Childhood adversity profiles and adult psychopathology in a representative Northern Ireland study

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ABSTRACT

Childhood adversities are key aetiological factors in the onset and persistence of psychopathology. The aims of this study were to identify childhood adversity profiles, and investigate the relationship between the adversity classes and psychopathology in Northern Ireland. The study utilized data from the Northern Ireland Study of Health and Stress, an epidemiological survey ($N = 1986$), which used the CIDI to examine mental health disorders and associated risk factors. Latent Class Analysis revealed 3 distinct typologies; a low risk class ($n = 1709$; 86%), a poly-adversity class ($n = 122$; 6.1%), and an economic adversity class ($n = 155$; 7.8%). Logistic Regression models revealed that individuals in the economic adversity class had a heightened risk of anxiety and substance disorders, with individuals in the poly-adversity class more likely to have a range of mental health problems and suicidality. The findings indicate the importance of considering the impact of co-occurring childhood adversities when planning treatment, prevention, and intervention programmes.

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1. Introduction

Epidemiological studies have found that childhood adversities (CAs) can have a detrimental impact on psychological wellbeing. Unfortunately, CAs are highly prevalent with more than two-thirds of children experiencing at least one trauma before the age of 16 (Copeland, Keeler, Angold, & Costello, 2007). Using data from the WHO World Mental Health (WMH) Survey Initiative, Kessler et al. (2010) reported that CAs accounted for 29.8% of psychiatric morbidities worldwide and that CAs were inter-correlated, had a cumulative effect, and predicted further adversities; mirroring findings from previous studies (Copeland et al., 2007; Dong et al., 2004).

Adversities associated with maladaptive family functioning (MFF) have, in particular, been strongly linked to the onset (Green et al., 2010) and persistence of mental health problems (McLaughlin et al., 2010), especially anxiety disorders. McLaughlin et al. (2010) proposed that the detrimental impact may be due to the frequency or duration of these types of adversities which are likely to be enduring. Other studies have also found that trauma caused by an

attachment figure impacts greatly on psychopathology (Carlson & Dalenberg, 2000). Fryers and Brugha (2013) proposed that parenting style and quality, neglect, parental divorce, parental separation, and exposure to inter-parental violence during childhood, all play a role in adult psychiatric disorders. A recent systematic review of adverse childhood experiences suggested that child abuse and family violence have the greatest impact on future mental health (DeVenter, Demyttenaere, & Bruffaerts, 2013).

Weich, Patterson, Shaw, and Stewart-Brown (2009) reported that abusive and dysfunctional family relationships predicted a range of disorders, including anxiety, PTSD and depression. CAs have also been linked to substance use and externalizing disorders (Slopen et al., 2010). Additionally, a strong association has been found between CAs and suicidal behaviour (Bruffaerts et al., 2010).

While much of the epidemiological research into the association between CAs and psychopathology is American based, WMH surveys conducted in other countries have reported similar findings. The Health 2000 project in Finland found that those who had experienced CAs were almost twice as likely to have mental health problems (Pirkola et al., 2005). The Mexican National Comorbidity Survey found that family dysfunction and abuse were associated with psychopathology across the lifespan (Benjet, Borges, & Medina-Mora, 2010). The Nigerian Survey of Mental Health and Well-being (NSMHW) reported that adversities involving parental

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maladjustment, impacted significantly on mental health in adulthood (Oladeji, Makanjuola, & Gureje, 2010).

Some surveys however have suggested that there may be cross-national variations. The South Africa Stress and Health Study reported that Africans were more likely to have higher prevalence rates of CAs than Whites, with CAs impacting particularly on anxiety disorders (Slopen et al., 2010). While American based studies have suggested that CAs predict psychopathology in general (Green et al., 2010; McLaughlin et al., 2011), a Japanese epidemiological study reported that certain disorders were associated with specific adversities (Fujiwara & Kawalkami, 2011). Mood disorder, for example, was significantly related to parental mental health and physical abuse; however, no specific childhood adversity was significantly associated with the onset of anxiety disorders. While Oladeji et al. (2010), in the NSMHW, found no significant relationship with any specific adversity, they concluded that those who experienced three or more MFF adversities were 12 times more likely to develop anxiety disorders.

Traditionally, research assessing the link between CA and psychopathology has focused on one particular adversity. Contemporary knowledge now indicates that CAs often co-occur (Armour, Elklit, & Christoffersen, 2014; Dunn et al., 2011; Rosenman & Rodgers, 2004). Accounting for co-occurrence rather than focusing on the impact of single adversities is of paramount importance, given it is probable that different combinations of adversities may account for varying mental health outcomes. In addition, separating out the impact of a single adversity is problematic. Indeed, Shevlin and Elklit (2008) suggested that research should focus on individuals with similar adversity profiles.

Recent research has employed Latent Class Analysis (LCA) to identify the co-occurrence of CA's; also referred to as poly-victimisation. Studies examining high risk individuals, such as those in the juvenile justice system (Ford, Grasso, Hawke, & Chapman, 2013) or those involved in mental health and social services (Hazen, Connelly, Roesch, Hough, & Landsverk, 2009) reported that individuals with childhood maltreatment profiles have more psychological problems, with poly-victimised subgroups being particularly vulnerable (Ford et al., 2013). A number of studies have utilized the latent profiles to examine associations with mental health outcomes. Indeed, Dunn et al. (2011) found that different adversity profiles were associated with a range of specific mental health problems.

The aims of the current study were (1) to examine the nature and frequency of CAs reported in NI, (2) to assess poly-victimization across 12 independent childhood adversities and (3) to assess the associations between childhood adversity classes and subsequent mental health and suicidal outcomes in the NI population. Based on previous literature, it was predicted that those categorized into groups endorsing multiple childhood adversities would have an increased likelihood of reporting psychiatric morbidity and suicidal ideation and behaviour.

2. Method

2.1. Sample

As part of the WHO World Mental Health (WMH) Survey Initiative (Kessler & Üstün, 2008), face-to-face household interviews were conducted by certified lay interviewers in NI between February 2004 and August 2008. This study utilizes data obtained from this epidemiological survey, known as the NI Study of Health and Stress (NISHS). Full details on sampling methodology used in the NISHS can be found in Bunting, Ferry, Murphy, O'Neill, and Bolton (2013). The response rate for the NISHS was 68.4%. A total of 4340 participants (1899 males, 2441 females) completed part 1 of

the survey. Part 2 was then completed by a sub-sample of 1986 of the original participants (950 males, 1036 females). All participants were 18 years of age or older and were English speakers, residing in NI. Non-English speakers, people residing in institutions, those living in shared accommodation, including military barracks and prisons, and those with learning disabilities were excluded. The investigation was carried out in accordance with the latest version of the Declaration of Helsinki. Ethical approval was obtained from the University of Ulster Research Ethics Committee and informed consent was obtained from all participants after the study had been fully explained.

2.2. Diagnostic assessment

The WHO World Mental Health (WMH) Survey Initiative is a collaborative, epidemiological, systematic study which assesses the incidence, prevalence, and correlates of mental health problems using the WMH Composite International Diagnostic Interview (CIDI) version 3.0 (Kessler & Üstün, 2004). This standardized instrument retrospectively assesses mental health disorders in accordance with ICD-10 and DSM-IV criteria and definitions, with diagnostic hierarchy rules (Kessler et al., 2010). The current study examines any mood disorders (major depressive, dysthymic, bipolar I and II and sub-threshold bipolar disorders), any anxiety disorders (GAD, PTSD, panic, agoraphobia without panic disorder, social phobia, specific phobia, and separation anxiety disorders), any substance disorders (drug and alcohol abuse, drug and alcohol dependence with abuse) and any suicide ideation and behaviour (gestures, plans, and attempts). In the NISHS all participants completed part 1 of the fully structured interview, which includes a screening section, demographic variables and core diagnostic assessment. Part 2, which is analysed in this study, contains a range of diagnostic sections, along with risk factors such as childhood adversities, consequences, and treatment, was completed by all participants who responded positively to core mental health disorder screening questions, plus 50% of those who were sub-threshold cases and 25% of other participants who did not meet either criterion; this allowed for the calculation of sampling weights.

2.3. Childhood adversities assessment

CA questions are included in the childhood and PTSD sections of the survey. This study utilized 12 CAs identified in previous WMH surveys (cf. Kessler et al., 2010). The retrospectively reported CAs, experienced before the age of 18 are presented in Table 1.

2.4. Demographic variables

Demographic information, based on Part 2 of the survey is presented in Table 3.

2.5. Data analysis

2.5.1. Data preparation

All WMH surveys use strict guidelines for cleaning and coding data and preliminary files were reviewed to ensure data quality. Imputations were performed on missing values for demographic variables using hot-deck methods (Kessler & Üstün, 2008). Regression methods were used if the rates of missing data were high and cases were deleted if the interview was not completed. There was no missing data on the 12 CAs or on the covariates used in this analysis. Statisticians working on the NISHS computed case-specific weights (cf. Bunting et al., 2013). Part 2 weights, stratification units and cluster units were utilized in the current study. Analyses were implemented using SPSS version 21 and Mplus version 7.