Binge Eating Behavior in University Students

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Abstract. The purpose of this study was to determine the prevalence of binge eating behavior and identify relationships between binge eating behavior and psychological variables in Korean university students. Data from the Bulimia Test Revised, general demographic characteristics, and measures of psychological variables such as depression and stress were collected using convenient sampling. Data from two hundred and fifty-seven participants were analyzed using descriptive statistics and Pearson’s correlation analysis. The analyses showed that none of the participants met the criterion for binge eating behavior and the prevalence of the tendency for binge eating was 8%. There were significant relationships found between stress, depression, and binge eating behavior. These findings suggest that we need to develop nursing programs that deal with stress and depression.

Keywords: Binge eating behavior, Depression, Prevalence, Stress

1 Introduction

Recently, there has been an increase in the attention given to appearance and a thinner body shape in our society. This makes people pay attention to their diet or abstain from food. Dietary control is very common among university students. Strict regulation of eating, one of the diet control methods, puts them at risk of disinhibition and they easily resort to overeating [1].

Meanwhile, university students face a lot of challenges during the transition period from an adolescent to an adult. Thus, we conducted this study in order to determine the prevalence of binge eating behavior and identify relationships between binge eating behavior and psychological variables in Korean university students. This information would be useful for the development of nursing intervention programs to prevent binge eating behavior.

2 Methods

2.1 Subjects
Data were collected from students at 3 universities using the convenience sampling method. The subjects agreed to participate in this study after they were informed about the purpose of study, the guarantee of anonymity, freedom to stop engagement with the study, the time required for participation in the study, and so on. The subjects completed self-report questionnaires that included demographic variables such as age, sex, smoking, and drinking behavior, and scales to measure binge eating behavior, stress, and depression.

2.2 Instruments

Binge eating behavior was assessed using the Bulimia Test-Revised (BULIT-R) by Thelen et al. [2]. This test has 28 items and a 5-point Likert scale. Binge eating behavior was operationally defined as a total score ≥121 and the tendency for binge eating behavior by a total score ≥88. Stress was evaluated by the Life Stress Scale revised by Chon et al. [3]. The scores were computed by multiplying the frequency of the stressful event by its severity. The higher the score, the higher the stress that was present. Beck’s Depression Inventory (BDI) [4] was used to assess the presence of depression. This scale consists of 21 items and a 4-point response scale. Depression was operationally defined as a total score ≥ 16. Body mass index (BMI) was calculated by the formula weight/height² (Kg/m²).

2.3 Data analysis

Data from two hundred and thirty-seven participants were analyzed after excluding the incomplete data, with the SAS 9.4 program. Demographic characteristics, binge eating behavior, stress, and depression were analyzed using descriptive statistics. Pearson’s correlations were used to analyze the relationships between binge eating behavior and psychological variables.

3 Results

3.1 General Characteristics

The mean age of participants was 20.6 years (SD = 1.92). The percentage of participants below 20 years of age was 30%, and male students formed 26.6% of the total sample. The mean score for stress was 69.0 (SD = 45.68). 20.7% of the subjects in this study had depression.

<table>
<thead>
<tr>
<th>Table 1. General Characteristics of the Subjects (N = 237)</th>
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<tr>
<td>Variables</td>
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<tr>
<td>Age (yrs)</td>
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### 3.2 Prevalence of binge eating behavior

Table 2 shows that the mean score for binge eating behavior was 57.8 (SD = 17.61). None of the participants reported binge eating behavior. However, the tendency for binge eating behavior was found in 8% of the sample.

**Table 2. Binge Eating Behavior in Subjects**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Category</th>
<th>n (%)</th>
<th>Mean±SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulimia Test Revised (BULIT-R)</td>
<td></td>
<td></td>
<td>57.8±17.61</td>
</tr>
<tr>
<td>Binge eating behavior</td>
<td>BULIT-R≥121</td>
<td>0(0)</td>
<td></td>
</tr>
<tr>
<td>Tendency for binge eating behavior</td>
<td>BULIT-R≥88</td>
<td>19(8.0)</td>
<td></td>
</tr>
</tbody>
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### 3.3 Correlations between binge eating behavior and psychological variables

Table 3 shows that binge eating behavior was significantly correlated with stress and depression.

**Table 3. Correlations between binge eating behavior and psychological variables**

<table>
<thead>
<tr>
<th>Binge eating</th>
<th>Stress</th>
<th>Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.21*</td>
<td>0.43*</td>
</tr>
<tr>
<td>Depression</td>
<td>0.53*</td>
<td></td>
</tr>
</tbody>
</table>

* <.001

### 4 Discussion and Conclusion

Binge eating is defined as the inability to control eating and therefore, eating a large amount of food at one time [5]. The results of the present study showed that no participant demonstrated binge eating behavior. However, 8% of the subjects showed
the tendency for binge eating behavior. Reyes-Rodríguez et al. [6] reported that the prevalence of binge eating was 3.24% in university students. According to the study by Oh [7], 0.3% of the female university students showed binge eating behavior, while 5% of the total students showed the tendency for binge eating in Korea. Napolitano & Himes [8] reported the prevalence of binge eating as 8.4% in female college students. They also reported the distribution of binge eating according to race; 9.9% among Caucasians and 2.4% among African Americans. While the results of the present study were lower than the prevalence rates of previous studies, the prevalence of the tendency for binge eating was demonstrably higher than the results of Oh’s study [7]. Thus, we should pay attention to this at-risk group and take steps to ensure that they do not develop binge eating behavior.

Meanwhile, Pearson’s correlation analysis revealed that binge eating behavior was significantly related to depression and stress in the present study. This finding was in accordance with the results of the study by Adamus-Leach et al. [9], where depression and stress were correlated with binge eating in women. These findings suggest that nursing intervention programs to prevent binge eating behavior should consider psychological variables such as depression and stress. We suggest that future studies should focus on identifying factors associated with binge eating behavior, including other psychological variables.

References