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Subtypes in bulimia nervosa: the role of eating disorder symptomatology, negative affect, and interpersonal functioning

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Abstract

Background: The aim of the study was to investigate whether patients with bulimia nervosa (BN) could be subdivided into clinically meaningful groups reflecting the complex patterns of eating disorder symptoms and personality characteristics that face the clinician.
Methods: Seventy patients diagnosed with BN using the Eating Disorder Examination were assessed with measures of negative affect, attachment patterns, and interpersonal problems. An exploratory hierarchical cluster analysis was performed.
Results: The study found two main subtypes differing primarily in terms of symptom severity and level of negative affect, but these subtypes were further subdivided into four clinically relevant subtypes: A dietary restraint/negative affect/high symptomatic group, an emotionally overcontrolled group, a low dietary restraint/emotionally underregulated group, and a high functioning/securely attached group.
Conclusions: The study indicates that cluster-analytic studies, including a broad range of instruments measuring eating disorder symptoms as well as negative affect, relational patterns, and other personality characteristics, may contribute to an integration of previously suggested models of subtypes in BN.

1. Introduction

The issue of subtypes within the eating disorders has been predominant since the beginning of the clinical and empirical investigation of eating disorders [1-3]. Important goals of these efforts have been to optimize treatment and to elucidate possible etiological pathways to different clinical pictures. Various aspects of the eating disorders have been the focus of subtyping. Diagnostic research [2,4-6] has concentrated on differences in specific eating disorder symptoms; an effort that has contributed to a gradual (and highly debated) [7] increase of eating disorder diagnoses as reflected in the development of the 2 diagnostic systems, *DSM* and *ICD* [8-14]. Partly motivated by the importance of personality characteristics for treatment, this research has been supplemented by studies on personality and personality differences across eating disorder diagnoses. The results of these studies, based on different comprehensive personality measures and with samples consisting of patients with mixed eating disorder diagnoses, converge toward the existence of three subgroups: An overcontrolled/constricted group, a high-functioning/low-psychopathology group, and an undercontrolled/emotionally dysregulated group [15-19]. Similar subgroups have also been found in a sample consisting only of patients with BN or a subclinical variant of BN [20].

An alternative model of subgroups specifically within BN is the dual pathway model proposed by Stice and colleagues [21,22]. The model integrates two etiological theories of BN, the restraint model [23] and negative affect theory [24,25] and proposes that 2 major subtypes of BN exist, one characterized primarily by dietary restraint, and one where dietary restraint is accompanied by elevated levels of negative affect. The model is supported by a number of studies [22,26-30], all validating 2-cluster solutions corresponding to the model. The studies consistently demonstrate that the dietary restraint-negative affect subgroup is characterized by greater weight, shape, and eating concern, more frequent binge eating and compensatory behaviors, a higher level of functional impairment, and more psychiatric co-morbidity than the dietary restraint subgroup.

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A recent study by Turner et al [31] of a sample consisting of various eating disorders included measures of both eating disorder symptoms and attachment and coping styles. The study found four subgroups: one with low levels of eating disorder behaviors and severe attachment and coping difficulties, one with high levels of dietary restraint and an avoidant attachment style, one with low levels of eating disorder symptoms and positive attachment and coping styles, and a fourth with high levels of binging and vomiting and few attachment and coping difficulties. The authors indicate that the first three of these groups may be comparable to the overcontrolled/constricted group, the high-functioning/low-psychopathology group, and the undercontrolled/emotionally dysregulated group found in previous studies based on personality measures. The fourth group identified by Turner et al is primarily characterized by bulimic symptoms.

The picture that emerges from the research presented above is complex. Different approaches to subtyping of eating disorders in general and BN in particular have led to the identification of different clusters of subtypes, all of which have considerable empirical support. Obvious reasons for the apparent inconsistencies are that the symptoms and personality characteristics included are not uniform across studies and that some studies only include personality features, whereas other studies include both eating disorder symptoms and personality characteristics. Thus, there is a risk that the models of subtyping established through the existing studies do not adequately represent the complex interplay between the specific symptoms of the eating disorder and the variety of personality features relevant to the disorder and to treatment. Studies based only on measures of personality characteristics cannot elucidate the relationship between personality dimensions and symptomatology. Stice and colleagues include specific aspects of eating disorder pathology (restraint) and definitely point to the importance of negative affect for the subtyping of patients with BN, but neither the emotionally dysregulated nor the high-functioning, low-symptomatic subtypes found in other studies are identified in their research. Accordingly, more comprehensive models of subtypes of BN, elucidating the interplay between current negative affect, other personality characteristics, and eating disorders symptoms are needed. The study by Turner et al is promising in this respect, but the results of this study are hard to interpret with regard to BN since the sample of the study is composed of patients with various eating disorders.

Among the personality characteristics relevant to subtype models, *interpersonal functioning* is probably of major importance. Numerous studies drawing on various measures of personality and interpersonal functioning have shown that problems in interpersonal relationships are associated with bulimic symptoms [15,32-37] and may persist long after symptomatic improvement [38]. Interpersonal functioning is important not only for the etiology and consequences of BN, but also for the treatment of the disorder. Thus, it has been demonstrated that interpersonal distress is related to poorer therapeutic alliance [39] and that attachment avoidance increases the risk of noncompletion of treatment for patients with the binge-purge subtype of anorexia nervosa [40]. The present study focuses on two partially overlapping and yet different conceptualizations of relational functioning: *interpersonal problems* and *attachment patterns*.

Interpersonal problems, most often measured with the Inventory of Interpersonal Problems (IIP) [41], are typically operationalized as recurrent self-experienced problems occurring in a wide range of relationships. With regard to BN, studies have found that the general level of self-reported interpersonal problems of bulimic patients is somewhat higher than in normal samples and that the interpersonal problems of patients with BN tend to be related to submissive rather than dominant behavior and to being excessively affiliative toward others rather than being too hostile [39,42]. However, some studies [36,37] suggest a *pathoplastic* relation between interpersonal difficulties and bulimic features, implying that the severity of bulimic symptoms may not be uniquely related to specific kinds of interpersonal problems and that different profiles or clusters of interpersonal problems may be represented among patients with BN.

Attachment patterns, as measured with the Adult Attachment Interview (AAI) [43], are fundamental behavioral, cognitive, and emotional dispositions actualized in close relationships. Attachment theory and research has recently received an increasing amount of attention within the psychotherapy field [44-46]. One particularly relevant feature of attachment patterns is that they entail fundamental strategies toward *affect regulation* in attachment-related contexts. Whereas persons with *secure* attachment patterns are able to regulate their emotions adaptively, persons with insecure attachment patterns have problems with affect regulation. Thus, persons with *preoccupied* attachment patterns tend to *underregulate* or *hyperactivate* their emotional displays in order to maintain the emotional closeness to attachment figures. Conversely, persons with *dismissing* attachment patterns tend to *overregulate* or *deactivate* their emotions, thus distancing themselves from the feelings aroused in close relationships [47]. A fourth attachment category, *unresolved/disorganized*, which is always assigned in combination with one of the three other patterns, relates to fundamental problems with processing experiences of loss or attachment-related trauma [48]. In studies of persons with BN where attachment classifications were based on the AAI, the percentage of persons classified as secure ranged between 0% and 21% [49-51]. In comparison, on average 56% are classified as secure in non-clinical samples and 23 % in general clinical samples [52]. The samples in the existing studies have been too small to conclude anything with respect to the distribution of the different insecure categories in BN compared to other samples.

The purpose of the present study was to assess eating disorder symptoms, negative affect, and interpersonal