



RESEARCH ARTICLE

LOCAL AND FOREIGN UNIVERSITY STUDENTS: WHO HAS MORE PREVALENCE IN SUFFERING EATING DISORDERS?

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ABSTRACT

Background: Eating disorders are mental disorders characterized by developing pathological behavior against food intake and an obsession with weight control which, nowadays, have a higher prevalence in adolescents and young people attending university. **Objective:** The objective of this study is to compare the prevalence of eating disorders in foreign and local students at the Mexico Valley University in Veracruz. **Methods:** A sample of one hundred students was taken, which were evaluated through a survey containing the SCOFF test, a validated test for eating disorders screening. Within these surveys, the study variables were sex, type of student (foreign or local) and the five questions corresponding to the test. **Results:** The population that includes foreign students is the one with the highest prevalence of eating disorders, obtaining that, for each local student with these disorders, there are two point six outsiders with the same condition. **Conclusions:** The prevalence of this type of disorders is higher in those students belonging to the Mexico Valley University in Veracruz who are foreign compared to those considered local. The reason for this higher prevalence in this type of students should be explored more thoroughly in future research.

INTRODUCTION

Eating disorders (ED) are mental disorders with a complex etiology, often linked to sociocultural and family factors (pressure for physical appearance and poor communication)(1-3); biological (the action of neurotransmitters)(4); gender (higher risk in women); school stress and changes in eating habits during the university stage(5-8); and overwhelming events such as sexual and / or physical abuse during childhood as well as disapproving comments about your physique. Frequently it is during adolescence when the precedents of eating disorders begin; however, nowadays it is more common for these disorders to begin in childhood (9) and adulthood (10). Eating disorders can be classified mainly into the following three categories: anorexia nervosa (AN), bulimia nervosa (BN) and binge eating disorder.(11)(12). People who suffer from these disorders have a harmful desire to achieve a "perfect" body, so they constantly resort to compensatory behaviors. These actions are usually observed mainly in patients with BN, where vomiting is induced or laxated after binge episodes, both are the most commonly used tactics (90%) in this disorder (13) and over time it becomes serious complications.

The most dangerous clinical complication is a serious lack of control of electrolytes (severe levels of hypokalemia) and acid bases (metabolic acidosis) produced by these purgative practices linked to mortality(14)(15), other anomalies are: dental erosion (16), difficulty swallowing and even esophageal cancer (17) (due to the repetitive reflux with gastric acid); and growth of parathyroid glands. With respect to AN, it is known as the psychiatric disease with the highest mortality rate(18) and it is attributed to the large number of alterations that can lead to it involving almost all systems of the human organism. Extreme weight loss and malnutrition are the main causes of serious problems in these patients, as well as abnormalities in the gastrointestinal system that can cause perforation in the stomach if not detected in time (19). Sudden cardiac death, along with suicide, is 60% of causes of death in AN. On the other hand, the functions of the respiratory system also seem to show negative alterations, there are data that a collapse in the lungs can occur (20). As the AN progresses, alterations in blood cells may occur; Anemia can be observed in 40% of patients, leukopenia in 30% and approximately 10% of thrombocytopenia (21) and a higher incidence of fractures even in adolescents (22). Amenorrhea is very common in these women, however, it can be resumed when more than 90% of ideal weight is reached (23). Hypoglycemia is an alarming sign that indicates a negative prognosis (24) and other neurological alterations (cerebral atrophy) and dermatological. For all these situations it is so important to emphasize the prevention, detection, and treatment of this type of disorders in time, since the consequences can be serious, and the

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prevalence rates are increasing. It is estimated that 9.8% of women and 1.2% of men in Spain suffer from eating disorders (25). Likewise, in Mexico it has been declared that university men and women report a disagreement with their figure and body weight, as well as a pathological concern prompted by publicity and perfection(26). Because the specificity of the etiology of these disorders is quite limited, even when it is known about their condition in young university adults, This study focused on the analysis of students from Mexico Valley University in Veracruz (UVM Veracruz), taking into consideration whether they were local or foreign, this in order to find within the results, who have a higher prevalence of having a risk of suffering from eating disorders, or if said risk is similar in both groups of students.

MATERIAL AND METHODS

Study population: The study consisted of a total population of 100 students belonging to the Mexico Valley University in Veracruz, in an age range of 19-25 years.50% of this population was made up of local students and the rest by those students considered as foreign. For the realization of this study, the student belonging to or relative to a place, territory, country that is located in the same place as his place of study site was considered as a local student and as a foreign student to those who come from another city, state or country other than the site that their place of study or is located > 30 km away from it and that seeks the possibilities of their growth as a person and student.

ED risk screening test: The students were evaluated by means of a survey that contained the SCOFF questionnaire (Table) a validated test for TCA screening, since it can be used with ease and speed, it also provides significant sensitivity and a permissible false-positive rate (27)(28). In addition, to the questions pertaining to the SCOFF questionnaire, variables such as sex and type of student (foreign or local) were added to the surveys.

Statistical analysis: The statistical test of qualitative Chi-square variables ($\alpha = 0.05$) was used to analyze the results obtained in the surveys, as well as the ratio and ratio indicator (29)(30). The test was used for the purpose of verifying or refuting our initial hypothesis which formulated that foreign type of student would be those with the highest prevalence to be a probable case of these disorders, and the indicator was used to identify how many foreign students have this prevalence for each local student surveyed.

RESULTS

Study population: There was a predominance of the female sex with a percentage of 67% and one of 33% of the male sex in the total population surveyed (n = 100). Within the population of local students (n = 50) a percentage of 62% of women and one of 38% of men were surveyed and in the population of foreign students (n = 50) 72% women were 28% of men.

Cases for Eating Disorders detected: Taking into account the total number of respondents (n = 100), those who did not present a ED were 64% compared to those who presented it that were 36% identifying 26% cases of risk of ED in foreigners and 10% in local. And the prevalence of risk of ED was higher for women in both.

Table 1. The SCOFF questionnaire

The Scoff questionnaire		Yes	No
1	Do you make yourself sick because you feel uncomfortably full?		
2	Do you worry that you have lots control over how much you eat?		
3	Have you recently lost more than one stone (14 lb.) in a 3-month period?		
4	Do you believe yourself to be fat when others say you are too thin?		
5	Would you say that food dominates your life?		

Figure I. Foreign and local Students with/without ED

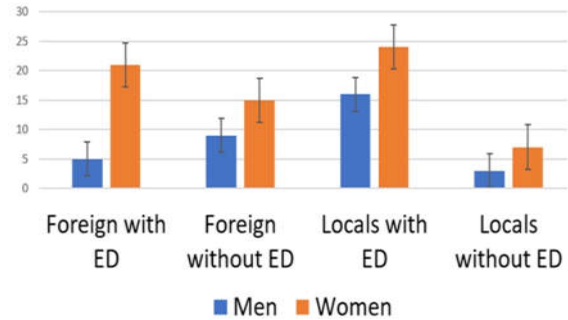


Figure 1. Total of the study population. The graph divides them depending on their sex, the kind of student they were (foreign or local) and their diagnosis over the detection of ED

For every 10 students with ED 7 are women. For every 26 foreigners with ED 21 are women (Figure I) the value of the chi-square test to assess whether the answers are real in both groups was $p = <0.000$. The probability that most participants with eating disorders were foreign was $p = <0.000$. The population that includes foreign students is the one with the highest prevalence of eating disorders, obtaining that, for each local student with these disorders, there are 2.6 foreign in this same condition.

DISCUSSION

The prevalence of eating disorders is higher in foreign students, being more frequent in women than in men for both groups. This can be derived from various factors such as the time they have to do each of their activities throughout the day, their emotional state, school and socioeconomic situations, to name a few. No statistical evidence was found that participants gave random answers. The probability that a foreigner has an ED is statistically the same as not having it, while for a local student there is a greater probability of not having it. It is recommended to give greater multidisciplinary attention (medical, nutritional, psychological) to foreign students due to their high vulnerability compared to local students, and thus prevent and / or treat possible risk situations that trigger eating disorders. It is recommended to continue with several lines of research on foreign students that allow clarifying risk factors for the development of an ED.

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¹*Whit two or more "Yes" answers to all five questions provides 100% sensitivity for ED such as anorexia and bulimia, separately and combined. However, a professional in the detection and treatment for ED will be still needed.

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Glossary

AN: Anorexia Nervosa

BN: Bulimia Nervosa

ED: Eating disorders

SCOFF: The letters in the full acronym are taken from key words in the questions: Sick, Control, One stone (14 lbs/6.5 kg), Fat, Food.

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