Bulimia nervosa in adolescents:
treatment, eating pathology and comorbidity

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Abstract

*Background: Bulimia nervosa (BN) is occurring with increasing frequency among adolescents. Yet, few studies have undertaken to detail the clinical presentation, or investigate different treatments for adolescents with BN. **Objective**: In this article, we 1) review our current knowledge of BN in adolescents, both in terms of clinical presentation and treatment possibilities, and 2) describe a cohort of adolescent bulimics in terms of eating pathology and comorbidity. **Subjects**: Twenty-seven consecutive referrals for adolescent BN to The University of Chicago Hospitals are presented here (mean age=16.2 yrs, sd+1.4). These patients are among the first to be evaluated for participation in an ongoing randomized controlled trial of two psychosocial treatments. **Measures**: Eating pathology was measured with the Eating Disorders Examination (EDE), while the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS) was used to establish comorbid psychiatric diagnoses. **Results**: Our findings indicate that this cohort is quite diverse in terms of ethnicity and family environment. Rates of comorbid depression are much higher in our cohort than in a comparable sample of adult BN. In most other respects, the clinical presentation of BN in our sample of adolescents appears to be similar to that in adults. **Conclusion**: Comorbidity and adolescent developmental status are two obvious factors that should be taken into account in the evaluation of effective treatments for adolescent BN.*

Introduction

Bulimia nervosa (BN) is a highly prevalent condition that has a profound impact on the lives of many young men and women and their families. Key features are binge eating accompanied by feelings of loss of control, guilt and remorse. As in anorexia nervosa (AN), there is a fear of fatness and repeated attempts to lose weight through dieting and/or compensatory purging behaviors, e.g., self-induced vomiting, laxative or diuretic abuse.[1] BN is a major source of psychiatric and medical morbidity with a peak age of onset at 18 years.[2]

BN is occurring with increasing frequency among adolescents. Yet, few studies have undertaken to detail the clinical presentation of BN in adolescents.[3] Moreover, no treatment has been systematically evaluated for this age group. However, consistent with clinical observations and based on a series of studies from the Maudsley Hospital in London for adolescents with AN (4-6), family treatment shows promise for BN in adolescents. These studies have shown that involving the parents and siblings in treatment has beneficial effects on reversing the course of the eating disorder as well as improving family interaction. Improvements for AN patients with binge eating and purging were as good as for those with purely restrictive eating patterns. In addition, a preliminary report from the Maudsley group of a case series of adolescents with BN that employed this approach has shown that this treatment is helpful.[7]

In this article, we will first summarize the limited information about BN in adolescence with reference to comorbidity, medical complications, epidemiology and treatment. We will then describe the characteristics, eating pathology and comorbidity of a cohort of adolescent bulimics who presented to the Eating Disorders Program at The University of Chicago Hospitals.

Clinical presentation of Bulimia Nervosa

Comorbidity: BN is a major source of psychiatric morbidity and impairs several areas of functioning. In adults, clinical features include high rates of depression and anxiety, personality disorders, disturbances in social functioning, alcohol and drug abuse, and suicide attempts. The few available reports of adolescents with BN seem to indicate that these patients experience significantly lower self-esteem than adolescents without an eating disorder.[8] In addition, adolescent bulimic patients report significantly more suicidal ideation and suicide attempts than other adolescents.[9] Rates of sexual abuse appear to be higher in BN than in other psychiatric groups[10], although this issue has not sufficiently been explored in young patients. Beyond psychiatric morbidity, preoccupation with food and body weight can impair social, school and work functioning.

Medical complications: Although BN is a psychiatric condition, it is also associated with significant medical complications, morbidity and mortality. As many as one quarter of patients may require hospitalization for medical reasons.[11] Moreover, BN can be life threatening due to the physiological effects of recurrent binge eating and vomiting. Hypokalemia is common; while hypocalcemia, hypomagnesemia, hypophosphatemia, esophageal irritation and bleeding, Mallory-Weiss tears, gastric rupture, and large bowel abnormalities have all been noted.[12] The use of Ipecac to induce vomiting can cause emetine cardiomyopathy, hepatic toxicity, or peripheral myopathy.[13] Body weight is usually within normal range, while dental caries, periodontal disease, and menstrual irregularities are common (25% present with secondary amenorrhea and 33% present with irregular menses). Medical instability in these patients, exacerbated by the fact that most tend to deny the severity of their conditions, causes a mortality risk.

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Epidemiology: Growth is a dynamic process in early adolescence and severe nutritional deficits can occur in the absence of weight loss in BN.[14] Earlier studies of dieting and binge eating behaviors in community samples have shown that 10-50% of adolescent girls and boys frequently engage in binge eating behavior.[15] BN is occurring with increasing frequency among adolescents and pre-adolescents. Applying stringent diagnostic criteria, studies have found 2-5% of adolescent girls surveyed qualify for a diagnosis of BN.[16-18] The relative frequency of pre-menarchal BN in children is particularly disconcerting.[19] There is also evidence to suggest that disordered eating in males may be similar to that observed in females.[16,20] BN may be as prevalent among non-western females as it is among Caucasian adolescents.[21]

In contrast to adolescent AN where there is clear evidence that cases with early onset of illness have a better prognosis than those with late onset illness[4], the same is not true for BN. In a series of 32 BN cases with an age at onset of 15 years or younger, deliberate self-harm was more prevalent compared to later onset cases. Nearly twice as many early onset cases were overweight prior to illness when compared to typical, later onset cases. Additionally, parental neglect was nearly twice as common in early onset cases compared to typical onset patients.[17] Clearly, BN is a prevalent and serious health concern that affects adolescents across diverse ethnic groups.

Treatment of Bulimia Nervosa in Adults

Much attention has been given to the evaluation of treatments for adults with BN. Treatment is complex and requires attention to broad psychiatric, medical, and nutritional aspects of the disease.[22] Numerous reports comparing psychosocial, and pharmacological therapies have come to dominate research in the field. For adults with BN, three treatments in particular have received the intense attention of investigators: cognitive-behavior therapy (CBT), interpersonal therapy (IPT) and antidepressant medication.

Psychotherapies: Cognitive-Behavioral Therapy and Interpersonal Therapy: The bulk of the research on the psychological treatments for BN in adults has focused on CBT, which was first described by Fairburn.[23] Since then several randomized controlled trials have been conducted (e.g., [24,25]). Taken together, these studies have demonstrated the specific clinical effectiveness of CBT as a treatment for adult BN. Only one other psychotherapeutic treatment has proved to challenge the efficacy of CBT. In a study comparing CBT, behavior therapy and interpersonal psychotherapy (IPT)[26], CBT was significantly more effective than IPT in reducing purging, dietary restraint, and changing attitudes to shape and weight. At a closed one-year follow-up[27], though, both CBT and IPT were superior to behavior therapy. Results for IPT were similar to that for CBT. In a large multicenter comparison of CBT and IPT, the authors demonstrated that CBT was the preferred psychotherapeutic treatment for a cohort of adult patients with BN, while IPT remains a credible alternative to CBT. This trial confirmed that CBT acts faster than IPT in ameliorating the primary symptoms of BN.[28]

Antidepressant medication: Besides CBT, the most intensively researched treatment for adult BN has been the use of antidepressant medication. Most classes of antidepressant medication have been examined, including the tricyclics, MAO inhibitors, specific seretonin reuptake inhibitors, and atypical antidepressants such as bupropion and trazadone. In almost all the controlled trials, both tricyclics and fluoxetine have proven superior to placebo for reduction of binge frequency. Generally, mood disturbance and preoccupation with shape and weight also show greater improvement with medication than with placebo.[29] Several controlled studies have directly evaluated the relative and combined effectiveness of CBT and antidepressant drug treatment (e.g.,[30,31]). Taken together, these studies indicate that CBT is superior to medication alone and that combining CBT with medication is significantly more effective than medication alone. A recent meta-analyses of psychosocial and pharmacological treatment studies for adult BN confirmed CBT as the treatment of choice.[32]

Treatment of Bulimia Nervosa in Adolescents

Despite the availability of a large number of treatment studies for adult BN, none has specifically included or investigated adolescents with BN. This is consistent with the overall paucity of clinical intervention research for adolescents with eating disorders. Nonetheless, more is known about the treatment of adolescent AN. In addition to several reports on the inpatient management, the first controlled treatment studies involving the families of adolescent AN patients have been conducted at the Maudsley Hospital in London in the mid 80's. The 'Maudsley Approach' to the treatment of adolescents with AN has been shaped by a series of controlled trails in which family therapy has been compared with individual supportive therapy. In these trials, family therapy has shown a positive response for adolescent AN patients with a short history of illness.[4-6] Since then, a group in Detroit has recently published a family treatment study of adolescent AN[33], and the Maudsley treatment has been manualized.[34]

While AN and BN are distinct syndromes, considerable overlap in symptomatology is common. Therefore, treatments that have proved to be effective for adolescent AN might also be beneficial in adolescent BN patients. On the other hand, families with an AN offspring may be different from those with BN offspring, and these differences may have implications for the involvement of family members in therapy. Women with BN report more troubled childhood experiences than women with AN.[35] Our own studies have shown that there may be a greater likelihood of conflict or criticism in families with a BN adolescent compared to their AN counterparts[36], but that it would be premature to talk about a 'typical anorexic family' versus a 'typical bulimic family'. Notwithstanding, the secrecy of the bulimic behaviors as opposed to the more obvious fragility of a starving anorexic teenager, as well as the general difficulty in engaging adolescents in therapy, implies that family intervention has an important place in both these disorders. From a developmental perspective, it is possible to argue that adolescent BN and AN patients share similar challenges, e.g., the negotiation of individuation, separation, sexuality, etc. Therefore, it is clinically feasible that adolescent BN patients still living with their families of origin may benefit from family therapy, especially if the treatment accommodates differences between AN and BN in adolescents.

The only scientific evidence we have that a psychological treatment may be effective with an adolescent BN population comes from a preliminary report from the Maudsley group. Their investigation of family therapy for adolescent BN revealed encouraging results. The finding in a small cohort of eight adolescent BN patients suggested that family therapy is helpful for this group of patients and their families.[7] Inclusion of educational principles of the disorder and involvement of the parents in helping to stop the binge/purge cycle seem to be successful. Most patients responded positively and showed significant changes in bulimic symptoms from the start of treatment to one-year follow-up. These results should still be viewed with caution; this study described a small group of patients, follow-up was brief, and no control group was included.

Nevertheless, as with all adolescents, there are strong theoretical and clinical arguments for involving the family in treatment of adolescents with BN. Apart from any relevant family issues, heightened feelings of shame, guilt and blame in the parents can reinforce the symptomatic behavior in the adolescent. In family therapy, information about the condition can be shared with the parents and the adolescent, and issues around meals, and the impact of the eating disorder on family relationships, can be addressed. The intrinsic denial of the alarming nature of bulimic symptoms renders the adoles-

cent incapable of appreciating the seriousness of the illness. This necessitates that the parents make sure that the adolescent receives adequate treatment. If the bulimic adolescent is defined in the same manner Robin et al[33] conceptualize the anorexic teenager, i.e., 'out of control' and 'unable to take care of herself', then the parents of the BN adolescent should be coached to work as a team in developing ways to restore healthy eating in their offspring.

Although CBT and IPT are apparently effective treatments of adolescents with BN, there are no clinical trials that have employed either treatment with an adolescent group. Both of these treatments are effective for other psychiatric illness in adolescents, notable depression and anxiety disorders, so it is probable that these approaches would be helpful with adolescent with adolescents with BN as well.[37,38] However, when these approaches have been used with adolescents and children, therapy is modified to include some measure of family involvement consistent with the developmental needs of the patient. Similar modifications would likely need to be made to either treatment if used with adolescents with BN.[39]

Although medications are effective in helping to prevent binge eating in adults, no data on adolescents with binge eating or purging has been published. Few studies have documented effectiveness of antidepressants in adolescents for depression or anxiety disorders, though the published evidence suggests that they are likely helpful, though perhaps less so, than in adults for these conditions.[40] The use of antidepressants to prevent binge eating in adolescents appears to be best conceived of as an adjunctive treatment, to be used if response to psychotherapy (of whatever type) is insufficient. On the other hand, data from adult trials suggest that many co-morbid illnesses and our own preliminary data, suggest that adolescents are likely to present with these other illnesses for which medications might be considered.

In summary, family therapy for adolescent BN has considerable potential. The extant data raise a clinically important and theoretically interesting possibility that adolescent BN can be successfully treated by having the patient's parents assume responsibility to restore healthy eating habits in their offspring through family therapy, a question that is currently under investigation at The University of Chicago. The purpose of this article is threefold; 1) to provide a description of the characteristics of a sample of young bulimics, heretofore rarely detailed, 2) to describe the nature of the eating pathology, and 3) to report on current comorbid psychopathology of a sample of consecutive referrals for adolescent bulimia to The University of Chicago Hospitals.

Method
Participants
To be included in the study, patients had to meet DSM-IV[41] criteria for BN or ED-NOS. To be included with a diagnosis of ED-NOS, they had to have binged or purged at a frequency of > 1/wk for the past six months. Patients had to be < 19 years of age at time of referral and be living with their families. Participants were 27 consecutive referrals to the Eating Disorders Program at The University of Chicago Hospitals, US. The present sample was all female with a mean age of 16.2 years (+1.4) (range: 13-19). Fifty nine percent of this cohort was Caucasian, 18.5% Hispanic, 7.4% Black, 3.7% Asian, while 11.1% identified themselves as mixed ethnic origin.

Procedures
This study is part of a large ongoing investigation in which manualized family therapy and manualized individual therapy for adolescent BN are compared. Assessments are conducted at baseline; end of treatment and at six-month follow-up. This paper reports only data from the baseline assessment of patients prior to the start of treatment. At the time of the first assessment and before the first clinical

contact, patients complete several measures of both eating pathology as well as general psychopathology. The measures of interest for this paper are presented below.

Measures
1). Demographics
Participants self-reported their age, ethnicity, and family status, while weight and height were measured on a balance-beam scale.
2). *Eating pathology*
The Eating Disorder Examination (EDE; 42) is a standardized investigator-based interview that measures the severity of the characteristic psychopathology of eating disorders. The EDE also generates operational eating disorder diagnoses. It is a measure of present state and, with the exception of the diagnostic items, it is exclusively concerned with the preceding four weeks. It assessed both the frequency of key behaviors (including various forms of overeating and purging), and the severity of psychopathology along certain dimensions (dietary restraint, concern about eating, shape and weight).

The EDE has been the subject of three tests of its discriminate validity.[42] These have involved detailed comparisons of patients with AN, patients with BN, subjects who are extreme dieters, and women in the general population. More recently, the EDE has been used with adolescents as well.[43] These findings consistently support its use, while the same is true for studies of its reliability. The EDE has also been shown to be sensitive to change and to have concurrent validity.
3). *Comorbidity*
The Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS; 44) is a semi-structured diagnostic interview designed to ascertain past and current episodes of psychopathology in children and adolescents. It is used in the present investigation to establish psychiatric comorbidity. The K-SADS has demonstrated both reliability and validity in children and adolescents.[45]

Results
1). Characteristics of adolescent bulimics (n=27)
Table 1 summarizes the characteristics of the first 27 adolescent bulimics who were evaluated for this treatment study. Perhaps the most notable, at this time, is the relative young age of the patients, as well as the fact that they have been ill, on average, for a significant duration (mean 18.1 months, sd+ 14.9, range 3-48 months). Also, 40% of this cohort is not Caucasian. While 27 adolescents have been evaluated so far, the EDE and K-SDAS have been completed for 22 and 25 participants respectively.

2). Eating pathology (n=22)
In terms of eating pathology, Figure 1 provides evidence that, on average, adolescent bulimics score as high as adult bulimics on the EDE subscales, i.e., restraint, weight, eating and shape concerns. Mean scores on these subscales are very similar to that reported by Agras et al. (2000) in a large sample of adult bulimics.

3). Comorbidity (n=25)
The presence of a comorbid psychiatric illness was confirmed through diagnostic interview by a psychiatrist or psychologist (n=13), or established by K-DSADS (n=12). Diagnostic interview vs. the K-SADS reflects a change in clinic assessment protocol. Although the diagnostic and K-SADS were different procedures, overlap in establishing comorbid diagnoses can be assumed, in particular as the first author supervised both procedures.

In addition to an eating disorder diagnosis, nearly half the sample (48%) was also diagnosed with a current mood disorder, while (56%) reported suicidal ideation (12/25) or attempted suicide (2/25) in the past 12 months. Another 12% presented with a current oppositional

disorder. Only one patient presented with a current diagnosis of anxiety disorder, and none was diagnosed with substance use disorder. Forty percent of this sample had no comorbid psychiatric disorder.
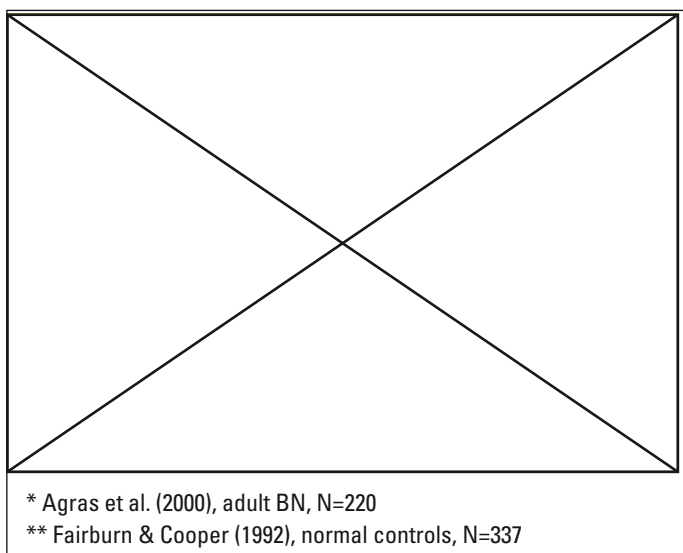
Discussion

This early report on a cohort of adolescent bulimics adds further support to the notion that a significant number of patients with BN present with their illness at a young age and having been symptomatic, on average, for 18 months. Similar to earlier findings[21], we are also observing a relatively large number of non-Caucasian patients presenting with bulimia. In other words, both in terms of early age of onset, as well as ethnic diversity, our findings lend credence to the assertion that the eating disorders are becoming increasingly heterogeneous. In terms of eating pathology, it is striking that this cohort of young patients are comparable, at least in terms of the EDE subscales, to their adult counterparts. These data seem to suggest that, in terms of eating pathology, BN in adolescents is clinically equivalent to the disorder among adults. This conclusion, though, should be viewed with caution as we are still at an early stage in our research.

Comorbidity in adult BN has received significant research and clinical attention. In terms of adolescent BN, Hoberman et al.[9] reported high rates of depression and suicidality among younger patients. In keeping with these findings, it was striking that almost half of our sample presented with a current diagnosis of a mood disorder while the same number reported suicidal ideation/attempted suicide in the 12 months prior to reporting to our clinic, or during treatment at our clinic. The presence of a comorbid mood disorder in adult BN has been well described before. For instance, Agras et al[28] recently reported that 22% of their sample of BN patients presented with depression. Although it may be problematic to make a comparison between these two studies, it is nevertheless remarkable that depression seems more prominent in our adolescent sample. In addition, while almost a quarter of those in the Agras study presented with substance abuse, none of our patients presented with such a diagnosis. A comorbid personality disorder diagnosis usually features prominently in adult BN studies. Agras' study is no exception in this regard; 37% of their sample received an Axis II diagnosis. While it is problematic to make a diagnosis of personality disorder in adolescents, 12% of our sample presented with at least some aspects of a characterlogical disorder. Prospective data of our cohort would shed light on the prevalence of personality disorders in adulthood.

Finally, if BN in adolescents is similar to the illness in adults, one could argue that treatment for adults should apply for adolescents. However, because adolescents are embedded in their families, as we have argued at the outset of this paper, treatments that have shown to be effective for young AN patients may be most applicable for young bulimics. This question remains largely unanswered, and data from the Chicago controlled treatment study ought to shed light on this compelling issue.

* Agras et al. (2000), adult BN, N=220
** Fairburn & Cooper (1992), normal controls, N=337

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TABLE I: CHARACTERISTICS OF ADOLESCENT BULIMICS (N=27)

Demographic Variables (mean, sd or %)

Age (years)	16.2	(1.3)
BMI	23.0	(4.9)
%IBW	107.5	(28.5)
Binges per wk	3.1	(4.0)
Purges per wk	10.2	(9.2)
Duration illness (months)	17.6	(14.9)

Ethnicity		Family Status	
- Caucasian	57.1%	- Intact	64.3%
- Hispanic	17.9%	- Divorced	14.3%
- African American	10.7%	- Reconstituted	10.7%
- Asian	3.6%	- Single parent	10.7%
- Other	10.7%		

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COMMENTARY 1

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The paper aims to describe a sample of bulimia nervosa (BN) patients with regard to their demographic, eating disorder and comorbidity characteristics. It is unusual for an article to have aims which are purely descriptive, and this reflects the exploratory nature of the research. It is important to note that the purpose of description here is not merely to locate the sample in a context, but rather to allow the researcher to distinguish the characteristics of an adolescent BN sample from those expected of an adult BN population and normal controls. Although neither of these populations are actually investigated in the study they are implicit comparison groups, evident by the language and assertions made in the paper.

It is in this regard that I will examine the standard considerations of validity when discussing the results of the paper. Of particular concern in this paper is the construct validity of measurement. In essence the paper reports the degree to which a number of diagnoses are present in the sample under investigation. This allows conclusions relating to prevalence and comorbidity to be drawn. A number of measurement approaches are used, generally consisting of diagnostic interviews. Although the interviews

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are described and referenced, no information is given on the effectiveness and validity of these approaches. It is unclear, whether the same clinician performed the interviews and whether the procedures were standardized across the different subjects.

Of particular concern in this regard is the use of K-SADS to measure comorbidity. The researchers indicate that this was only used in 12 of the 25 subjects examined. The other 13 were examined by means of a clinical interview. It is unclear that these interviews were consistent, and that they particularly looked for the diagnoses considered in the comorbidity discussion. It is also unclear that the same diagnostic criteria were used when the K-SADS was followed as opposed to when the interviews were performed. In spite of these concerns it is to the researchers' credit that they looked for formal diagnoses rather than just indicators based on a questionnaire.

The second area of concern is that of external validity. In particular the demographic characteristics are helpful in describing the sample, but it is difficult to determine how this relates to the demographics of the population served by The University of Chicago Hospitals. For example, do the high number of non-Caucasian patients result from a move to heterogeneity in the bulimic population, as suggested by the researcher, or is this an artifact of the population groups served by the Hospitals. It is difficult to determine this without knowledge of the target populations.

Some comment must be made of the statistics used here. There are two concerns: the first relates to some inconsistent reporting while the second relates to the non-use of inferential techniques. There are a number of inconsistencies in the reporting. The percentages of the different race groups are different from those given in table1. In addition the sample sizes vary across the different measures. No explanation is given for these differences. Also in the description of results for comorbidity, the results are given as 12 and 2 out of 27 respectively, while according to the section heading, only 25 were examined for comorbidity. Whether these inconsistencies are errors or, as for the most part it seems more likely, lack of clarity in the explanation it makes it difficult for the reader to understand the possible implications for external and statistical validity.

Finally a number of comparisons are made both explicitly and implicitly between the three population groups mentioned. In the case of the comorbidity results no information is given as to what extent these conditions are prevalent in a normal population. While it seems that the level of suicidal ideation is high, we are not given any values to compare it against. In particular we do not know what the rate of suicidal ideation is among adolescents in the population who are serviced by the hospitals in question. In addition these comparisons do not apply inferential statistics to determine if the differences observed could be caused by chance. For example using the Normal approximation to the Binomial distribution the proportion of individuals who are diagnosed with suicidal ideation/parasuicide has an error of approximately 10% in either direction. Thus it could be as low as 40% or as high as 60%. By applying simple statistics such as these it would eliminate a focus on differences which are merely artifacts of the chosen sample.

The issues raised here must be seen in the context of the papers intent. It is clearly an exploratory study examining a relatively unresearched field. To that end it makes an important contribution. The concerns raised highlight some questions which remain unanswered by this research. They are concerns which must be addressed before firmer conclusions can be drawn. **SAPR**

COMMENTARY 2

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Although eating disorders are common among female high school and college students, little is known about the exact prevalence of anorexia nervosa (AN) and bulimia nervosa (BN) in younger adolescents and children.[1] In view of the few studies that have addressed the clinical presentation of BN in adolescents and the lack of systematic treatment studies for BN in this age group, the authors' notion to review and study the subject is pertinent.

As a first step towards determining effective treatment for BN in adolescents, the authors have provided a description of the clinical presentation and comorbid psychopathology in a cohort of 27 adolescents with bulimia. They acknowledge that these preliminary results may not be sufficient to draw comparable conclusions from previous studies in BN patients . The available data however, seem to suggest that the clinical presentation of BN in adults and adolescents is similar. The high occurence of mood disorder (48%) and characterlogical disorder (12%) in their sample is therefor not unexpected. Their comorbid finding regarding the incidence of a current oppositional disorder (12%) is an interesting one, given the limited reference to this condition in eating disorder literature and warrants further research in itself.

Effective treatment modalities for adult BN currently consist mainly of cognitive behaviour therapy (CBT), interpersonal therapy (IPT) and anti-depressant treatment. Family therapy has shown efficacy in adolescents with AN[2] and the authors propose a potential benefit from this in adolescents with BN. The authors argue that this appears feasible given the considerable overlap of symptomatology in AN and BN along with the developmental challenges confronting adolescents with eating disorders. (A control group consisting of adolescent AN patients in the current study, may have supported this view).

This study will thus be followed by an investigation in which manualized family therapy and manualized individual therapy for adolescent BN will be compared. These findings are awaited with anticipation and should indeed shed more light on the treatment of BN in adolescents.

References

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2. *Dare C, Eisler I. Family therapy for anorexia nervosa. In DM Garner & PE Garfinkel (Eds.), Handbook of treatment for eating disorders. New York: Guilford Press; 307 - 324.* **SAPR**

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