimisation and psychosis by focusing on clinically-relevant psychotic disorders and exploring a range of possible modifiers. First, we examined whether a history of bullying victimisation was more prevalent amongst individuals presenting to mental health services for the first time with a psychotic disorder than unaffected community controls. Second, we explored the association between bullying and psychosis by gender, conduct disorder, diagnosis and cannabis use.

2. Methods

2.1. Participants

The sample was drawn from patients who participated in the Genes and Psychosis (GAP) study from the Lambeth, Southwark and Croydon adult in-patient units of the South London & Maudsley (SLAM) Mental Health National Health Service (NHS) Foundation Trust. Inclusion criteria for cases were: age 16–65 years, presenting to psychiatric services for the first time with a psychotic disorder (codes F20–29 and F30–33 from the International Classification of Diseases [ICD-10]; WHO, 1992) and resident within tightly defined catchment areas in Southeast London, UK. Exclusion criteria were: organic psychosis; intelligence quotient (IQ) under 50; previous contact with services for psychosis, and transient psychotic symptoms resulting from acute intoxication (ICD-10; WHO, 1992). ICD-10 diagnoses were determined using data from the Schedules for Clinical Assessment in Neuropsychiatry (SCAN; WHO, 1994).

Controls were aged 16–65 years and recruited from the local population living in the area served by the Trust, by means of internet and newspaper advertisements, and distribution of leaflets at train stations, shops and job centres. Considerable efforts were made to obtain a control sample that was representative of the general population in age, gender, ethnicity, educational qualifications and employment status. The Psychosis Screening Questionnaire (PSQ; Bebbington and Nayani, 1995) was administered to all potential control group participants; individuals were excluded if they met criteria for a psychotic disorder.

Ethical permission was obtained from the SLAM and the Institute of Psychiatry Research Ethics Committee. All participants provided written consent after reading a detailed information sheet.

2.2. Measures

A range of socio-demographic information was obtained including age at interview, gender, current level of education and self-ascribed ethnicity using the UK 2001 census categories. Symptom data were collected on patients during face-to-face interviews with the SCAN (WHO, 1994). This information, supplemented by clinical records, was used to estimate lifetime DSM-IV diagnoses using the OPCRIT diagnostic system (McGuffin et al., 1991).

Data on sub-clinical psychosis-like symptoms in the past year were obtained from controls using the PSQ (Bebbington and Nayani, 1995). Endorsement of one or more symptoms (hypomania, thought insertion, paranoia, strange experiences, hallucinations) using the criteria outlined by Morgan et al. (2009) was considered to indicate the presence of psychosis-like experiences (PLEs).

Family history of psychotic and affective disorders was obtained from patients and controls for their first degree relatives using the Family Interview for Genetic Studies (FIGS; https://www.nimhgenetics.org/interviews/figs).

Bullying was assessed as part of the Brief Life Events schedule adapted from Bebbington et al. (2004). Patients and controls were shown a card listing 10 adverse events (serious injury or assault to yourself, bullying, violence at work, violence in the home, sexual abuse, being expelled from school, running away from home, being homeless, taken into local authority care, and time in children's institution) and asked whether they had ever experienced any of them during their lifetime. If a positive response was obtained, then participants were asked to point out which events they had experienced and whether each one had occurred in the last six months, one year previously, or more than 5 years previously. Only positive responses concerning bullying 5 or more years previously were taken as evidence of having been a victim of bullying in order to minimise the likelihood of psychotic symptoms occurring prior to the bullying exposure. Indeed none of the cases were deemed to have an onset of psychosis more than 5 years prior to interview. An additional life events variable was also created to indicate the presence of any of the other life events (excluding bullying).

Conduct disorder prior to 15 years of age was assessed using the Antisocial Personality/Conduct Disorder module of the Structured Clinical Interview for DSM-IV (SCID-CD; First et al., 1996). This comprises 15 items rated as present, sub-threshold or absent by the interviewer and the presence of 3 or more items was taken to indicate a history of conduct disorder (Malcolm et al., 2011).

Lifetime cannabis use was assessed with the Cannabis Experience Questionnaire modified version (Di Forti et al., 2009). This provides a detailed assessment of lifetime patterns of cannabis and other substance use, including type, age at first use, frequency and duration of use of each substance reported by the respondent. This detailed self-report questionnaire was read out to participants. Participants who responded positively to the item “Have you ever smoked/used cannabis” were subsequently asked about the frequency of use (coded as “everyday” or “once a week or less”).

2.3. Statistical analysis

Binary logistic regression was used to examine associations between exposure to bullying and psychosis case status, while controlling for potential confounders (age, gender, ethnicity, level of education and family psychiatric history). This was done first with the sample unstratified and then stratified by gender, conduct disorder, diagnosis and cannabis use. Associations are expressed as odds ratios (OR) with 95% confidence intervals (CI). Statistical interactions were assessed using likelihood ratio tests. All analyses were conducted using Stata version 10.1 for Windows (StataCorp, 2009).

A power calculation using the program QUANTO Version 1.2.4 software (http://hydra.usc.edu/gxe/) indicated over 90% statistical power (0.92) at a significance level of 0.05, 2-sided, for unmatched case–control analyses to obtain an OR of 2.0 with the total sample size in this study based on estimates of exposure to bullying victimisation amongst the UK general population (25%; Radford et al., in press). In addition, we calculated power for multivariate logistic regression with 7 variables in the regression model using the ‘powerlog’ function in Stata version 10. For 90% statistical power at a significance level of 0.05, we would require 112 or 150 unmatched cases and controls assuming 0.2 or 0.4 collinearity between the variables, respectively.