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Expressed emotion in anorexia nervosa: What is inside the "black box"?

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Abstract

Objective: Expressed Emotion has been called a "black box", since little is known about contributing factors. The aim of this study was to examine which parental and which patient/illness-related characteristics contribute to maternal and paternal Expressed Emotion levels.
Method: Sixty adolescent girls with Anorexia Nervosa (AN) and their parents completed instruments that evaluate characteristics of the adolescent's illness and patient/parental psychological characteristics (depression; anxiety; obsession–compulsion; social anxiety and alexithymia). The following illness-related characteristics were recorded: age at AN onset, duration of illness, AN subtype (restrictive AN-R vs. purging type AN-B), current Body Mass Index (BMI) (in kg/m^2), minimum lifetime BMI and number of previous hospitalizations, the Global Outcome Assessment Scale total score. Levels of Expressed Emotion were assessed for the two parents using the Five-Minute Speech Sample.
Results: Less than 30% of the parents in our sample expressed high levels of Critical EE and Emotional Over-Involvement. Our main findings indicate that maternal Criticism (Critical EE levels, Critical Comments, Dissatisfaction) and the sub-dimensions of maternal Emotional Over-Involvement (EOI EE) (Statement of loving Attitudes and Excessive Details about the past) were related both to the severity of the daughters' clinical state and to maternal psychological functioning. Only paternal levels of anxiety explained paternal Dissatisfaction, EOI EE and Statement of loving Attitudes.
Discussion: Parental psychological functioning and the severity of the daughters' clinical state have an impact on the family relationships. These elements should be targeted by individual treatment for parents where necessary, and by psycho-educational sessions about Anorexia Nervosa for parents generally.

1. Introduction

Family relationships in Anorexia Nervosa (AN) are considered as one of the key elements implicated in the evolution of this disorder [1–3] and Family-Based Treatment is the most widely practiced treatment in adolescents with AN [4,5].

The construct of Expressed Emotion (EE) was originally developed in schizophrenia to assess family relationships [6]. Since 1981, EE has been widely studied in families with a member suffering from AN, and EE appears to be a relevant predictor of treatment compliance, early treatment outcome and long-term clinical outcomes of patients with AN [7].

EE reflects the family climate between a patient and his/her parents, focusing on 2 dimensions: Criticism (Critical EE) expressed by the parent towards their child, and Emotional Over-Involvement (EOI EE), defined as intrusive, overprotective, excessively self-sacrificing behavior or exaggerated emotional response to the patient's illness [8,9]. The underlying mechanisms of EE were for a long time poorly understood. In 1985, Leff & Vaughn were already wondering about the EE dilemma and "*the*

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problem of prediction without understanding" [9]. This statement led Jenkins & Karno to refer the EE as a "Black Box" [10].

Recently it was hypothesized that the EE construct may reflect a dynamic interaction between patient and parental dimensions [11–13]. For example, Criticism could be a reaction resulting from the way in which parents perceive the patient, as determined by their own emotional state [14,15]. However, only a handful of studies have focused on this theme. One study, concerning schizophrenia, found that maternal Critical EE was related to the severity of the patient's symptoms, while EOI EE was associated with both maternal conscientiousness and patient depression [11]. In AN, parental levels of anxiety and depression and the anorectic behaviors of the patient perceived by the parents as negative/difficult accounted for over 60% of the variance in parental EOI. For parental Criticism, the most significant variable was the negative/difficult behaviours of the patients as perceived by the parents, which accounted for 50% of the variance at the first step of R^2 partitioning. At the second and final step patient rejection of caregivers assistance accounted for a further 2% of the variance [12]. Because few studies have sought to determine the contents of the "Black Box" of EE, the aim of the present study is to examine the contributing factors to maternal and paternal EE levels in families of adolescent girls with AN. Thus, we consider the parent and patient-related characteristics, including alexithymia, since difficulties in processing emotional states are implicated in the etiology and maintenance of AN [16]. Furthermore we consider the illness-related characteristics, the socio-economic status of the families and the age of the patient, which have not been taken into account in previous studies, and because all these variables have been found to be related to levels of EE [7]. We consider maternal and paternal EE separately since interactions between parent and adolescent child differ according to the dyad considered (mother/daughter or father/daughter) [17]. Better knowledge of the determinants of EE would enable the definition of potential therapeutic targets.

2. Materials and methods

This study is part of a comparison of two multidimensional post-hospitalization outpatient treatment programs for adolescents with severe AN: treatment as usual versus this treatment plus Family Therapy (FT) (see Godart et al. [18] for details).

The study received approval from the Ethics Committee and is in accordance with the terms of the Helsinki declaration. The Trial Registration is Controlled-trials.com ISRCTN71142875.

Prior to inclusion in the study, all participants had been hospitalized in our care unit for life-threatening physical and/or mental states.

2.1. Participants and recruitment

Inclusion criteria: female subjects 13 to 21 years old, with a DSM-IV diagnosis of AN at admission, having been hospitalized in our inpatient care unit for AN, age at onset under 19 years and AN duration ≤ 3 years at admission to the hospital, living in the Paris metropolitan area, and never having received FT.

Exclusion criteria were as follows for patients and parents: inability to speak or read French, and/or understand the interview questions. For patients: any metabolic pathology interfering with eating or digestion (e.g. diabetes) or a psychotic disorder.

Out of the 116 patients for whom eligibility was assessed during the recruitment period, 40 did not meet our selection criteria (10 males: 14 for whom illness onset occurred at age 19 or older or illness duration > 3 years, 3 had a parent with schizophrenia, 5 were living outside the Paris area, 8 had had FT previously). Out of the 76 eligible for participation, 16 refused to participate (21%). The patients and parents who refused to participate did not differ from those included with regard to socio-demographic variables, or clinical status on hospital entry or at discharge (data available on request) [18].

Sixty adolescent girls with severe AN, 60 mothers and 58 fathers were included.

2.2. Assessment

The evaluations were conducted during the second part of the hospitalization, when refeeding was partially achieved and the patient was in regular contact with the family.

Expressed Emotion was evaluated using the Five-Minute Speech Sample (FMSS) [19]. The French version has satisfactory validity properties [20,21]. EE levels were rated from a recorded five-minute sample of speech provided by the respondent about the patient. Each parent was asked to talk about what kind of a person their daughter was and their relationship with her. Two dimensions were rated on the basis of both content and tone: Criticism (Critical EE) and Emotional Over-involvement (EOI EE). Critical EE is rated "High" if the parent makes an Initial negative Statement and/or expresses a negative Relationship and/or makes one or more Critical Comments; in other cases, Critical EE is rated as "Low". A "High" EOI EE rating is based on Self-sacrificing or Overprotective attitudes and/or Emotional Display (rated as present when, for example the respondent bursts into tears) during the interview, and on presence of any 2 of the following: Excessive Details, Statements of (loving) Attitudes, at least 5 Positive Remarks; in other cases EOI EE is rated as "Low".

2.3. Parent and patient-related characteristics

2.3.1. Depression

The 13-item Beck Depression Inventory (BDI) is a self-rating scale designed to evaluate cognitive and motivational symptoms of depression at the time of evaluation (rated from