Organic vs. functional neurological disorders: The role of childhood psychological trauma

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ABSTRACT

Although the relationship between psychological trauma and medically unexplained symptoms (MUS) is well established, this relationship is less well understood in people with medically unexplained neurological symptoms. In the present study, we set out to compare people with functional neurological disorders, and organic neurological disorders, in terms of childhood and adulthood traumatic events, traumatic stress, emotional dysregulation and symptoms of depression and anxiety. We have hypothesised that those with functional neurological disorders would be more likely to report childhood and adulthood traumatic life events, traumatic symptomatology, emotional dysregulation and symptoms of anxiety and depression, compared to those with organic neurological disorders. Sample consisted of a consecutive series of people with functional neurological disorders and with organic neurological disorders (n = 82) recruited from a hospital in Scotland. Participants completed measures of life events, traumatic stress, emotional regulation, anxiety and depression. The two groups were found to significantly differ in relation to all measures, with the MUS group being more likely to report childhood and adulthood life events, more severe emotional dysregulation, traumatic stress and symptoms of anxiety and stress. Logistic regression analysis revealed that exposure to childhood traumatic life events, specifically childhood sexual abuse, and childhood physical neglect, were the only factors which were significantly associated with membership of the medically unexplained neurological symptoms group. Although further research is required to confirm our findings, our results suggest that identifying and addressing the impact of childhood trauma, may alleviate distress and aid recovery from functional neurological disorders.

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1. Introduction

It has been estimated that at least 33% of somatic symptoms in primary care are medically unexplained (Kroenke, 2003). Presence of Medically Unexplained Symptoms (MUS) has been associated with frequent consultations (Fiddler, Jackson, 2017).
Karatzias, Kapur, 2004), significant personal suffering and decreased quality of life (Kirmayer, Groele, Looper, & Dao, 2004). Three different types of MUS can be observed. These include somatisation that is best understood as the physiological components of anxiety and depression; normal daily sensations that are misinterpreted as serious illness; and functional somatisation, which describes subjective symptoms that cannot be attributed to either physical or psychiatric illness, or hypochondriasis (Roelofs & Spinhowen, 2007). The aetiological factors of functional somatisation remain unknown.

Recent population based studies on the relationship between traumatic life events and physical health confirm a strong association and a dose–response relationship between experience of traumatic life events and physical health problems (e.g. Karatzias, Yan, & Jowett, 2015). Numerous studies have also demonstrated an association between psychological trauma and MUS. In particular, psychological trauma has been associated with chronic pelvic pain, Irritable Bowel Syndrome (IBS), Somatisation Disorders and Chronic Fatigue Syndrome (e.g. Roelofs & Spinhowen, 2007; Taylor & Jason, 2002). Limited evidence exists on the association between psychological trauma and neurological disorders. For example, in a study comparing people with psychogenic non-epileptic seizures vs. people with epilepsy, it was found that those with psychogenic epileptic seizures were more likely to have experienced childhood psychological trauma, as well as increased difficulty in identifying their feelings (Kaplan et al., 2013). This is supported by the finding that prevalence rates of both childhood and adulthood abuse were significantly higher in a non-epileptic attack disorder group, than an epileptic group (Reilly, Baker, Rhodes, & Salmon, 1999). Furthermore, a study investigating the prevalence rates of potential predisposing factors in a sample of patients with functional neurological symptoms concluded that the most prominent factors were non-sexual trauma, family/relationship difficulties, and bereavement (Reuber, Howlett, Khan, & Grünwald, 2007). Finally, in a study exploring the extent to which severity of pain was related to coping strategies and post-traumatic symptomatology in people with Chronic Fatigue Syndrome (CFS), it was found that participants with CFS present with significantly more post-traumatic stress symptoms and report significantly less emotion focused strategies and problem focused coping strategies compared to healthy controls (Krzczkowska, Karatzias, & Dickson, 2015).

Although the relationship between psychological trauma and MUS is well established, this relationship is less well understood in people with medically unexplained neurological symptoms. In the present study we set out to compare for the very first time people with functional neurological disorders, and organic neurological disorders, in terms of childhood and adulthood traumatic events, traumatic stress, emotional dysregulation and symptoms of depression and anxiety. We have hypothesised that those with functional neurological disorders would be more likely to report childhood and adulthood traumatic life events, traumatic symptomatology, emotional dysregulation and symptoms of anxiety and depression, compared to those with organic neurological disorders. Identifying potential differences between those with functional neurological disorders compared to those with organic neurological disorders is important because such information can inform development of interventions to alleviate distress in people with MUS (i.e. functional somatisation).

### 2. Method

#### 2.1. Design

The present study employed a cross-sectional survey design of hospital – based neurology patients using standardised questionnaires in Scotland.

#### 2.2. Participants

A consecutive series of patients with neurological MUS (n=41) were invited to participate. Diagnoses in this group included Fibromyalgia, Non-epileptic seizures and Functional Movement Disorder. A control sample of 41 patients with organic neurological disorders, matched on age and gender, were randomly selected from a sample of 107 patients recruited as part of this study, using the SPSS Select Cases function. Diagnoses in this group included Multiple Sclerosis, Epilepsy, Myasthenia Gravis and Guillain Barre Syndrome. Diagnoses of MUS and organic disorders were made by consultant neurologists following appropriate tests and investigations.

#### 2.3. Procedure

Ethical approval was granted from the appropriate NHS Ethics Committee. Informed consent was obtained by a senior member of the medical team, and patients who agreed to take part in the study were then introduced to the researcher who conducted the assessment. Interviews lasted approximately 30–45 min. All participants were presented with an Information Sheet outlining the purpose of the study and the associated risks. Participants were then asked to first complete the demographics form, followed by the five questionnaires. Participation in the study was voluntary and anonymous.

#### 2.4. Measures

*Childhood Trauma Questionnaire* (CTQ; Bernstein & Fink, 1998) is a 28-item self-report questionnaire used to assess five types of childhood traumatic events: emotional, physical and sexual abuse, and emotional and physical neglect. Each item is rated on a 5-point Likert scale (1 = *never true*, 5 = *very often true*) aimed at encapsulating frequency of occurrence for each
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