Risk Eating Behaviors in male and female students: A longitudinal study

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Introduction

One aspect that should be analyzed as part of adolescent development is how changes occur over the years regarding the Body Mass Index (BMI) and the probable relationship with presence of different risky eating behaviors, and whether they pose risks to physical and mental health of adolescents, such as social, academic, family and individual Impairment.

Most studies are cross-sectional, which complicates determining whether these risk factors are concurrent with such conduct or result from them, so it is important to conduct longitudinal studies where you can keep track of the population to obtain a valid estimate of the problem in each measurement, and to study the association between different risk factors over time (Samet & Munoz, 1998).

The purpose was to analyze changes in Body Mass Index and Risky Eating Behaviors in a group of students through a longitudinal study.

Method

Participants

5,780 students participated, 37.5% were male and 62.5% female, mean age for each measurement times was: 15.1 years ($SD = 1.15$) first measurement, 18.0 years ($SD = 1.13$) second measurement, 22.1 years ($SD = 1.16$) last measurement.

Measures

Weight and height of each student was measured to then calculate the Body Mass Index (BMI) based on the proposal of the World Health Organization (WHO, 2010). Risk Eating Behavior (REB), was evaluated with seven indicators that measure the presence or absence of such things as: the use of laxatives, vomiting after eating, exercising two hours a day, stopping eating for a day or more, use of pills or diuretics, being on more than two diets.

Procedure

The information was obtained in a previous session at the beginning of the semester for each of the three events analyzed for the case of the first two applications, they were carried out on the admission to high school level and later in the admission to higher level, for the third measurement, it took place when students were in their fourth year of Bachelor. The application of the questionnaire was conducted in group sessions in the different facilities campuses of the University with the support of trained personnel in the handling of the instrument so that they could clarify questions that arise during the implementation

Results

To determine the distribution of participants by level of BMI in each measurements, frequency analysis by sex were carried out (Table 1).

Table 1. Distribution of participants by measuring BMI and sex.

|	Time1		Time 2		Time 3	
	Men %	Women %	Men %	Women %	Men %	Women %
Underweight	1.8	5.4	7.4	8.0	21.8	15.4
Normal weight	59.1	68.1	68.4	70.7	60.6	68.8
Overweight	31.4	20.6	21.6	17.4	13.7	11.9
Obesity	7.7	5.9	2.6	4.0	3.9	3.9

REB frequency analyses by measurement and gender were performed to determine the presence or absence of each of the seven behaviors (Table 2).

Table 2. Distribution of disordered eating by measuring and sex.

	Time1		Time 2		Time 3	
	Men %	Women %	Men %	Women %	Men %	Women %
Laxatives	1.4	4.8	1.2	6.5	1	5.8
Vomited	0.7	2.4	0.8	3.7	0.7	1.5
Exercise more than two hours a day	78.3	59.7	74.1	44.4	62.9	33.9
Stop eating	4.5	14.2	7.5	14.8	6.8	10.9
Pills	1.9	4.3	4.6	9.2	6.8	16.4
Diuretics	2.6	3.6	1.7	6.3	3.4	7.7
Over two diets	26.3	40.8	11	27.3	11.6	27.8

In order to analyze differences in the risk eating behaviors by BMI groups, a one-way analysis of variance was conducted for each of the measurements. For the first measurement, the findings were statistically significant [$F_{(3,1647)} = 2.91$, $p < .05$]. For the second measurement [$F_{(3,1606)} = 0.46$, $p > .05$] and the last measurement ($F_{[3,1726]} = 2.41$, $p > .05$], the results showed no significant differences in terms of risk eating behaviors by BMI group Regarding (Figure 1).

Figure 1. Means for Eating Behaviors Risk (EBR) by BMI group.
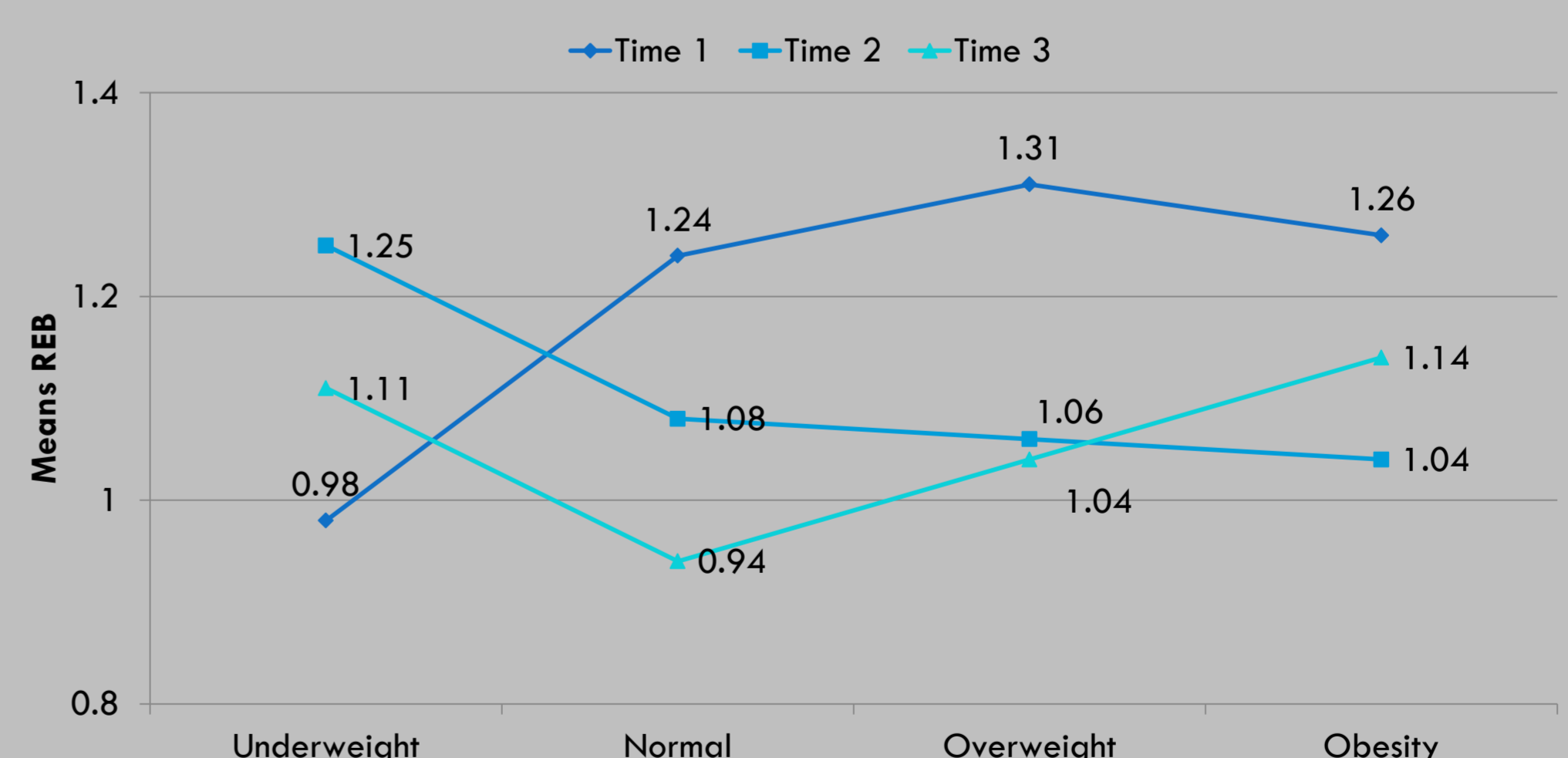
Conclusions

The results showed significant differences in REB by category of BMI only in the first measurement where overweight youth scored higher in contrast to the low weight, however, in the following two measures despite not finding statistically significant differences, it is noteworthy that BMI categories that scored higher in the second and third measurement were the underweight youth, and those with obesity. That is, young people who had a greater number of eating disorders were the ones who were not within a normal weight.