Psychological attachment in obesity: the significance for bariatric surgery

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Mental Health Care Utilization in Patients Seeking Bariatric Surgery: 
the Role of Attachment Behavior

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Abstract

Obesity may be a factor contributing to mental health in patients seeking bariatric surgery. Whether a person uses mental health care for one's psychological problems may have its roots in attachment behavior. The present study (N = 260) identified that attachment anxiety was associated with more mental health care visits (OR = 1.86, 95% CI = 1.11-2.54, \( p = .02 \)), present use of medication (OR = 2.30, 95% CI = 1.43-3.68, \( p = .001 \)) and previously prescribed medication (OR = 2.01, 95% CI = 1.13-3.57, \( p = .02 \)). Furthermore, the use of previously prescribed medication was especially prevalent in patients with high attachment anxiety and low attachment avoidance (OR = 2.96, 95% CI = 1.35-6.50, \( p = .007 \)). The observation that attachment anxiety is associated with mental health care utilization indicates that it should be recognized and considered by health care providers working with patients with morbid obesity for therapeutic and economic reasons.
Introduction

Obesity has been recognized as a growing public health problem and it is associated with physical problems such as type II diabetes and hypertension as well as mental problems such as depressed mood.1, 2 Mental problems are particularly high among patients with morbid obesity seeking bariatric surgery,3-7 and mental health care utilization has also been found to be high.8 Some patients with mental problems are given mental health counseling prior to bariatric surgery to improve their mental health status.9 The present study focuses on the association between attachment behavior and mental health care utilization.

Attachment behavior—the habitual way of relating to other persons—plays a role in the etiology of mental problems, and may influence the risk of individuals becoming obese and the probability of individuals using mental health services. According to attachment theory,10-13 early interactions with attachment figures influence how people think, feel and behave in adulthood.14 Anxiously attached people seek support from others through amplifying distress, while avoidantly attached people evade dependency on others.15 Confronted with a stressor, people with anxious attachment representations have been found to increase caloric intake and physiological responses relevant to eating (e.g. cortisol).6, 16, 17 Moreover, insecure attachment has been found to be associated with obesity in both child- and adulthood18, 19 and with poor self-efficacy of eating management20. In addition, insecure attachment was shown to be a vulnerability factor for mental health problems in the general population21 and in bariatric surgery candidates.22

Mental health care may be used by patients with morbid obesity as a one-off after crisis,23 throughout life in case of chronic psychiatric comorbidity,9 as a preoperative psychological intervention for bariatric surgery patients with significant psychological problems,24 and as pre-treatment for bariatric surgery.9 Based on observations in the general population for health care utilization,25-28 attachment anxiety in bariatric surgery patients is hypothesized to predict mental health care utilization of any kind. Individuals with anxious attachment representations are expected to use more mental care, because they have a negative view of the self are hypervigilant to stressors, have little faith in their own ability to manage and tend to rely on others.29 In contrast, individuals with avoidant attachment representations have a positive view of the self and a negative view of others, have fear for intimacy, and have been found to be self-reliant,29 and are therefore expected to use less mental health care. Finally, although individuals with secure attachment representations believe that they are worthy of care and attention, are comfortable in seeking support and are confident that health care providers are capable and willing to provide
care, we expect their use of mental health care to be low because they have a low risk at mental disorders.

Thus, the aim of our study was to examine the association between attachment representations and mental health care use in patients with morbid obesity applying for bariatric surgery.

Materials and Methods

Study sample
Patients with morbid obesity between the ages of 18 and 60 referred to the Department of Bariatric Surgery of the Slotervaart Hospital, Amsterdam, the Netherlands between February and August 2012 were included in this study. Patients are eligible for gastric bypass surgery if they have a Body Mass Index (BMI) above 40 kg/m² or a BMI above 35 kg/m² and co-morbidity such as hypertension, diabetes, obstructive sleep apnea syndrome (OSAS) or osteoarthritis. Furthermore, patients should have made serious attempts at losing weight. A total of 299 patients from the Slotervaart bariatric surgery unit completed the questionnaires. Of these 299 patients, the 260 patients with complete datasets on variables needed in this study were included in analyses.

Procedures
Data were obtained from questionnaires filled out by patients during their pre-surgical multidisciplinary assessment. Questionnaires consisted of questions on demographics, adult attachment and mental health care utilization. After random allocation all questionnaires received an identification number and information gathered was treated confidentially. The study was approved by the Medical Ethical Committee of the Slotervaart hospital. Research participants provided informed consent.

Instruments
Adult attachment was measured with the Experiences in Close Relationship scale Revised (ECR-R), a continuous measurement of attachment. The ECR-R comprises 36 items to assess how individuals experience intimate relationships emotionally by employing two broad dimensions, attachment anxiety (18 items) and attachment avoidance (18 items). Items were rated on a 5-point Likert scale, ranging from ‘strongly disagree’ to ‘strongly agree’. The present data showed good internal consistency for both subscales, Cronbach’s alphas for attachment anxiety and attachment avoidance subscale were 0.88 and 0.90.
Mental health care utilization of patients was measured with the question: *Have you ever been in contact with a social worker, psychologist or psychiatrist for professional help?* Previously prescribed medication was measured with: *Have you ever used medication for mental problems in the past?* The question to measure current medication use was: *Do you use medication for mental problems currently?* Questions could be answered by yes or no. Medication use at presentation was retrieved from the electronic patient files.

**Statistical analyses**

Descriptive statistics were used to summarize demographics, attachment, and mental health care utilization. Means (M) and standard deviations (SD) were calculated for continuous variables. Frequencies and percentages were used to describe categorical data. Differences between patients with and without complete datasets regarding demographics were investigated using one-way analysis of variance and Pearson $\chi^2$. Logistic regression analysis was used to predict mental health care visits, previously prescribed medication and present use of medication for mental problems from attachment anxiety, attachment avoidance and the interaction between attachment anxiety and attachment avoidance. Also the possible prediction of age, gender, BMI and education level of the patient (person characteristics) was examined. However, only those demographic variables that significantly correlated ($p < .10$) with at least one of the three variables indicating mental health care use were included in the regression model.

In step 1 of the logistic regression, demographic variables (i.e., gender, age) were entered. In step 2, attachment anxiety and attachment avoidance were entered. In step 3, we examined the interaction term between attachment anxiety and attachment avoidance. Attachment anxiety and attachment avoidance were centred on their grand mean (i.e., the overall mean was subtracted from the values of a variable). To probe a significant interaction effect, logistic regression analyses were repeated including only patients with score below and above the median on attachment anxiety and attachment avoidance, respectively. Statistical analyses were performed using SPSS 19.0 software package. The level of significance was set at $p < .05$. All tests were two-tailed.

**Results**

*Description of the sample*

The mean age of the study population was 44 years (SD = 10.8); 84% of the research participants was female, mean BMI was 44 kg/m$^2$ (SD = 6.2) and 20% of the patients had followed higher
education (bachelor's degree or higher). Mean attachment anxiety was 2.01 (SD = .79) and mean attachment avoidance was 2.13 (SD = .79).

No statistically significant differences were found between the patients with missing data and those with complete datasets regarding age, gender, BMI or education level (data not shown).

**Personal characteristics, attachment style and mental health utilization**

In our sample of patients seeking bariatric surgery, 53% of the patients had ever been in contact with a mental health care provider, 60 patients (23%) had ever used prescribed medication for mental problems, and 29 patients (11%) currently used prescribed medication for mental problems. Most of the patients with current medication (n = 23) used antidepressants and two patients used antipsychotics. Furthermore, six patients used antidepressants or antipsychotics combined with benzodiazepines.

Table 1 shows the results of logistic regression analysis. In step 1, neither age nor gender were found significantly associated with the outcome variables. Almost significant (p < 0.10) observations were that previously prescribed medication use was higher in older than younger patients (p = .07) and that mental health care visits (p = .06), previously prescribed medication use (p = .06) and present use of medication (p = .07) were higher for women than men. Step 2 showed that attachment anxiety was associated with more mental health care visits (OR = 1.86, 95% CI = 1.11-2.54, p = .02), previously prescribed medication (OR = 2.30, 95% CI = 1.43-3.68, p = .001), and present use of medication (OR = 2.01, 95% CI = 1.13-3.57, p = .02). No significant associations were found between attachment avoidance and mental health care utilization. In step 3, the interaction of attachment anxiety and attachment avoidance predicted a significant proportion of individual differences in previously prescribed medication (OR = .56, 95% CI = .33-.94, p = .03). In the prediction of previously prescribed medication, neither the odds ratios for attachment avoidance in patients below the median on attachment anxiety (OR = 1.32, 95% CI = 0.59-2.96, p = .51) or above (OR = 0.73, 95% CI = 0.42-1.25, p = .25) the median on attachment anxiety were significant, nor the odds ratio for attachment anxiety in patients scoring high on attachment avoidance (OR = 1.47, 95% CI = 0.89-2.42, p = .13). However, previously prescribed medication was significantly predicted by attachment anxiety in patients with attachment avoidance below the median (OR = 2.96, 95% CI = 1.35-6.50, p = .007) indicating that previously prescribed medication was especially prominent in patients scoring high on attachment anxiety and low on attachment avoidance.
### Table 1. Regression analyses predicting mental health care visits, previously prescribed medication and present use of medication for mental problems from person characteristics (step 1) attachment anxiety, attachment avoidance (step 2) and the interaction term (step 3)

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Mental health care visits</th>
<th>OR</th>
<th>95% CI</th>
<th>OR</th>
<th>95% CI</th>
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<td>(.99-1.04)</td>
<td>1.03*</td>
<td>(.99-1.06)</td>
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<td>(.99-1.07)</td>
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<tr>
<td>Gender (0=female, 1=male)</td>
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<td>(.27-1.04)</td>
<td>.38*</td>
<td>(.14-1.03)</td>
<td>.15*</td>
<td>(.02-1.17)</td>
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<th>Mental health care visits</th>
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<th>95% CI</th>
<th>OR</th>
<th>95% CI</th>
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<td>(.99-1.04)</td>
<td>1.03*</td>
<td>(.99-1.02)</td>
<td>1.03</td>
<td>(.99-1.07)</td>
</tr>
<tr>
<td>Gender (0=female, 1=male)</td>
<td>.49**</td>
<td>(.25-.99)</td>
<td>.37*</td>
<td>(.14-1.02)</td>
<td>.16*</td>
<td>(.02-1.20)</td>
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<tr>
<td>Attachment anxiety</td>
<td>1.68**</td>
<td>(1.11-2.54)</td>
<td>2.30***</td>
<td>(1.43-3.68)</td>
<td>2.01**</td>
<td>(1.13-3.57)</td>
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<tr>
<td>Attachment avoidance</td>
<td>1.09</td>
<td>(.73-1.64)</td>
<td>.79</td>
<td>(.48-1.31)</td>
<td>.71</td>
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<table>
<thead>
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<th>Step 3</th>
<th>Mental health care visits</th>
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<th>95% CI</th>
<th>OR</th>
<th>95% CI</th>
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<th>95% CI</th>
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<tr>
<td>Gender (0=female, 1=male)</td>
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<td>(.25-.98)</td>
<td>.36*</td>
<td>(.13-1.00)</td>
<td>.16*</td>
<td>(.02-1.19)</td>
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<tr>
<td>Attachment anxiety</td>
<td>1.77***</td>
<td>(1.16-2.73)</td>
<td>2.66***</td>
<td>(1.64-4.29)</td>
<td>2.22***</td>
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<tr>
<td>Attachment avoidance</td>
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<td>(.73-1.63)</td>
<td>.90</td>
<td>(.55-1.47)</td>
<td>.8</td>
<td>(.41-1.56)</td>
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<td>Attachment anxiety * Attachment avoidance</td>
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<td>(.52-1.21)</td>
<td>.56**</td>
<td>(.33-.94)</td>
<td>.63</td>
<td>(.32-1.25)</td>
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*p<.10, **p<.05, ***p<.01

OR=odds ratio; CI=confidence interval; BMI=Body Mass Index
Discussion

Our study shows that more than half of the 260 patients (53%) referred for bariatric surgery has ever been in contact with a mental health care provider. In addition, 1 out of every 4 to 5 patients (23%) has ever used prescribed medication for mental problems, and 1 out of 9 patients (11%) currently uses such medication.

The results of this study demonstrate that the use of mental health care is greatest in more anxiously attached patients and that the use of previously prescribed medication is especially prevalent in patients scoring high on attachment anxiety and low on attachment avoidance. These findings are in agreement with attachment theory and may reflect that patients with more anxious attachment representations seek mental care more often because they rely more for support and care on others in combination with being more vulnerable for developing mental problems and experiencing higher levels of negative affect.29 On the other hand, attachment avoidance was not found to be associated with mental health care, which may reflect preference to be self-reliant and reluctance to become interdependent. Although patients with avoidant attachment representations may show considerable biological distress (e.g. increased blood pressure), they appear calm and subjectively feel and report to be not distressed.21

Furthermore, previous research showed that more secure attachment representations are associated with resilience and good psychological health.32 Although patients with morbid obesity who are more securely attached may not be free of mental problems, they might possess more effective psychosocial skills (e.g. social and communicative competences) and coping strategies (e.g. social support, active problem solving).32 These skills and strategies may prevent them from needing mental health care. In our study, more secure attachment representations might be reflected in the combination of low scores on attachment anxiety and low scores on attachment avoidance. This interaction was not associated with low or high mental health care use, perhaps because psychiatric disorders were low in this group and in case of psychiatric disorders these patients are comfortable in seeking support and are confident that health care providers are capable and willing to provide support.29 The most use of mental health care was made by patients scoring high on attachment anxiety and low on attachment avoidance. These patients may have relatively high mental problems or even psychopathology and are dependent without being reluctant to accept help form others.
Although the association between higher health care utilization and attachment anxiety has been described in previous studies,\textsuperscript{26, 27} the present study adds to this literature by focusing specifically on mental health care utilization in a population seeking bariatric surgery. Some aspects of this study require comment. The main limitation of this study is its retrospective, cross-sectional design preventing conclusions about the direction or prospective relation between variables. Furthermore, our findings do not generalize beyond the population of patients with morbid obesity seeking bariatric surgery or to other variables not rooted in attachment that may affect obesity and the use of health care. We cannot exclude that a proportion of the patients may have had a visit with a psychologist or psychiatrist as part of an earlier weight loss program instead of treatment for mental problems. A final limitation is that we used self-reports of health care utilization. Future prospective studies should include questions about the number and reasons of visits at the different mental health care providers and should verify these visits with mental health care providers. While this study provide descriptive information on which patients seems to utilize the most mental health care, future studies are required to examine who needs and benefits from mental health care on pre- and post-surgical level.

**Conclusions**

Overall, the results suggest that attachment behavior plays a role in mental health care utilization of patients with morbid obesity who apply for bariatric surgery. Therefore, it is important for health care providers working with patients with morbid obesity to have knowledge of the attachment theory, to recognize anxious attachment representations and to be aware of these patients’ desire of close relationships and hypervigilance for rejection as well as of the mental vulnerability of this group. Anticipation on attachment representations may help prevent unnecessary delay and may increase throughput of patients needing psychological treatment to improve their mental health before they are allowed to receive bariatric surgery. The implication is twofold. First of all, more anxiously attached patients may actually need more mental health care than securely attached patients, and, secondly, their emotionally dependency on caregivers and fear of rejection and abandonment may lead to unnecessary mental health care visits and high costs. To deal with both problems regularly scheduled frequent brief visits or telephone calls with health care providers may be required for these patients.\textsuperscript{29, 33} If a health care provider –responsive to concerns\textsuperscript{34}– is available at these scheduled moments before the patient asks for it and independently of symptoms, anxiously attached patients may become less compulsive in care-seeking outside these moments. Patients may experience that support occurs regardless of whether or not they communicate to have symptoms.\textsuperscript{29} Furthermore, it is important for the patients that they experience enough support and empathy from the health care provider as
well as from more accessible resources such as family, friends or religion. Conclusively, the observation that attachment anxiety is associated with mental health care utilization in morbidly obese patients seeking bariatric surgery indicates that it should be recognized and considered by health care providers for therapeutic and economic reasons.
Reference List