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## Invited Editorial Comment on: Ludwig et al. Stressful life events and maltreatment in conversion (functional neurological) disorder: systematic review and meta-analysis of case-control studies

After a relatively brief period of acceptance as a field worthy of scientific study in the late 19<sup>th</sup> century, the quality and quantity of research on functional neurological disorders (FND, then thought of as ‘hysteria’) went into sharp decline <sup>1</sup>. Happily, this situation has changed quite dramatically since the turn of the millennium <sup>2</sup>. The last two decades have seen a marked up-turn in research interest in FND and growth in service provisions for patients – although very significant gaps persist. Research from this period has demonstrated that FND continue to be one of the commonest diagnoses made in neurology clinics and that symptoms with functional causes are at least as disabling as comparable symptoms related to other disorders treated by neurologists <sup>3 4</sup>.

While the recent explosion of interest is great news, it is important to acknowledge that there are a number of skeletons in the cupboard of this field of medicine. The ‘skeletons’ include unresolved problems related to terminology, nosology, aetiology and the diagnostic process. The systematic meta-analysis of reported trauma by Ludwig et al. published in the current edition of *Lancet Psychiatry* makes a definitive contribution to an important question about the diagnosis of FND, adds significantly to our understanding of the aetiology and informs our thinking about the first two issues <sup>5</sup>.

In terms of the diagnosis, Ludwig et al. demonstrate that a substantial subgroup of patients with FND deny recent or remote life adversity. This finding supports the decision of the authors of the DSM-5 to move towards a more atheoretical definition of Functional Neurological Symptom (Conversion) Disorder. The new definition recognizes that the signs and symptoms of FND follow their own rules and can be picked up by observation and examination findings with high levels of inter-rater reliability. These signs and symptoms are inconsistent or incongruent with those of neurological disorders attributable to structural, neurophysiological or metabolic abnormalities <sup>6,7</sup>. It is now not necessary to identify traumatic precipitants or dilemmas to diagnose FND. This important finding of the meta-analysis also suggests that the authors of the next edition of the ICD will need to change the current definition of dissociative (conversion) disorder unless they want clinicians to distinguish between two patients groups with objectively and subjectively indistinguishable presentations on the basis of aetiological assumptions: the ICD-10 still insists that there must be “convincing associations in time between the symptoms of the disorder and stressful

events, problems or needs”<sup>8</sup>.

By showing that remote or recent adverse life events, maltreatment or neglect are reported eight times more commonly by FND patients than by non-clinical controls or two times more commonly than by patients with other disorders, this meta-analysis also provides a strong signal indicating that traumatization as well as neglect of patients’ emotional or physical needs are aetiologically relevant in many presentations of FND. This is very helpful for our understanding of patients’ likely treatment needs and provides us with insights about how terms such as ‘functional’ / ‘psychogenic’ could be defined positively (in terms of maladaptive biopsychosocial processes) and not as the opposites of the terms ‘organic’/ ‘physical’.

What this meta-analysis cannot resolve is whether there are two different populations of patients with FND – those in whom the disorder is ‘explained’ by adverse experience and those in whom different causes have to be found. To be captured in the meta-analysis, relevant experiences must have been experienced, committed to memory, recognized as potentially traumatic, recalled, reported and recorded in studies using a wide range of methodologies of variable quality. While there is no need to call the association between reported events and events that occurred into question, there is much in this chain of conditions that can go wrong. Another problem is that methods probing potentially traumatizing events do not tell us to what extent patients were actually traumatised. Since the age of Freud we have learned much about the complex emotional, biological, cognitive and social consequences of trauma. Whether or not these consequences follow on from a particular experience is likely to depend as much on a complex mix of biopsychosocial contextual factors as on the nature of the traumatising event itself. This observation does not invalidate the meta-analytic approach based on reported events, but it does underline the importance of combining this approach with methods using a “subjective” (i.e. highly individualised) definition of trauma and studies focusing on objective biological correlates of traumatization or persistent arousal. However, even if all of these methods are combined the question how relevant trauma/adversity is for FND may well remain unanswerable.

As it happens, in the most recent cognitive aetiological models of FND, trauma or traumatization have turned from essential ingredients into important but facultative predisposing, precipitating or perpetuating elements<sup>9-11</sup>. These theories provide a compelling basis for a range of interventions aimed at changing patterns of thinking and behaviour, preconscious responses and emotion regulation, so whether or not a patient reports trauma or has been traumatised should be much less relevant to clinicians providing an acceptable

explanation of their disorder and keen to engage them in treatment.

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