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Factors associated with comorbidity patterns in full and partial PTSD: Findings from the PsyCoLaus study

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Abstract

Subtypes of comorbid conditions and their associated trauma and clinical characteristics in full and partial PTSD were examined. Data from 289 subjects from the general population that met criteria for full or partial PTSD were analyzed. Latent class analyses (LCA) were performed to derive homogeneous patterns of DSM-IV Axis-I disorders and anti-social personality comorbid to PTSD. Logistic regression models were conducted to characterize these classes by trauma-related and clinical features. The LCA revealed three classes: (1) low comorbidity; (2) high comorbidity with primarily substance-related disorders and a higher proportion of males; and (3) more severe PTSD-symptomatology and higher comorbid anxiety disorders and depression, almost entirely represented by females. Exposure to sexual abuse was more likely in the substance-dependent class and contributed strongly to the distinction between classes. Affective disorders tended to precede the onset of PTSD in the substance-dependent class, whereas phobias were more likely to follow PTSD in the depressed–anxious class. Posttrauma onset of alcohol use disorders in the substance dependent class confirmed the self-medication hypothesis. The three classes of comorbidity and their sequence of onset with PTSD suggest different mechanisms involved in their development. Our findings suggest that PTSD-related comorbidity subtypes also apply to individuals with partial PTSD.

1. Introduction

Traumatic stress exposure might place an individual at increased risk for a broad range of psychiatric disorders. From those, posttraumatic stress disorder (PTSD) may be the most common condition. Frequent co-occurring conditions are anxiety, mood and substance-related disorders as well increased rates of suicidality [1–6]. In a review, Breslau (2009) [7] estimated that individuals with PTSD tend twice as likely to have another psychiatric disorder compared to those without the syndrome. Prevalence rates of disorders co-morbid with PTSD in community samples ranged between 50% and 100% [8]. Epidemiological studies have suggested that comorbidity among individuals with PTSD is associated with a more severe clinical profile, worse course and greater impairment and disability [9,10]. Thus, psychiatric comorbidity in PTSD could be an indicator for the severity of the disorder, although the reverse might be possible as well [11].

Previous research revealed gender, socioeconomic status and other demographic features as well as common genetic and environmental factors to account for the co-occurrence of PTSD with other disorders [12–15]. Especially source and type of trauma were linked to specific comorbidities in previous studies (review: [3]. For example, combat-related PTSD was highly associated with comorbid substance-related disorders, depressive and personality disorders [16] while sexual dysfunction and substance-related disorders were highly prevalent after the experience of childhood or sexual trauma [17–19]. Victims of physical violence were found to be at risk for co-occurring anxiety disorders and depression [20] while phobic disorders and depression as comorbid conditions to PTSD are frequently linked to the experience of a disaster [21].

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However, existing studies are mostly limited by their methods exploring the comorbid complexity of PTSD, since standard methods that simply assess the association with another single disorder simultaneously make a holistic picture of comorbidity patterns elusive. According to a more comprehensive approach using latent class analysis, comorbidity in PTSD appeared to take three different forms [1]. The first class grouped individuals with low comorbidity levels and a moderate probability of lifetime major depression and suicidality. The second class included subjects with higher comorbidities of suicidality as well as depressive and anxiety disorders, whereas the third class was characterized by subjects with high probable comorbid substance-related disorders [11].

Another shortcoming in most of the existing studies exploring PTSD comorbidity is the neglect of posttraumatic symptoms that fall short of the full diagnostic criteria of PTSD. Despite high rates of traumatic experiences in general population samples, only a few subjects will subsequently develop PTSD [7]. The diagnostic concept of partial PTSD was developed to account for subjects who have symptoms of PTSD but do not fulfill all diagnostic criteria. Partial PTSD might be the result of partial recovery from a full PTSD syndrome or the development of subthreshold symptoms after trauma exposure [22]. Nevertheless, there is empirical evidence that partial PTSD, and even the presence of single PTSD symptoms, is also associated with a wide array of comorbid disorders almost as large as for full PTSD [1]. Previous findings are, however, difficult to compare since no consensus on the definition of partial PTSD has been reached so far.

In the current study, we used a similar approach to the one used by Galatzer-Levy et al. (2013) [11] but extended our population under study to those with partial PTSD. Accordingly, we focused on three aims: (i) to estimate the associations of trauma type and comorbid disorders with PTSD in a representative community sample; (ii) to identify subgroups of participants diagnosed with full or partial PTSD that have homogeneous profiles of comorbid disorders and suicidal behavior; and (iii) to examine the extent to which these different subgroups were characterized by different trauma-related and clinical features.

2. Method

2.1. Sample and procedure

All data were collected in the PsyCoLaus study, a subsample from the larger CoLaus study, a randomly selected population-based cohort study of Lausanne, i.e. in the French part of Switzerland. From 2003 to 2006, a community sample of N = 6734 subjects aged between 35 and 75 years was recruited for the first wave of CoLaus, an epidemiological study designed to assess the prevalence of cardiovascular risk factors and diseases. From a total of 5535 individuals that finally participated in the CoLaus study, two thirds (N = 3720; 67.00%) agreed to take part in the additional psychiatric (PsyCoLaus) assessment. From this sample, about half (52.96%) were female and the mean age of the subjects was 49.60 years (SD = 8.80). For the present analyses N = 26 subjects (0.70%) were excluded due to missing data on the screening item of exposure.

The study was approved by the Ethics Committee of the University of Lausanne, Switzerland. All participants provided written consent after being informed of the goal and funding of the study.

2.2. Measures

The data of the PsyCoLaus study were derived from the French version [23] of the semi-structured Diagnostic Interview for Genetic Studies (DIGS) [24]. In addition to demographic features, the French version of the DIGS comprises information on a broad spectrum of DSM-IV Axis I and Axis II criteria as well as on suicide behavior [25]. PTSD and generalized anxiety disorders were assessed using the relevant sections from the French version [2] of the Schedule for Affective Disorders and Schizophrenia — Lifetime and Anxiety disorder version [27]. According to the definition of Breslau et al. [28], partial PTSD was defined as one or more symptom(s) in each of the three symptom clusters of PTSD (re-experience, avoidance/numbing, and hyperarousal) with a duration of at least one month. Exposure to potentially traumatizing events was assessed using five separate questions: 1.) accident, 2.) physical assault, 3.) combat and/or war, 4.) witness of murder, violence or death by an accident, and 5.) sexual abuse. Subsequently, all distinct events reported by the respondent were repeated by the interviewer and the respondent was asked to identify the most upsetting event and the age of first exposure to this event. Age of first sexual abuse was asked separately. All associations with single traumatic events are in relation to this specific event.

The French version of the DIGS as well as the anxiety sections of the SADS-LA revealed excellent inter-rater and fair to good test–retest reliability for mood [29], substance use [30] and anxiety disorders [26]. The three-year test–retest reliability in terms of Yule's Y coefficients for the PTSD diagnosis was 0.69 in a sample of 176 psychiatric patients [31]. Furthermore, the test–retest Yule's Y coefficients for exposure to violent crime and sexual trauma in this sample were as high as 0.84 and 0.57, respectively, although those for exposure to accidents and witnessing trauma to others were only 0.30 and 0.22, respectively. The test–retest reliability for exposure to war could not be tested in this sample given its rareness [31].

The following categories, based on the DSM-IV criteria, were considered as comorbid conditions: alcohol use disorders (abuse or dependence), other substance-related disorders (abuse or dependence of cannabis, solvent, hallucinogens, stimulants, cocaine, sedativa, or narcotics), major depressive episode, dysthymia, generalized anxiety disorder (GAD),