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Violence and violent victimization in people with severe mental illness in a rural low-income country setting: A comparative cross-sectional community study

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ABSTRACT

Background: Violence perpetrated by and against people with severe mental illness (SMI) is important but rarely investigated in low- and middle income countries.
Objective: To compare the prevalence of perpetrated violence and violent victimization, and associated factors, in people with and without SMI in rural Ethiopia.
Method: A random sub-sample of people with a standardized, clinician diagnosis of SMI (n = 201) was recruited from an existing population-based study and compared to a group of unaffected individuals from the same neighborhood (n = 200). The lifetime and 12-month prevalence of violence and violent victimization was measured using an adapted version of the McArthur Violence Interview.
Result: Lifetime and 12-month prevalence of perpetrated violence in people with SMI (28.4% and 17.4%, respectively) was significantly higher than in the non-mentally ill comparison group (15.0% and 8.5%, respectively). Male gender, being literate and violent victimization were associated independently with violence in both groups. In people with SMI, violence was associated additionally with being unmarried, exposure to stressful life events and non-response to medication. The prevalence of violent victimization was also significantly higher in people with SMI than those without SMI (60.7% vs. 41.5%). In people with SMI, violent victimization was associated with unemployment, non-adherence to treatment and being a perpetrator of violence.
Conclusions: Our finding of high levels of violence and violent victimization in people with SMI underscores the need to improve access to mental health services in this setting, as well as the urgent need to raise awareness about victimization of people with SMI.

1. Introduction

Violence perpetrated by people with severe mental illness (SMI: including bipolar disorder, schizophrenia and other psychotic disorders) has been the subject of research in high-income countries for decades (Swanson et al., 1990; Torrey, 1994; Elbogen and Johnson, 2009; Fazel et al., 2009a, 2009b, 2010; Vinokur et al., in press). In high-income country settings, the presence of SMI is associated consistently with an increased risk of violence, although the extent to which this excess risk is explained by co-morbid substance misuse continues to be debated (Choe et al., 2008; Fazel et al., 2009a, 2009b, 2010; Short et al., 2013). The problem of violence carried out by people with SMI is often the focus of the public's attention in high-income countries; however, people with mental illness are more frequently the victims of violence ('violent victimization') than the general population (Walsh et al., 2003; Teplin et al., 2005; Hodgins et al., 2007; Maniglio, 2009; Sturup et al., 2011). Indeed, people with SMI are more likely to be victims of violence than to commit a violent act (Hiday et al., 2001; Hodgins et al., 2007; Choe et al., 2008; Silver et al., 2011).

Almost nothing is known about the risk of violent behavior or violent victimization associated with SMI in low- and middle-income countries (LMICs). Moreover people with SMI in LMICs are usually perceived to be dangerous by the community (Alem et al., 1999; Shibre et al., 2010), even though it is unclear whether they actually are more violent than members of the general population or more likely to be victims of violence. In the World Health Organization multi-country study of first contact patients with schizophrenia, the prevalence of self-reported assault against another person was substantially higher in LMICs (Columbia, India and Nigeria) (31.5%) compared to the high-income countries (10.5%) (Volavka et al., 1997); however, in the absence of general population comparison groups it was not possible to determine the excess risk of violence associated with schizophrenia. The only other studies of violence and SMI in sub-Saharan Africa were located in

Abbreviations: SMI, severe mental illness; HCR-20, the historical/clinical/risk management 20-item (HCR-20) scale.

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psychiatric in-patient facilities and limited by small sample sizes (Ben-Tovim and Boyce, 1988; Amoo and Fatoye, 2010; Krüger and Rosema, 2010). In Nigeria, 13.8% of psychiatric in-patients were aggressive during their admission (Amoo and Fatoye, 2010), in South Africa 16.0% of psychiatric patients in long-stay in-patient facilities were violent against persons or property during the admission (Krüger and Rosema, 2010), and in Botswana, 29.0% of psychiatric in-patients had been violent against persons or property prior to admission (Ben-Tovim and Boyce, 1988). However, strong selection biases are apparent in help-seeking populations attending specialist mental health care facilities in LMICs, due to inaccessibility and scarcity of services (Fekadu et al., 2007), which limit the interpretation of these findings. The only study of violent victimization from sub-Saharan Africa that we are aware of was a small case series of in-patients from a hospital in Zaire (Burdon, 1999).

There are several compelling reasons why the available evidence from high-income countries, mostly from Western cultures, may not be applicable to people with SMI in LMICs. In many LMICs in sub-Saharan Africa the population is predominantly rural and the social and structural factors relevant to violence from people with SMI, such as high-crime neighborhoods, do not pertain (Hiday et al., 2001; Swanson et al., 2002). Differing legal contexts, for example, regarding possession of firearms, the limited availability of emergency mental health care and absence of community-based outreach for people with SMI who disengage from care, and different patterns and extent of co-morbid substance misuse will also have a bearing on the association between SMI and violence in a given society. Lastly, the prevailing cultural, religious and social norms regarding violence and attitudes towards people with SMI will be expected to influence both violent behavior and violent victimization.

The objective of this study was to compare the prevalence of perpetrated violence and violent victimization, and associated factors, in people with and without SMI in a rural African community characterized by high social connectedness, widespread poverty and rudimentary mental health services.

2. Methods

2.1. Study design

Comparative cross-sectional study.

2.2. Setting

The study was carried out in a predominantly rural area of Ethiopia, around Butajira town, which is located 135 km south of Addis Ababa, the capital city of Ethiopia. Butajira hosts a demographic surveillance site (Berhane et al., 1999) and the area has been a center for research in mental health for more than fifteen years (Kebede et al., 2000, 2003, 2006; Alem et al., 2009).

2.3. Sample

The sample was selected randomly from an ongoing population-based cohort of people with SMI (DSM-IV diagnoses of schizophrenia, schizoaffective disorder and bipolar I disorder). The initial cohort of 640 people with SMI was identified during a house-to-house survey of over 68,000 adults living in the Meskan and Mareko districts in Butajira, which was conducted between 1997 and 2001 and has been followed up for over ten years (Kebede et al., 2000, 2003, 2006).

2.3.1. Establishment of the original SMI cohort

In 1998, the Meskan and Mareko districts were estimated to have a population of 83 282 in the 15 to 49 year age group which constituted the source population for the cohort study. To establish the cohort, a two stage screening design was used. In the first stage, possible cases of SMI were identified from responses to the Composite International Diagnostic Interview (CIDI) (Robins et al., 1988) administered in the house-to-house survey and identification by trained community key informants (Shibre et al., 2002). In the second stage, a structured clinical interview (the Schedules for Clinical Assessment in Neuropsychiatry; SCAN) (WHO, 1992) was administered by Ethiopian clinicians in order to make a definitive diagnosis. The validity of the SCAN was established against clinical diagnosis (Alem et al., 2004) and a rigorous process of training and piloting to ensure reliable administration (Shibre et al., 2002).

2.3.2. Sample for current study

The data collection for the current study was carried out in March 2011 after the cohort of people with SMI had been followed up for between 12 and 15 years. The sampling frame was all people with SMI who remained under active follow-up (n = 397): bipolar I disorder (n = 210; 68.0%) and schizophrenia or schizoaffective disorder (n = 187; 58.3%). Loss to follow-up over the 12 to 15 year period was due to death (n = 94; 14.7%), refusal (n = 83; 13.0%), migration (n = 46; 7.2%) and vagrancy (n = 14; 2.2%). A sample of 202 people with SMI was selected using systematic sampling with a random start-point. A comparison group of unaffected individuals, matched for age (±3 years), sex and place of residence, was identified. The first or second house neighboring the house of the person with SMI was chosen for participation based on the matched age and the sex. Self-report of mental health status from the comparison group participants and their family members was used to ensure that they were not suffering from SMI. Although no clinical assessment was carried out, it has been demonstrated previously that community recognition of SMI is high (Alem et al., 1999).

2.4. Sample size

The sample size was calculated assuming a baseline prevalence of violence in the general population of 1.6% (Fazel et al., 2009a). In order to detect a 6.7-fold increase in the prevalence of violence in persons with SMI (to 9.9%) (Fazel et al., 2009a) with alpha = 0.05 and power 80%, 187 persons were required in each group. Allowing for 8% contingency, a total of 202 participants were approached for each group.

2.5. Instruments and data collection

2.5.1. Primary outcomes

2.5.1.1. Violence perpetrated by the participant. Violence was defined as violence that resulted in physical injury; sexual assaults; assaultive acts that involved the use of a weapon; or threats made by the individual with a weapon in their hand (Elbogen and Johnson, 2009). Violence was measured using a self-report questionnaire based on the MacArthur Violence interview, used in several previous studies to assess violence by persons with SMI (Steadman et al., 1993; Swanson et al., 2006; Elbogen and Johnson, 2009). The questions were straightforward to adapt and to translate into Amharic, the official language of Ethiopia.

2.5.1.2. Violent victimization of the participant. Violent victimization was defined as an act of physical or threatened violence (as defined in the above paragraph) experienced by a person with SMI. The experience of being mocked by children was also included within our definition of violent victimization as this was considered to be a severe form of emotional violence. Detection of violence perpetrated against the participant was measured using questions adapted from the WHO multi-country study on violence against women (Garcia-Moreno et al., 2006). An Amharic version of the original instrument has been used in the Butajira setting and found to be culturally acceptable (Deyessa et al., 2009).