1. Introduction

There is overwhelming evidence that depression is one of the most common experiences of eating disorder patients (Herzog et al., 1992; Touchette et al., 2010). Individuals with anorexia or bulimia nervosa commonly display high levels of dysphoric affects, feelings of emptiness and ineffectiveness and emotions such as loneliness and desperation (Bruch 1973). Self-depreciating emotions associated with pathological eating behaviors may probably trigger depressive episodes (Nolen-Hoesema et al., 2007). However, several authors have suggested that eating behaviors themselves (whether starving, bingeing or purging) may serve as adaptive strategies to regulate negative emotions, such as those associated with identity and interpersonal disturbances, frequently seen in these patients (Heatherton et Baumeister, 1991).

For these reasons, it seems worthwhile, in eating disorders, to look for depression not only in a categorical way but also in a dimensional way and to explore the subjective experience of depression of these patients. This is in line with recent conceptualizations on depression from different theoretical perspectives which converge towards the identification of two types of fundamental depressive experiences framed by personality development: the first one focused on concerns associated with disruption in relationships with others (with feelings of loss, abandonment and loneliness) and the second one centered on problems concerning identity (associated with low self-esteem, feelings of failure, culpability, lack of self-confidence) (Blatt and Zuroff 1992). According to Blatt (Blatt, 2004), maladaptive behaviors would emanate directly from an overemphasis and exaggeration of one of the two essential developmental lines of the personality: the Dependent/Anaclitic line, which concerns the establishment of satisfying interpersonal relationships, and the Self-critical/Introjective line, which focuses on the achievement of a positive and cohesive sense of self (Blatt and Zuroff 1992).

Blatt and colleagues have initially developed the Depressive Experience Questionnaire (DEQ) to assess these two dimensions which emerge as independent factors in analytic studies (Blatt et al., 1976). However, subsequent theoretical developments have suggested that different levels could be indentified, each following a developmental trajectory from immature to more mature forms of interpersonal relatedness and self-definition.
Investigations using the Depressive Experience Questionnaire (DEQ) have thus identified two levels within the Dependency factor (relabeled more appropriately, Interpersonal Concerns): a first sub-factor, labeled Neediness, assesses feelings of loneliness and insecurity as well as a marked vulnerability to nonspecific experiences of loss, rejection, and abandonment. The second sub-factor, labeled Relatedness, appears to assess a more mature level of interpersonal relatedness, including valuing intimate relationships and being concerned about disruptions of particularly meaningful, specific, interpersonal relationships (Blatt 2004). In a similar way, the development of a sense of self seems to follow an analogous progression. Research conducted with the DEQ has identified two levels within the development of self-definition: a first level, which corresponds to the Self-critical factor of the DEQ, assesses concerns about self-worth and failure to meet self and externally imposed standards. The second level contains more positive, proactive expressions of competence and confidence in one’s self and in the future. Items corresponding to this more mature level of self-definition load mostly on the Efficacy factor already identified within the DEQ. Thus, the DEQ appears to measure adaptive and maladaptive dimensions of interpersonal relatedness (Neediness and Relatedness)(McBride et al., 2006), as well as adaptive and maladaptive dimension of self-definition (Self-Criticism and Efficacy)(Blatt 2004; Blatt and colleagues in their initial conceptualization largely emphasized the link between the personality dimension of self-criticism and the clinical expression of depression. However, they hypothesized the existence of several forms of introjective and anacritic psychopathology, not just limited to depression. Several authors since have reported high levels of both self-criticism and dependency in disorders such as depression (Bagby et al., 1994), panic disorder (Bagby et al., 1992) or social phobia (Cox et al., 2000). The exploration of the depressive experience of eating disorder patients has only recently brought attention (Speranza et al., 2003), notwithstanding the fact that the clinical features of these disorders may imply a specific psychopathology of the developmental processes involving interpersonal relatedness and self-definition. In fact, current theorization on eating behaviors considers these disorders as a reflection of a specific developmental arrest in the separation-individuation process due to the primary caregiver’s failure to provide essential functions during development (Corcos and Jeammet 2001). The eating disorder symptoms could be an attempt to cope with needs stemming from this incomplete self-development or to an interruption of the separation-individuation process (Goodsit 1997). Moreover, it can be hypothesized that the level of maturation of interpersonal relationships and/or identity could differentially characterize and influence the outcome of eating disorders according to the different subtypes. The aim of this paper was to reach a better understanding of the impact of personality development on the clinical outcome of patients with eating disorders. We specifically sought to explore if anorexic or bulimic patients presenting more immature forms of interpersonal relatedness and/or self-definition would present a worst outcome. As relational maturation and identity formation are special duties of adolescence, we focused our investigation on a sample of adolescents and young female with eating disorders.

2. Methods

2.1 Participants

The participants of this study were derived from a multicentre research project investigating the psychopathological features of eating disorders (Inserm Network No. 494013). The overall design of the Network was a cross-sectional investigation, with only a subset of
research centres involved in a prospective follow-up study at 30 months. The recruitment centres were academic psychiatric hospitals specialized in adolescents and young adults (age range for reception: 15–30 years). For this study, only female participants who had requested care for an eating disorder were screened for inclusion. At the first assessment and at outcome, patients included in the sample completed a research protocol that consisted of a clinical interview (for sociodemographic and diagnostic data) and a self-report questionnaire eliciting psychopathological features. Eating disorder diagnoses, whether of Anorexia Nervosa or Bulimia Nervosa, were made by a psychiatrist or a clinical psychologist specialized in the field of eating disorders using DSM-IV diagnostic criteria (APA 2000). Diagnostic assessment was made using the Mini International Neuropsychiatric Interview (MINI) which is a structured, validated diagnostic instrument that explores each criterion necessary for the establishment of current and lifetime DSM-IV axis I main diagnoses (eating disorders, anxiety and depressive disorders, substance-related disorders)(Sheehan et al., 1998). Patients were invited to participate in the follow-up study 3 years later. At 18 months, a reminder letter was sent to all participants. A second letter was sent just before contacting them by phone to plan the second assessment. Only patients with complete files at follow-up were included in the study.

2.2 Measures at baseline
The quality of the depressive experience was assessed with the Depressive Experience Questionnaire (Blatt et al., 1976). The DEQ is a 66-item self-report scale rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). This questionnaire was designed to assess the personality dimensions hypothesized by Blatt and Zuroff (Blatt and Zuroff 1992) to underlie different forms of depression. The instrument was developed by assembling a pool of items describing experiences frequently reported by depressed individuals. Factor analyses of the 66 items in normal and clinical samples have yielded three orthogonal factors matching the constructs of Interpersonal Concerns, Self-Criticism, and Efficacy (Blatt et al., 1976; Kuperminc et al., 1997). Subsequent factor analyses have identified two sub-factors within the Interpersonal Concerns factor, namely Neediness and Relatedness corresponding to different levels of maturation of interpersonal relatedness (Blatt et al., 1995; Rude and Burnham 1995). The DEQ has been shown to have high internal consistency and test-retest reliability (Mongrain and Zuroff 1994), high convergent and discriminant validity (Blaney and Kutcher 1991), as well as a high level of construct validity (Blatt and Zuroff 1992; Mongrain and Zuroff 1994). For the present study, we calculated the factor scores for Self-Criticism and Efficacy using the factor-weighting procedure provided by Blatt and colleagues (Blatt et al., 1976) and adapted in French by Atger and colleagues (Atger et al., 2003). We also calculated the sub-factor scores for the Neediness and Relatedness subscales of the Interpersonal Concerns factor using the scoring program for SPSS developed by Besser & Babchoock (Besser and Babchoock 2001).
Depression severity was measured with the French translation of the abridged version of the Beck Depression Inventory (BDI-13). The BDI is a self-report inventory measuring characteristic attitudes and symptoms of depression (Beck 1961). An abridged version with 13 items selected within all the items showing a high correlation (≥0.90) with the total score of the BDI-21 has been developed as a specific tool for epidemiological studies including clinical and non-clinical subjects (Beck and Beck 1972). The 21-item and the 13-item forms have shown correlations ranging from 0.89 to 0.97 and a similar factor structure indicating that the short form is an acceptable substitute for the long form (Beck et al., 1974). Both the
original version of the BDI-13 and the French translation have high internal consistency and substantial test-retest reliability (Beck et al., 1988; Bobon et al., 1981).

Binge eating behaviors were assessed with questions issued from the MINI diagnostic interview (Sheehan et al., 1998). Binge eating behaviors (defined as the consumption of large amounts of food in a short period of time associated with a sense of lack of control during the episode) were considered as present if they were currently used, independently of their frequency.

At the end of the assessment procedure, the clinician rated the severity of the illness with the Clinical Global Impression scale (CGI)(Guy 1976). The CGI requires the clinician to rate on a 7 point scale (1=normal to 7=extremely ill) the severity of the patient’s illness at the time of assessment, relative to the clinician’s past experience and training with patients with the same diagnosis.

2.3 Outcome criteria

A clinical interview was realized at follow-up. The clinical outcome at 3 years was approached categorically according to presence or absence of an eating disorder on the basis of the Psychiatric Status Rating Scale (PSRS) for anorexia nervosa or bulimia nervosa (Herzog et al., 1996; Herzog et al., 1993). The PSRS, which is part of the diagnostic assessment LIFE Eat II, is based on DSM-IV diagnostic criteria for eating disorders. It defines six levels of severity according to the presence and the degree of clinical symptoms.

A score at least of 5 means that the patient fulfills all the diagnostic criteria for an eating disorder (whether R-AN, P-AN or BN)(Fichter and Quadflieg 1999). Treatments received during follow-up were recorded (types of treatment, duration). The types of treatment were recoded in dichotomous answers (yes/no) according to Honkalampi and colleagues (Honkalampi et al., 2000) as follows: (1) Pharmacotherapy: antidepressants: treatment was considered as correct if prescribed at least for 3 months at a usual dosage; (2) Psychotherapy: any psychotherapy was recorded as positive, independently from the type, if duration was at least 6 months weekly. (3) Hospitalisation: (full or partial admission). Social outcome was assessed with the Groningen Social Disability Scale (GSDSII) at the end of the clinical interview (Wiersma et al., 1990). Patients were considered as having an unfavorable social outcome for scores in the moderate or severe range on the GSDSII.

2.4 Procedure

Diagnostic interviews were conducted by a research team of master’s level clinicians (psychologists or psychiatrists) familiar with DSM-IV Axis-I/II disorders and experienced in assessment and/or treatment of psychiatric adolescents. To reach high levels of reliability, the research evaluation team participated in several training sessions, including commented scoring of videotaped interviews. Final research diagnoses were established by the best-estimate method on the basis of the interviews and any additional relevant data from the clinical record according to the LEAD standard (Pilkonis et al., 1991). The protocol was approved by the local ethics committee (Paris-Cochin Hospital). After full information had been provided, all subjects gave written consent to participate in the study.

2.5 Statistical analysis

Comparisons between anorexic and bulimic participants at baseline were calculated with a chi² test for categorical variables and with an analysis of variance (ANOVA) test for
continuous variables, as appropriate. Following these tests, a priori pairwise contrasts were performed with alpha level adjusted using the Bonferroni procedure. Relationships between variables were calculated using Pearson’s correlations. To evaluate the predictive power of depression (in terms of severity of depression and in terms of the quality of the depressive experience) on the long-term outcome of eating disorder patients, we performed a logistic regression analysis. Presence or absence of an eating disorder at outcome was the dependent variable. Age, BMI, severity of the illness, presence of binge eating behaviors, severity of depression (BDI) and quality of the depressive experience (Self-criticism, Efficacy, Neediness and Relatedness subscales of the DEQ) at inclusion were the independent variables. We used a stepwise method to identify the best model predicting the clinical outcome of eating disorders. Differences in treatments delivered during the study period were secondarily added to the model. Finally, a logistic regression analysis was performed to identify the clinical variables at inclusion who best predicted social outcome measured with the Groningen scale. Results are presented as mean ± standard deviation. Statistical analyses were performed with the 10.1 version of the Statistical Package for Social Sciences.

<table>
<thead>
<tr>
<th>Variables</th>
<th>R-AN (N=42)</th>
<th>P-AN (N=19)</th>
<th>BN (N=33)</th>
<th>Total (N=94)</th>
<th>Statistics *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>P&lt;</td>
<td>≠</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCIO-DEMOGRAPHICS AT INCLUSION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (M±SD)</td>
<td>19.4±3.0</td>
<td>20.7±3.0</td>
<td>23.2±3.8</td>
<td>21.0±3.7</td>
<td>12.7 &lt;0.001 BN&gt;R-AN/P-AN</td>
</tr>
<tr>
<td>Education (Bachelor degree)[N, %]</td>
<td>25 (59)</td>
<td>14 (74)</td>
<td>25 (76)</td>
<td>65 (68)</td>
<td>2.90 ns</td>
</tr>
<tr>
<td>Life situation (Still leaving in family)[N, %]</td>
<td>33 (79)</td>
<td>12 (63)</td>
<td>9 (27)</td>
<td>54 (57)</td>
<td>24.8 &lt;0.001 BN&lt;R-AN/P-AN</td>
</tr>
<tr>
<td>CLINICAL CHARACTERISTICS AT INCLUSION</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient status (N, %)</td>
<td>37 (88)</td>
<td>13 (68)</td>
<td>5 (12)</td>
<td>55 (58)</td>
<td>41.5 &lt;0.001 BN&lt;R-AN/P-AN</td>
</tr>
<tr>
<td>Body Mass Index (M±SD)</td>
<td>15.0±1.6</td>
<td>15.2±2.3</td>
<td>20.8±3.6</td>
<td>17.1±3.8</td>
<td>50.6 &lt;0.001 BN&lt;R-AN/P-AN</td>
</tr>
<tr>
<td>Binge eating behaviors (N, %)</td>
<td>2 (5)</td>
<td>15 (79)</td>
<td>33 (100)</td>
<td>50 (53)</td>
<td>73.7 &lt;0.001 R-AN&lt;P-AN/BN</td>
</tr>
<tr>
<td>Clinical Global Impression (M±SD)</td>
<td>5.1±1.0</td>
<td>4.9±1.0</td>
<td>4.4±0.9</td>
<td>4.8±1.0</td>
<td>4.18 &lt;0.05 R-AN&lt;BN</td>
</tr>
<tr>
<td>Beck Depression Inventory (M±SD)</td>
<td>12.1±8.0</td>
<td>18.5±6.9</td>
<td>12.7±8.9</td>
<td>13.6±8.5</td>
<td>4.28 &lt;0.05 P-AN&gt;R-AN/BN</td>
</tr>
<tr>
<td>DEQ Self-Criticism (M±SD)</td>
<td>1.2±1.1</td>
<td>1.6±0.9</td>
<td>1.0±0.9</td>
<td>1.2±1.0</td>
<td>2.60 ns</td>
</tr>
<tr>
<td>DEQ Efficacy (M±SD)</td>
<td>-0.84±1.0</td>
<td>-0.68±0.8</td>
<td>-0.47±1.0</td>
<td>-0.67±1.0</td>
<td>1.19 ns</td>
</tr>
<tr>
<td>DEQ Relatedness (M±SD)</td>
<td>40.4±6.0</td>
<td>41.2±8.1</td>
<td>43.7±6.2</td>
<td>41.7±6.6</td>
<td>2.36 ns</td>
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<td>DEQ Neediness (M±SD)</td>
<td>47.3±9.2</td>
<td>48.5±10.5</td>
<td>47.8±10.4</td>
<td>47.7±9.8</td>
<td>0.09 ns</td>
</tr>
</tbody>
</table>

R-AN=Restricting Anorexia nervosa. P-AN=Purging Anorexia Nervosa. BN=Bulimia Nervosa. DEQ = Depressive Experience Questionnaire

Table 1. Socio-demographic and clinical characteristics of the sample at inclusion

3. Results

From the initial sample of the Inserm Network on eating disorders, 118 patients fulfilling the inclusion criteria of this study were selected to be included in the follow-up and retraced 3 years later. Among these subjects, 19 refused to participate or were unavailable. 99 subjects were directly interviewed, of whom 4 had to be excluded because they did not completely answered the self-questionnaire. Statistical analyses were performed on a final sample of 94 subjects (79.7% of the initial sample). Subtypes were represented as follow: 42 restricting anorexics, 19 purging anorexics and 33 bulimics. The mean age of the sample was 21.0±3.7.
Bulimic participants were slightly older than anorexic participants and lived more often outside the family. The level of education was similar between groups. Anorexic participants were more often recruited as inpatients and showed a more severe clinical picture compared to bulimics. Comparisons between groups on depression measures at inclusion show a differential picture. Purging anorexics had significant higher scores than restricting anorexics and bulimics concerning the severity of depression assessed with the BDI. On the contrary, we did not observe any significant differences between groups in levels of self-definition (Self-critical and Efficacy) and interpersonal relatedness (Neediness and Relatedness). The negative scores on the Efficacy factor (calculated according to factor scores of the control group) highlights that this factor seems to measure a developmental more mature capacity. Socio-demographic and clinical characteristics of the sample at inclusion are presented in table 1.

<table>
<thead>
<tr>
<th>Body Mass Index (1)</th>
<th>Clinical Global Impression (2)</th>
<th>Binge eating behaviors (3)</th>
<th>Beck Depression Inventory (4)</th>
<th>DEQ Self-Criticism (5)</th>
<th>DEQ Efficacy (6)</th>
<th>DEQ Relatedness (7)</th>
<th>DEQ Neediness (8)</th>
</tr>
</thead>
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<tr>
<td></td>
<td>-0.19</td>
<td>-0.20</td>
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<td>-0.03</td>
<td>0.12</td>
<td>0.24</td>
<td>0.11</td>
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<td></td>
<td>-</td>
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<td>0.11</td>
<td>0.19</td>
<td>0.03</td>
<td>0.15</td>
<td>0.17</td>
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<td></td>
<td></td>
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<td>-0.22</td>
<td>0.09</td>
<td>0.11</td>
<td>0.18</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.11</td>
<td>0.09</td>
<td>-0.21</td>
<td>0.37</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-0.21</td>
<td>0.46</td>
<td>0.25</td>
<td>0.37</td>
<td>0.41</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>-0.21</td>
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<td></td>
<td>0.31</td>
<td>0.41</td>
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<td></td>
<td></td>
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<td>-0.21</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-0.21</td>
<td></td>
<td></td>
<td></td>
<td>0.69</td>
</tr>
</tbody>
</table>

DEQ = Depressive Experience Questionnaire;

Table 2. Correlations between variables at inclusion (* p < 0.05. ** p < 0.05).

Correlations between variables at inclusion showed that the clinical severity of the eating disorder and the presence of binge eating behaviors were unrelated with BDI and with the subscales of the DEQ. The BDI showed a positive correlation with all DEQ subscales (correlations were in the medium range going from 0.37 to 0.46) with the exception of the Efficacy factor that was negatively correlated to depression (-0.21). These moderate correlations indicate that the DEQ scales are not equivalent to severity scales but identify specific personality traits (Table 2).

The mean duration of the follow-up was 30.6±6 months. According to the Psychiatric Status Rating Scale (PSRS), 44% (N=41) of the initial sample still presented an eating disorder fulfilling DSM-IV criteria. A higher proportion of patients (63%) still presented symptoms of an eating disorder (PSRS≥3). The persistence of a diagnosis was independent from the initial subtype of eating disorder. The group of purging anorexics was the most instable in terms of the subtype of eating disorder presented at follow-up. 17% of the patients showed an unfavorable social outcome at follow-up without differences between groups. All patients received at the same rates a pharmacotherapy or a psychotherapy or a combination of the two. Restricting and purging anorexics were more often rehospitalized during the follow-up compared to bulimics (Table 3).

Considering that eating disorder subtypes did not show any difference in DEQ measures at inclusion, the regression analysis was conducted on the entire simple of eating disorders (N=94). The logistic regression analysis significantly discriminated between participants with (N=41) and without (N=53) a persisting diagnosis of eating disorder (2logL = 111.0, Model F(df =3)= 12.1, p=0.01, Nagelkerke R² 0.17). The model included the severity of the eating...
disorder (CGI), the Neediness subscale and the Relatedness subscales of the DEQ at inclusion. The Neediness subscale (Wald Z=6.19, p=0.013; OR=1.09, IC 1.02-1.17) and the severity of the eating disorder (Wald Z=4.00, p=0.045; OR=1.62, IC 1.01-2.61) at inclusion were significantly associated with the persistence of an eating disorder. The Relatedness subscale, which was negatively associated with diagnostic persistency, just missed the level of significance (Wald Z=3.74, p=0.053, OR=0.91, IC 0.82-1.00)(Table 4). Treatments delivered during the follow-up had no impact on the results. Finally, social outcome was significantly predicted by a model including the severity of depression and the Relatedness subscale of the DEQ (2logL = 58.0, Model F(df =2)= 17.7, p=0.003, Nagelkerke R² 0.32). BDI was positively associated with the social outcome (B=0.14, Wald Z=7.87, p=0.01; OR=1.15, IC 1.04-1.26); Relatedness was negatively associated with the social outcome (B=-0.017, Wald Z=4.63, p=0.03; OR=0.84, IC 0.72-0.98).

<table>
<thead>
<tr>
<th>Outcome variables</th>
<th>R-AN (N=42)</th>
<th>P-AN (N=19)</th>
<th>BN (N=33)</th>
<th>Total (N=94)</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>p&lt;</td>
<td>#</td>
<td></td>
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</tr>
<tr>
<td>DURATION OF THE FOLLOW-UP (M±SD)</td>
<td>31.2±6</td>
<td>28.8±5</td>
<td>31.2±6</td>
<td>30±6</td>
<td>0.81</td>
</tr>
<tr>
<td>ED SYMPTOMS (PSRS≥3)(N, %)</td>
<td>26 (62)</td>
<td>12 (63)</td>
<td>21 (64)</td>
<td>59 (63)</td>
<td>0.02</td>
</tr>
<tr>
<td>ED DIAGNOSIS (PSRS≥5)(N, %)</td>
<td>19 (45)</td>
<td>9 (47)</td>
<td>13 (39)</td>
<td>41 (44)</td>
<td>0.39</td>
</tr>
<tr>
<td>SUBTYPES OF ED (N, %)</td>
<td>26.2</td>
<td>&lt;0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Restricting Anorexia</td>
<td>16 (84)</td>
<td>2 (22)</td>
<td>0</td>
<td>18 (37)</td>
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<tr>
<td>- Purging Anorexia</td>
<td>0</td>
<td>3 (33)</td>
<td>5 (38)</td>
<td>8 (19)</td>
<td></td>
</tr>
<tr>
<td>- Bulimia Nervosa</td>
<td>3 (16)</td>
<td>4 (44)</td>
<td>8 (61)</td>
<td>15 (37)</td>
<td></td>
</tr>
<tr>
<td>SOCIAL FUNCTIONING (GSDSII)(N,%)</td>
<td>8 (20)</td>
<td>3 (18)</td>
<td>4 (12)</td>
<td>15 (17)</td>
<td>0.91</td>
</tr>
<tr>
<td>TREATMENT RECEIVED (N, %)</td>
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<td></td>
<td></td>
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<tr>
<td>- Antidepressants</td>
<td>17 (40)</td>
<td>10 (53)</td>
<td>10 (30)</td>
<td>37 (39)</td>
<td>2.60</td>
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<tr>
<td>- Psychotherapy</td>
<td>23 (55)</td>
<td>12 (63)</td>
<td>18 (54)</td>
<td>53 (56)</td>
<td>0.44</td>
</tr>
<tr>
<td>- Hospitalisation</td>
<td>22 (52)</td>
<td>11 (58)</td>
<td>8 (24)</td>
<td>41 (44)</td>
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<td>- Pharmacological Psychotherapy</td>
<td>8 (19)</td>
<td>5 (26)</td>
<td>4 (12)</td>
<td>17 (18)</td>
<td>1.70</td>
</tr>
</tbody>
</table>

R-AN=Restricting Anorexia Nervosa. P-AN=Purging Anorexia Nervosa. BN=Bulimia Nervosa. ED=Eating Disorders. PSRS= Psychiatric Status Rating Scale. GSDSII= Groningen Social Disability Scale . DEQ = Depressive Experience Questionnaire

Table 3. Description of the clinical outcome of the sample

<table>
<thead>
<tr>
<th>Predicting variables</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>IC per Exp(B) 95%</th>
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<tbody>
<tr>
<td>Clinical Global Impression</td>
<td>0.48</td>
<td>0.24</td>
<td>4.00</td>
<td>0.045</td>
<td>1.62</td>
<td>1.01 - 2.61</td>
</tr>
<tr>
<td>DEQ Relatedness</td>
<td>-0.97</td>
<td>0.05</td>
<td>3.74</td>
<td>0.053</td>
<td>0.91</td>
<td>0.82 - 1.00</td>
</tr>
<tr>
<td>DEQ Neediness</td>
<td>0.09</td>
<td>0.03</td>
<td>6.19</td>
<td>0.013</td>
<td>1.09</td>
<td>1.02 - 1.17</td>
</tr>
</tbody>
</table>

DEQ = Depressive Experience Questionnaire

Table 4. Prediction of the diagnostic outcome according to the severity and the quality of the depressive experience
4. Discussion

At our knowledge, this is the first research investigating the relationships between the development levels of interpersonal relatedness and self-definition and the clinical outcome of adolescents and young adults with an eating disorder. Two main findings should be highlighted: first, a less mature level of interpersonal relatedness at inclusion (as assessed by the Neediness sub-factor of the DEQ) was a significant predictor of the persistence of an eating disorder diagnosis at 3-year follow-up, independently from the severity of the eating disorder, which also appeared as a significant predictor. Second, a more mature level of interpersonal relatedness (as assessed by the Relatedness sub-factor of the DEQ) appeared as a protective factor of a poor social outcome three years later. On the contrary, the severity of depression was a negative predictor of the social outcome, result that agrees with other studies from the literature (Godart et al., 2004). The other variables, such as the BMI, the presence of binge eating behaviors or the other sub-factors of the DEQ at inclusion, had no direct influence over the clinical and social outcome of eating disorders.

Personality factors have already been identified as significant predictors of diagnostic status and social outcome in eating disorders. For example, obsessive-compulsive personality traits have been repeatedly associated with poor diagnostic outcome in anorexia nervosa (Crane et al., 2007; Steinhausen 2009). Furthermore, impulsivity (Fichter et al., 2006) and low self-directedness (Rowe et al., 2011) have been related to poor outcome in bulimia nervosa. Results from our study add some interesting data from a developmental perspective showing that personality features reflecting the maturational level of interpersonal relationships may play a significant role in the outcome of eating disorders.

There are several ways in which the developmental level of interpersonal relationships can negatively impact the clinical outcome of eating disorders: via the influence it exerts on the clinical expression of the disorders and via the reduced efficacy of the therapeutic interventions. As Blatt and coworkers have largely described (Blatt 2004; Zuroff et al., 1999b), the establishment of increasingly mature and satisfying interpersonal relationships is an essential component of personality development. Interpersonal relationships are dynamic systems that change continuously throughout development following a trajectory ranging from dependency to more mature expressions of mutuality and reciprocity, including intimacy. Flourishing relationships also allow a dynamic balance between focus on intimate relationships and focus on other social relationships (Fincham and Beach 2010). Subjects with an immature development of interpersonal relationships may feel less competent in social interactions and may experience them as unpleasant and distressing. Investigations in samples of normal adolescents have shown that the Neediness sub-factor of the DEQ correlates negatively with measures of interpersonal competence (Henrich et al., 2001) and is associated to dysphoria, anxiety over loss, introversion, and discomfort with depending on others (Zuroff et al., 2004). Intense separation distress is a common feature among eating disorders (Touchette et al., 2010) and many patients demonstrate marked separation anxiety when confronted to real or imagined abandonments. High scores on the Neediness sub-factor of the DEQ in eating disorders may reflect the discomfort of these patients in social relationships (Zuroff et al., 1999a; Zuroff et al., 2004).

A personality profile characterized by high dependency may have direct implications for therapeutic relationships in eating disorders. As pointed by Zuroff and colleagues (Zuroff et al., 2004), dependent people expect to be hurt in relationships and adopt submissive interpersonal style to forestall conflict and to elicit protection and support (Zuroff et al.,
This interpersonal style may foster ambivalent feelings toward the therapeutic situation perceived as dangerous and may interfere with the subject’s ability to engage in psychotherapy. On the contrary, as witnessed in our study by the protecting value of high levels of Relatedness, valuing intimate relationships and being able of positively use interpersonal and social resources are essential factors that can positively promote the development of therapeutic relationships. Relatedness seems to capture personality features that correspond to a greater level of psychological maturity, indicating a sensitivity to the feelings and need of others and a regard for a symmetrical relationships rather than need gratification only (Zuroff et al., 1999b). As pointed by Greenberg and Bornstein, relational trust, insight and psychological mindedness are tightly related to interpersonal development (Greenberg and Bornstein 1988) as it is the case for therapeutic change. As Blatt and colleagues have highlighted, depressed patients can differently react to treatments (whether psychotherapy or pharmacotherapy) according to the quality and development of interpersonal relatedness and self-definition dimensions (Blatt et al., 1995). Using data from the National Institute of Mental Health Treatment for Depression Collaborative Research Program, Zuroff and Blatt (Zuroff and Blatt 2006) have shown that, independent of type of treatment, a perceived positive therapeutic relationship early in treatment predicts a better adjustment as well a greater enhanced adaptive capacities throughout the 18-month follow-up. If therapeutic relationships contribute directly to positive therapeutic outcome, it should deserve special attention as a specific mechanism involved in change. As pointed by Fonagy and Target (Fonagy and Target 2002), treatment research should begin with the identification of key dysfunctions associated with a particular disorder and by establishing a conceptual link between the method of treatment and the dysfunctional mechanism identified in connection with the disorder.

According to our results, relational and interpersonal issues should be considered as key dysfunctions in eating disorders and should deserve specific attention. In fact, if symptom control is often a vital aim at the beginning of the therapy, elaborating relational experiences and family dynamics seem essential for the long term care of eating disorders. It is not surprising that interest in family interventions in eating disorders has increased over the past 5 years. A recent metaanalysis of RCT studies has shown that systemic family therapy appears efficacious for the treatment of adult eating disorders (von Sydow et al., 2010). Family interventions are the current first-line treatment for adolescent anorexia nervosa and promising for adolescent bulimia nervosa (Le Grange and Eisler 2009; Lock 2011). Family treatment would be effective not only for weight restoration, but also in improving some psychological symptoms including dietary restrain, interoceptive deficits, and maturity fears (Couturier et al., 2010). Although encouraging, however these conclusions are based on few trials that included only small numbers of participants with several issues regarding potential bias. The field would benefit from large, well-conducted trials (Fisher et al., 2010).

There are several limitations to this study that must be acknowledged. First, the sample was composed of young women with medium to high levels of education recruited from university hospitals specialized in adolescents and young adults with severe disorders. It is possible that the sample contained patients with specific clinical and socio-demographic profiles that may reduce the generalisability of the results. Second, the study had a naturalistic design, with therapeutic interventions freely chosen on the basis of usual practices. Although we controlled treatments in all statistical analyses, differences in treatments received may have influenced the evolution of patients over time. A final limitation is the middling rate of follow-up. A certain number of refusals can be explained...
by the young age at inclusion and the duration of the study. However, we made the choice of directly collecting data and retaining only patients with complete files to ensure a good quality of the sample.

5. Conclusions

Aside from these limitations, the results of our study indicate that an immature development of interpersonal relatedness can act as a negative prognostic factor of the long-term outcome of patients with eating disorders. This result implies that relational issues should deserve specific attention in eating disorders and indirectly supports the interest of family approaches for these patients. More generally, this study highlights the interest of a person-centered approach focusing on the subjective experience of patients. As Fonagy and Target (Fonagy and Target 2002) have outlined, the majority of studies do not explore the subjective experience and the psychological distress of patients, although this may be critically different among subjects. The investigation of the subjective experience can deepen our understanding of psychiatric disturbances as categorized by the DSM-IV and refine our prediction about treatment outcomes for a variety of different types of psychological disturbances (Fonagy 2004). This approach is also in line with the recommendations issued by the working group on personality disorders for the future DSM-V. The working group, arguing that personality psychopathology fundamentally emanates from disturbances in thinking about self and others, and that these features influence treatment strategies, has proposed to include an assessment of the levels of self (including identity and self-direction) and interpersonal functioning (including empathy and intimacy) to describe the personality characteristics of all patients, independently from the presence of a personality disorder (APA 2011). Professionals should carefully monitor interpersonal concerns when assessing eating disorder patients and should develop specific therapeutic strategies to handle the negative relational expectancies frequently experienced by these patients (Goodsit 1997).

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The Quality of Depressive Experience as a Prognostic Factor in Eating Disorders


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New Insights into the Prevention and Treatment of Bulimia Nervosa


Zuroff DC, Moskowitz DS, Cote S. (1999b). Dependency, self-criticism, interpersonal
Bulimia nervosa and eating disorders are common cause of distress and health related burden for young women and men. Despite major advances over the past three decades many patients come late to treatment and find that the therapy is incompletely addressed to the complex psychopathology and co-morbidities of the illness. The present book brings timely and contemporary understandings of bulimia nervosa to aid in current thinking regarding prevention and treatment. It will be read by therapists interested in enhancing their current approaches and those interested in earlier and more effective prevention and closing the gap between illness onset and accessing treatment. They will find practical guidance but also new ideas and ways of thinking about bulimia nervosa and the illness experience in this book.

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