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Do depressive symptoms explain associations between binge eating symptoms and later psychosocial adjustment in young adulthood?

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ABSTRACT

Prospective associations between binge eating symptoms (i.e., objective overeating [OOE] and loss of control [LOC] eating) and psychosocial functioning during emerging adulthood were examined using data from the Longitudinal Study of Adolescent to Adult Health. We examined associations between OOE and LOC eating and psychosocial functioning variables with and without adjusting for concurrent depressive symptoms. Analyses revealed that OOE at Wave 3 (ages 18–28) was associated with depressive symptoms, social isolation, weight perception, and perceived attractiveness seven years later at Wave 4 (ages 25–35) and LOC eating at Wave 3 was associated with later depressive symptoms, suicidal thoughts, weight perception, social isolation, number of close friends, and sleep difficulty. Analyses adjusted for depressive symptoms at Wave 3 revealed that OOE at Wave 3 was associated with social isolation and perceived attractiveness at Wave 4 and LOC eating at Wave 3 was associated with later depressive symptoms, isolation, number of close friends, and sleep difficulty. Results show that binge eating symptoms are prospectively associated with psychosocial impairment during emerging adulthood even after controlling for depressive symptoms. Rather than simply screening for depressive symptoms, results highlight the utility of screening for binge eating symptoms as these symptoms are independently associated with psychosocial impairment in emerging adults.

1. Introduction

Binge eating is a serious mental health concern in the U.S. especially among adolescents and young adults (Hudson, Hiripi, Pope, & Kessler, 2007). Binge eating involves eating abnormally large quantities of food in a short period of time (i.e., overeating) with an associated loss of control over eating (LOC eating), and can be a symptom of eating disorders (American Psychiatric Association, 2013). While LOC eating has consistently been identified as a maladaptive feature of binge eating, more research is needed to determine the clinical significance of consumption of an objectively large amount of food, or objective overeating (OOE; Wolfe, Baker, Smith, & Kelly-Weeder, 2009). In a recent study, after controlling for LOC, OOE was associated with greater anxiety and eating disorder-related impairment (Forney, Bodell, Haedt-Matt, & Keel, 2016). More research elucidating the independent effects of LOC eating and OOE on clinical outcomes among young adults is necessary.

Subclinical binge eating symptoms (i.e., those not meeting diagnostic criteria) are more common than clinical eating disorders, but are similarly associated with psychosocial impairment (Hudson et al., 2007). Binge eating and other disordered eating behaviors are often comorbid with mood, anxiety, and impulse control disorders (Bulik, Sullivan, & Kendler, 2002; Davison, Marshall-Fabien, & Gondara, 2014; Hudson et al., 2007), suicidal thoughts, and insomnia (Davison et al., 2014; Johnson, Spitzer, & Williams, 2001). Furthermore, studies show eating disturbances, including binge eating, are related to social anxiety (Hudson et al., 2007) and lower social support (Tiller et al., 1997).

Although relationships between binge eating and impaired psychosocial functioning are important to study across the lifespan, certain developmental periods are especially dominated by these concerns. The period from the late teens through the twenties is an important developmental period sometimes termed young or emerging adulthood. Young adulthood is a critical developmental period for the onset of mental health problems (Kessler et al., 2005) and disordered eating behaviors (Hudson et al., 2007). Additionally, obesity and unhealthy eating commonly develop during this time (Nelson, Story, Larson, Neumark-Sztainer, & Lytle, 2008). Although, research has typically focused on adolescents and college students — and college students partially represent the emerging adulthood period — less is known about the population of emerging adults, which includes college students as well as individuals after the completion of college and those who do not attend or drop out of college (Arnett, 2000; Nelson et al., 2008).

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As individuals move from their late teens and early twenties into their late twenties and early thirties, mental health problems tend to decrease (Arnett, 2007; Kessler et al., 2007). Possible explanations for improvements in mental health include marriage, financial stability, and independence from parents. However, it is unclear how binge eating symptoms in young adulthood may be associated with later psychosocial functioning. Furthermore, studies show that individuals who engage in binge eating symptoms often report high depressive symptoms (Fulkerson, Sherwood, Perry, Neumark-Sztainer, & Story, 2004; Spoor et al., 2006; Stice, 2002) and have emotion regulation difficulties (Whiteside et al., 2007). Further research is needed to determine if binge eating symptoms are unique factors associated with later psychosocial functioning or if co-occurring depressive symptoms are the key factor related to poor psychosocial functioning. The current study used longitudinal data to examine independent associations among binge eating symptoms (i.e., OOE, LOC eating) and later psychosocial functioning during young adulthood. We first investigated associations among binge eating symptoms and psychosocial functioning without controlling for depressive symptoms concurrent with binge eating symptoms. Then, we analyzed the effect of binge eating symptoms on later psychosocial functioning controlling for depressive symptoms concurrent with binge eating symptoms.

2. Method

Data from Waves 3 and 4 of the Longitudinal Study of Adolescent to Adult Health (Add Health), a nationally representative, longitudinal survey-based study were used (Harris, 2009). Wave 3 data were collected from 2001 to 2002 when participants were ages 18–28 and Wave 4 data were collected from 2008 to 2009 (ages 25–35). More detailed information about the Add Health study and sampling design can be found elsewhere (Harris et al., 2009), but briefly, the initial sample included participants from 80 high schools and 52 middle schools in the U.S. Systematic sampling methods and implicit stratification were used to ensure the sample was representative based on characteristics of the schools (e.g., region, urbanicity, school size/type, race/ethnicity; see Morris et al., 2006 for sample characteristics). To account for the sampling design of the study, sampling weights were applied to the data. The Wave 4 longitudinal sampling weight was used which includes eligible Wave 1 respondents who were interviewed at both Wave 3 and 4, resulting in a sample of 12,288 people.

Binge eating symptoms in the past week were measured with two items in Wave 3 in which respondents indicated "yes" or "no": OOE ("Have you eaten so much in a short period that you would have been embarrassed if others had seen you do it?"), and LOC eating ("Have you been afraid to start eating because you thought you wouldn't be able to stop or control your eating?"). Depressive symptoms at Wave 3 were measured with 9 items from the Center for Epidemiological Studies–Depression (CES-D; Radloff, 1977) 20-item scale, asking about past week symptoms.

We examined several psychosocial variables as outcomes at Wave 4. Depressive symptoms in the past week were measured with 10 items from the CES-D 20-item scale (i.e., the same 9 items from Wave 3 and one additional item). The CES-D was dichotomized as low (<10) and high (≥10) based on a published cutoff score (Andresen, Malmgren, Carter, & Patrick, 1994). To measure suicidal thoughts, participants answered "yes" or "no" as to whether they experienced suicidal thoughts in the past year. Weight perceptions were measured with one item asking, "What do you think of your weight?" Response options included: very underweight, slightly underweight, about the right weight, slightly overweight, and very overweight. Perceived attractiveness was assessed with one item asking, "How attractive are you?". Response options included: not at all attractive, slightly attractive, moderately attractive, and very attractive. Sleep difficulty was measured by having participants indicate the number of nights they had trouble falling asleep in the past four weeks. Social isolation was measured by asking the frequency that participants felt isolated from others. Response options included never, rarely, sometimes, and often. Number of close friends was measured by asking the number of close friends the participant had. Single item measures demonstrate adequate face validity and the sum score for depressive symptoms has demonstrated adequate reliability and validity (Radloff, 1977).

3. Statistical analyses

Analyses were conducted using complex sampling within SPSS version 22 using available case analysis. First, a logistic regression was used to examine gender differences in OOE and LOC eating. Then, binary and multinomial logistic regressions were calculated for Wave 4 psychosocial outcomes with Wave 3 OOE and LOC eating as predictor variables. Finally, binary and multinomial logistic regressions were calculated again for Wave 4 psychosocial outcomes with Wave 3 OOE and LOC eating as predictor variables and Wave 3 depressive symptoms as a covariate. Gender, race, age, income, and body mass index (BMI) were included as covariates in all models. Outcome variables at Wave 3 were not available in the dataset, and thus, could not be included as covariates.

4. Results

The weighted prevalence of OOE was 5.9% and of LOC eating was 2.1%. Logistic regressions showed that women reported more OOE (OR = 1.56, 95% CI: 1.26–1.92) and LOC eating (OR = 2.46, 95% CI: 1.70–3.58) than men. Table 1 displays the frequencies of Wave 4 outcomes by OOE and LOC eating.

Results of OOE and LOC eating predicting psychosocial outcomes are displayed in Table 2. OOE at Wave 3 was prospectively associated with more depressive symptoms, increased social isolation, more sleep difficulty, poor weight perception, and less perceived attractiveness at Wave 4. LOC eating at Wave 3 was prospectively associated with more depressive symptoms, increased social isolation, suicidal thoughts, poor weight perception, having less close friends, and more sleep difficulty at Wave 4.

Table 2 also presents results of OOE and LOC eating predicting psychosocial outcomes controlling for depressive symptoms. Controlling for depressive symptoms at Wave 3, OOE at Wave 3 was no longer associated with depressive symptoms, sleep difficulty, or weight perception. LOC eating at Wave 3 was no longer associated with suicidal thoughts or weight perception at Wave 4. Depressive symptoms at Wave 3 were prospectively related to depressive symptoms, suicidal thoughts, weight perception, social isolation, less close friends, less perceived attractiveness, and increased sleep difficulties.

5. Discussion

This study showed that binge eating symptoms in young adulthood were associated with psychosocial impairment in people's mental health functioning and social development 7–8 years later. Both symptoms of binge eating (OOE and LOC eating) were similarly associated with impaired psychosocial functioning. However, LOC over eating was generally related to greater impaired psychosocial functioning, demonstrated by larger odds ratios than those for OOE. LOC eating is likely associated with the experience of a number of maladaptive cognitions about dieting, food, weight, and body shape (Latner, Hildebrandt, Rosewall, Chisholm, & Hayashi, 2007), which are known to have numerous negative ramifications on psychosocial health (Crow, Eisenberg, Story, & Neumark-Sztainer, 2006; Wilson, Latner, & Hayashi, 2013) and could contribute to the pattern of results seen in the present study. In addition, LOC eating, but not OOE, predicted suicidal thoughts and fewer close friends. OOE, but not LOC eating, predicted negative perceptions of appearance. These results are consistent with other studies finding associations between binge eating and psychosocial