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Research Paper

Prevalence of dissociative symptoms in adolescent psychiatric inpatients

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ABSTRACT

Introduction. – Even if dissociative disorders have been observed during adolescence, few adolescents hospitalized in psychiatry have been studied specifically for dissociative disorder symptoms.
Objective. – The purpose of the study was to assess the prevalence of dissociative symptoms and the exposure to traumas among adolescent psychiatric inpatients.
Method. – Ninety-three inpatients aged 12–20 years completed self-report measures of dissociation (AdolescentDissociative Experience Scale, A-DES; Dissociation Questionnaire, DIS-Q), traumas recordings (DIS-Q) and a specific questionnaire giving diagnostic impressions of dissociative disorders (Adolescent Multi-dimensional Dissociation Inventory, A-MID).
Results. – Forty-three percent (DIS-Q) or 33% (A-DES) patients showed pathological dissociative symptoms. Forty-five percent received a diagnosis of a dissociative disorder (A-MID). Patients with dissociative symptoms were significantly more likely to report all types of abuse (sexual, physical and emotional) and more exposed to multiple traumas.
Conclusions. – Dissociative symptoms were highly prevalent and typically had not been previously diagnosed clinically. Results suggest a link between accumulated exposure to various types of traumas and severity of dissociation. Following this, clinical examination of adolescents should take into account post-traumatic and/or dissociative symptomatology.

1. Introduction

Dissociative disorders, including dissociative identity disorder (formerly multiple personality disorder), were once thought to be "exotic and rare disorders, if indeed they existed at all" (Boysen & VanBergen, 2013). Several studies show that a certain number of events experienced by children can affect their psychological and somatic development (Shenk, Noll, Putnam, & Trickett, 2010); these events are therefore considered of traumatic nature (adverse childhood events) even if, from a personal point of view, there can only be trauma in a certain context determined by the relationship. Among these infantile experiences, early sexual abuse–intra and extrafamily (Finkelhor, Turner, Shattuck, & Hamby, 2013), physical abuse (MacMillan, Fleming, & Streiner et al., 2001) and emotional abuse are considered as psychopathogenic across the lifespan. Early childhood trauma seems to play a determinant role in cases of psychopathology that emerge during adolescence (Shenk et al., 2010; Kaplan, Pelcovitz, & Labruna, 1999; Atlas, Wolfson, & Lipschitz, 1995). Other factors seem to play a role of moderator, such as individual and family resiliency, affective environment and global context (economic and social) (MacMillan et al., 2001; Brown, Schrag, & Trimble, 2005; Gilbert et al., 2012).

Among disorders strongly impacted by traumatic experiences (incest, abuse and neglect), dissociative disorders have been observed during childhood (Weiss, Sutton, & Utecht, 1985; Zoroglu, Yargic, Tutkun, Ozturk, & Sar, 1996; Jans, Schneck-Seif, Weigand et al., 2008), during adolescence (Wallach & Dollinger, 1999; Brunner, Parzer, Schuld, & Resch, 2000) and adult age (Hunter, 2006). These disorders have been identified in both outpatients (Foote, Smolin, Kaplan, Legatt, & Lipschitz, 2006) and inpatients (Tutkun, Sar, Yargiç, Ozpulat, Yanik, & Kiziltan, 1998; Friedl & Draijer, 2000; Gast, Rodewald, Nickel, & Emrich, 2001). A recent article (Chiu, Meg Tseng, Chien et al., 2017) reported average prevalence rates of dissociative disorders in clinical adult populations around 20% all over the world (19.5% in Taiwan vs. 20.6% in Western studies). Sar, Önder, Kilincaslan, Zoroglu, & Alyanak, 2014 observed 45.2% of adolescents with dissociative disorders in an outpatient setting. The principal dissociative symptoms are amnesia, depersonalization, derealization, confusion of identity and identity alteration. DSM-IV-TR lists five

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diagnoses: dissociative amnesia, dissociative fugue, depersonalization disorder, dissociative identity disorder and dissociative disorder not otherwise specified. Note that the DSM-5 lists a new subcategory in the chapter trauma- and stressor-related disorders for the posttraumatic stress disorder with dissociative symptoms, in addition with the dissociative disorders chapter (dissociative identity disorder, dissociative amnesia, depersonalization/derealization disorder, other specified dissociative disorder and unspecified dissociative disorder). A small number of studies about hospitalized children (Malhotra, Singh, & Mohan, 2005) and adolescents (Atlas et al., 1995; Brunner et al., 2000) were reported but, to our knowledge, it seems that few adolescents hospitalized in psychiatry have been studied specifically for dissociative disorders and symptoms.

The purpose of the study was to assess the prevalence and the nature of dissociative symptoms in an inner-city adolescent inpatient psychiatric population. Our hypothesis is that dissociative symptoms and disorders were underestimated, especially without screening tools (self-report questionnaires). An additional issue is to check the presence in this population of adverse childhood events.

2. Method

2.1. Participants

Subjects were French-speaking adolescent inpatients, ages 12 to 20, who admitted for treatment at the Fond'Roy Psychiatric clinic (Brussels, Belgium) during the periods of research team availability. Subjects were 179 consecutive admissions (89 boys and 90 girls) to a hospital-based crisis unit. Patients who were unable to speak French and/or were intellectually disabled and/or were extremely agitated could not fill the questionnaires and thus were excluded from the study. There were no other exclusion criteria. The main reason for intake was recorded.

Patients were approached within the five days following their admission and gave their oral consent. They were not paid and did not receive any compensation for their participation. The research team was in charge of collecting the forms and verifying that they were filled correctly. This intensive follow-up explains the necessity of a specific team in place to ensure the quality of the research. The authors and clinical staff in charge of caring for the inpatients had no knowledge of the scores obtained in the tests and no knowledge of the diagnosis interpretations linked to the results of the research. The overall study design received the approval of the ethical committee of the hospital, no written consent was needed.

2.2. Instruments

We selected two screening tests: the Adolescent-Dissociative Experience Scale (A-DES) is the reference test used in the United States and the Dissociation Questionnaire (DIS-Q) is the most common one used in Europe. The A-DES is a screening instrument developed by Armstrong, Putnam, Carlson, Librero, & Smith, 1997 in order to detect dissociative behavior in children between 11–17 years of age. The A-DES is a 30-item self-report measure. Items are neutrally worded to avoid the risk of upsetting adolescents. The answer response format is a 0–10 scale, anchored at the ends with 'never' (0) and 'always' (10). The total A-DES score is equal to the mean of all item scores. The subject circles the number that best describes how often a given experience happens. On the title page, respondents are instructed not to count experiences that occur under the influence of alcohol or drugs. In North America, reliability and validity of the A-DES have been demonstrated in different studies (Armstrong et al., 1997). The A-DES has been validated in French by a Canadian team (Philippe-Labbé, Lachance, & Saintonge, 1999).

The DIS-Q is a 63-item self-report measure (Vanderlinden, Van Dyck, & Vertommen, 1991). The scale consists of five Likert scale choices (1 = not at all, 2 = a little bit, 3 = moderately, 4 = quite a bit, and 5 = extremely). Respondents endorsed the extent that each item is applicable to them. The total DIS-Q score is equal to the mean of all item scores. On the title page, respondents are instructed not to count experiences that occur under the influence of alcohol or drugs. Results with a French-speaking population show good criterion-related validity since it discriminates between patients and controls (Mihaescu, Vanderlinden, & Sechaud et al., 1998).

We used the Adolescent-Multidimensional Inventory of Dissociation (A-MID) as a comprehensive measure of dissociation. A-MID scores correlate highly with other measures of dissociation. As the MID, it has 218 items: 168 dissociation items and 50 validity items (Dell, 2006). The A-MID assesses 23 dissociation symptoms (these 23 scales assist diagnosis via an alternative apportionment of the A-MID's 168 dissociation items). The A-MID was chosen as a specific test, providing information entitled as "general dissociative symptoms", "partially-dissociated intrusions" and "fully-dissociated actions" based on which a statistical operation proposes different diagnoses relative to traumatic disorders. The diagnostic impressions that are generated by A-MID analysis are based on clinically sound diagnostic algorithms:

- posttraumatic stress disorder;
- dissociative disorder not otherwise specified;
- dissociative identity disorder;
- somatization;
- borderline personality disorder.

This self-report instrument is used for presenting an indication of dissociative disorders and PTSD rather than for establishing these diagnoses. The A-MID has two scoring systems:

- total score;
- severe dissociation score.

Total score ranges between 0 and 100. A score of 30 and above is considered a cut-off mark indicative of probable dissociative psychopathology.

The A-MID has undergone preliminary testing in the United States (Ruths, Silberg, Dell, & Jenkins, 2009) and Belgium (Goffinet, 2009). The A-MID found that symptoms in dissociative adolescents closely mirror the pattern found in dissociative adults.

The A-MID was first translated into French independently and a consensus on the translation was then formed. In following, back-translation to English was performed by two instructors in English. French A-MID already has good convergent construct validity measured by rho Spearman's statistic[1]. Spearman's Rho between French A-MID and DIS-Q (total score) was 0.70816 and rho between French A-MID and A-DES was 0.69074 (Goffinet, 2009). Complete validation of French A-MID is ongoing.

2.3. Data analysis

Scheffe's *t*-test was used to evaluate the differences between subjects with and without a trauma history. Chi-square is a

[1] The sign of the Spearman correlation indicates the direction of association between X (the independent variable) and Y (the dependent variable). If Y tends to increase when X increases, the Spearman correlation coefficient is positive. The Spearman correlation increases in magnitude as X and Y become closer to being perfect monotone functions of each other. When X and Y are perfectly monotonically related, the Spearman correlation coefficient becomes 1.

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