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Psychiatric comorbidity and maternal distress among adolescent eating disorder patients: A comparison with substance use disorder patients

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ABSTRACT

High rates of comorbidity are found among eating disorder (ED) patients, which may negatively affect treatment outcome and prognosis. However, there is a shortage of studies in Spain using clinician administered interviews to assess rates of comorbidity among these patients, particularly in adolescents. This study aimed to evaluate Axis I psychiatric diagnoses in adolescent patients with an ED and to compare them with patients with a distinct disorder with adolescent onset, substance use disorder (SUD) patients. Considering that maternal psychological distress is another factor involved in ED prognosis, a secondary aim was to examine the relationship between patient's psychological variables and maternal distress (depression and anxiety). The cross-sectional study included 50 ED patients, 48 SUD patients, and their mothers. More than half of the patients received a diagnosis for a comorbid disorder. Internalizing problems were more common among EDs and externalizing disorders were the most common comorbidities among SUDs, similar to findings from other countries. Maternal distress was associated with higher levels of depression and symptom severity in patients. No differences in distress were found between mothers of patients with a comorbid diagnosis and those without. Elevated anxiety or depression in mothers did not increase the likelihood of patients having a particular primary diagnosis. In short, while both ED and SUD patients presented high rates of comorbidity, the types of comorbid diagnoses were specific to each group. Assessing for the presence of comorbid disorders and targeting maternal psychological distress may guide treatment interventions and improve patient prognosis.

1. Introduction

Eating disorders (EDs) are chronic mental illnesses, with a typical onset during adolescence or early adulthood (American Psychiatric Association, 2013), and significantly elevated mortality rates, particularly in the case of Anorexia Nervosa (AN) (Arcelus, Mitchell, Wales, & Nielsen, 2011). Another group of chronic, life threatening mental illnesses with a similar age of onset are substance use disorders (SUDs) (Oyefeso, Ghodse, Clancy, Corkery, & Goldfinch, 1999; Smink, van Hoeken, & Hoek, 2012). Both present a long recovery process (American Academy of Pediatrics, 2011) and high risk of poor prognosis (American Academy of Pediatrics, 2011; Steinhausen, 2002). Furthermore, they share a multifactorial etiology, involving a combination of genetic, biological and personality vulnerabilities that interact with environmental factors (Davis & Claridge, 1998; Emmelkamp & Vedel, 2012; Fairburn & Harrison, 2003; Klump, Bulik, Kaye, Treasure, & Tyson, 2009).

Both EDs and SUDs present high rates of comorbidity, with 40 to 98% of AN patients in particular (Blinder, Cumella, & Sanathara, 2006; Bühren et al., 2014; Salbach-Andrae et al., 2008), and 40 to 90% of SUD patients (Armstrong & Costello, 2002; Chan, Dennis, & Funk, 2008; Langenbach et al., 2010; Shrier, Harris, Kurland, & Knight, 2003) reporting a comorbid Axis I diagnosis. The most frequent comorbid diagnoses among ED patients are mood disorders, followed by anxiety disorders and obsessive-compulsive disorder (OCD) (Blinder et al., 2006; Bühren et al., 2014; Jordan et al., 2008; Salbach-Andrae et al., 2008). In SUD patients, conduct disorder (CD) and oppositional defiant disorder (ODD) are the most frequent comorbid diagnoses, although a strong association has been found with depression (Armstrong & Costello, 2002; Chan et al., 2008; Couwenbergh et al., 2006), a weaker one with anxiety (Armstrong & Costello, 2002; Chan et al., 2008), and an ascending trend of comorbidity rates have been found with attention-deficit/hyperactivity disorder (ADHD) as well (Couwenbergh et al., 2006).

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A recent study highlighted the need for additional research on comorbidity rates among adolescents ED patients, particularly those with AN, as the majority of research to date has involved adult samples despite the fact that ED onset typically takes place during adolescence (Bühren et al., 2014). Psychiatric comorbidity appears to be associated with worse long term prognosis for both SUD (Grella, Hser, Joshi, & Rounds-Bryant, 2001) and ED (Herpertz-Dahlmann et al., 2001). While information regarding rates of comorbidity and common comorbid diagnoses may aid mental health professionals working with these patients, in Spain in particular, very few studies have assessed rates of psychiatric comorbidity in either patient sample (Couwenbergh et al., 2006; Godart, Flament, Perdereau, & Jeammet, 2002; Godart et al., 2007). Furthermore, the use of diagnostic interviews to assess prevalence rates of EDs is relatively recent in Spain (Peláez Fernández, Raich Escursell, & Labrador Encinas, 2010) in spite of the fact that semi-structured diagnostic interviews have long been considered the ¨gold-standard¨ for assessing the presence of psychiatric disorders as they are more reliable than other forms of assessment (Jewell, Handwerk, Almquist, & Lucas, 2004; Peterson, Ranson, & Hodgins, 2014).

Research on both EDs and SUDs have seen a shift in recent years, taking into consideration not only the patient, but the family as well (Anastasiadou, Medina-Pradas, Sepulveda, & Treasure, 2014; Templeton, Velleman, & Russell, 2010), revealing that family members report increased levels of stress and strain (Orford, Velleman, Copello, Templeton, & Ibanga, 2010; Treasure et al., 2001). Within the field of ED research, this distress is one component of the interpersonal maintenance model of AN (Treasure & Schmidt, 2013), which provides a theoretical framework for understanding the relationship between patient and family variables. This model posits that the high levels of distress reported by family members may be risk factors preceding illness onset, as well as maintenance factors which influence prognosis (Anastasiadou, Cuellar-Flores, Sepulveda, Parks, & Graell, 2016; Treasure et al., 2008). To date, studies assessing the distress experienced by ED family members have not used exclusively adolescent samples and most do not include a comparison group, which makes it difficult to know if the relationship between patient and family variables are unique to ED or are generalizable to family members of patients with other chronic mental illnesses (Anastasiadou et al., 2014). There is reason to believe that the latter may be true considering that the broader literature on child and adolescent psychopathology suggests that there is an association between mother's mental health and their children's behavioral problems and emotional functioning (Goodman et al., 2011).

The primary objective of this study was to use semi-structured diagnostic interviews to assess rates of psychiatric Axis I comorbidities in treatment-seeking adolescent ED and SUD patients and to compare these two groups on the type and frequency of psychiatric diagnoses, and other sociodemographic variables. A secondary objective was to assess the relationship between patients´ psychological variables and mothers´ levels of distress.

In regards to our hypotheses, we predicted that the rates of comorbidity and types of comorbidity for both groups would be similar to those found in prior studies carried out in other Western countries with treatment seeking adolescents (i.e. more internalizing problems in the ED group and more externalizing problems in the SUD group). We also expected to find an association between mother and patient variables in both groups, independent of the patient's primary diagnosis.

2. Method

2.1. Participants

Forty-nine females and 1 male (Mean age = 14.8; *SD* = 1.8, Range: 12–18) diagnosed with an ED were compared with 8 females and 40 males (Mean age = 18.2; *SD* = 2.2, Range: 13–23) diagnosed with a SUD. The patients' mothers were also enrolled in this study.

2.2. Procedure

A cross-sectional study with a descriptive and comparative design was carried out. The inclusion criteria for patients were: 1) 12 to 23 years old; 2a) for the ED group: presence of an ED according to DSM-IV-TR diagnostic criteria, 2b) for the SUD group: presence of a SUD according to DSM-IV-TR diagnostic criteria, 3) living with at least one parent. Patients were excluded if they had a diagnosis of psychosis, a learning disability, a neurologic disease or a disease affecting metabolic regulation (i.e. diabetes, hyperthyroidism) or comorbid ED and SUD. Data were collected from October 2011 to July 2014. The research was reviewed and approved by an institutional review board (R-009/10), all participation was voluntary and participants provided informed consent.

ED patients and their mothers were randomly recruited from consecutive admissions to inpatient and outpatient services at the Eating Disorders Unit of the Child and Adolescent Psychiatric Department of the Niño Jesus University Hospital, Madrid, Spain. A total of 53 patients were approached for the study, one female and one male patient with comorbid SUD were not approached. Two of the patients who were approached declined participation due to distrust regarding confidentiality of their personal information. Then, three of the authors (D.A., M.P. & M.G.) carried out semi-structured clinical interviews and one patient was excluded because she presented psychotic symptoms.

SUD patients and their mothers were randomly recruited from the adolescent outpatient clinic of "Programa Soporte" (Support Program), which is part of Proyecto Hombre, an association based in Madrid which provides treatment to adolescents and young adults with substance abuse and dependence related problems, as well as their families. Forty-eight of the 55 families who were invited to participate provided informed consent and underwent the semi-structured clinical interview carried out by D.A. Seven families declined participation due to lack of time and/or distrust regarding the confidentiality of their personal information. Two adolescents (one female and one male) had comorbid ED and were not approached. All SUD patients that were interviewed met the selection criteria and were included in the study. Following the interview, patients and their mothers completed a set of self-report instruments detailed below.

2.3. Instruments

2.3.1. Patients and mothers

Demographic and clinical characteristics were collected using a clinical interview designed for the specific purposes of the study. Mothers provided their age, education level, marital status, employment situation and history of psychiatric illness. Age, gender and illness duration was collected from all patients. The researcher conducting the interview measured the weight and height of the patient in order to calculate BMI.

The *Schedule for Affective Disorders and Schizophrenia for School-Age Children* (K-SADS-PL) (Kaufman et al., 1997) is a semi-structured diagnostic interview capable of generating 32 DSM-IV Axis I child psychiatric diagnoses. It consists of an introductory interview, diagnostic interview and supplementary diagnostic interview questions, which are administered when deemed relevant. The interview was carried out in the presence of the patient and responses were confirmed with mothers if the interviewer had doubts. The interview has been validated for use in Spain (De la Peña et al., 2002; Ulloa et al., 2006) and a pilot study proposed the extension of the K-SADS to young adults aged 18–25 years, although results have not yet been published (National Institute of Mental Health, 2016). For the current study we only considered current episodes of mental disorders.

2.3.2. ED patients

The *Eating Attitudes Test* (EAT-26) (Garner, Olmsted, Bohr, & Garfinkel, 1982) is a 26-item questionnaire with a six-point Likert-type scale (range 0–5) used to assess disordered eating behaviors.