



Anxiety, Depression and risks of the Eating Disorder in Ecuadorian Adolescent Women

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Abstract

Background: The present investigation counted on a non-experimental transverse design with a type of descriptive correlational study. Its objective was to determine the relationship between anxiety and depression factors and the risks of anorexia nervosa and bulimia nervosa; also know if the age is related to the risk of suffering from anorexia nervosa and bulimia nervosa. Methods: The population was confirmed by an equiprobabilistic sample of $n = 190$ women from 11 to 18 years of age ($M = 14.11$, $SD = 1.73$) of the "Particular Educative Catholic Cathedra de Cuenca" selected by a stratified monoethapic conglomerate sampling design using the Epidat 4.2 software. The instruments used were the Food Attitude Test (EAT-40) and the Goldberg Anxiety and Depression Test. The data were analyzed in the statistical package SPSS 24.0. Results: The results show that there is no statistically significant association between the risks of anorexia and bulimia nervosa with anxiety and depression factors, as well as age.

Keywords: Eating disorder; anxiety; depression

Introduction

The Eating Disorders (ED) are mental afflictions that are identified by problems in food intake, or behaviors related to weight control [1]. These have always existed, however, in recent years they have had an increase in their prevalence, there being a greater increase in anorexia nervosa and bulimia nervosa [2]. Adolescence is a topic of great importance and of transcendental interest in our society, because in this stage of life is where the greatest number of psychosocial difficulties afflict this population group [3]. [4] attached that as a consequence of this process more intense behaviors (excessive exercise and diets) and obsessive (body image) are generated in many of the adolescents, especially in women. Recent studies have shown that eating disorders are linked to anxiety and depression, where researchers such as [5] state that anxiety arises from the exaggerated apprehension of body image, thus promoting a phobia the overweight. Depression occurs in a general way in bulimia, the so-called binge eating that forges vomiting and purging, generate here the feelings of guilt and sadness that affect individuals [1]. The ED are mental pathologies that are characterized by serious eating problems [6] generated by changes in behavior and concern for weight that cause repercussions on a physical, psychological and psychopathological level in adolescents who suffer from it, becoming a problem social and clinical [7]. According to [1] the ED are complicated situations that can be

developed by different factors, among which we have personal factors (problems of low self-esteem, perfectionism, dissatisfaction with weight and body shape, in addition to problems of sexual abuse, traumatic events and finally use of chronic diets), family (overprotection of parents, lack of limits, family dysfunctionality, emotional abuse, history of anorexia or bulimia), and sociocultural (ideals of beauty, and negative ideas about weight and body shape). The ED represent the third most chronic disease in the world, epidemiological data indicate that there is a higher incidence in young women with a percentage of 90% - 95% and in men with 1% -10% being more frequent during adolescence in ages average of 14 to 17 years old [6]. According to Erickson 1968, puberty is defined as a time of crisis due to conflicts that arise in previous stages [8]. From these evidences [9] state that adolescence is considered a period of insecurity in the subsistence of individuals, one of them of greater occurrence are the diseases of biopsychosocial origin, specifically the ED. The concept of body image arises through the idea of constitution of corporality, because the body proportionally constitutes the personality as the social order, functioning as a means of identifying its culture, its norms and its limits [10]. Among the types of ED with the highest priority in public health care are Anorexia Nervosa (AN) and Bulimia Nervosa (BN), however, within this pathology is not less important TCA not specified (TANE) [11].

In relation to these implications, the authors [12] state that AN is a serious mental illness that is determined by an extreme fear of fattening, as well as by an intense search to lose weight through extreme procedures such as prohibitive diets, excessive physical exercise, control of calories ingested, purgative behaviors through self-induction to vomit and the intake of laxatives. On the other hand in what refers to the BN is characterized by the individual ingests large amounts of food in a short period of time thus producing binge eating, accompanied by inappropriate compensatory behaviors such as voluntary vomiting and use of laxatives to compensate for the robbery, as well as altered emotional processes such as anxiety and depression [12]. Coupled with the above, anxiety is a disorder of emotions that is expressed in greater proportion at present, which is characterized by the presence of great restlessness, acute excitement and widespread insecurity [13]. On the other hand, depression is a serious clinical disease that is determined by the appearance of excessive melancholy, feelings of guilt, low self-esteem, loss of pleasure due to activities, negative perception of the future, sleep disorders, lack of concentration and fatigue [13]. Anxiety is a habitual peculiarity of the individuals that suffer ED, because this is related to symptoms that arise from the fruit of the restlessness of their body and the corporal image use of erroneous diets, bingeing's and purges [6]. which creates a fear of obesity which produces a prohibition of drastic food intake, a peculiarity that generates anorexic disorder [14]. In AN, anxiety arises when the patient resists feeding and in the same way when the obsession is presented by having a perfect body, which no person has, which affects little by little, preventing them from leading a normal life [1]. Additionally, it was recognized that anxiety is not only an element that generates food pathology in individuals with eating disorders, but also intervenes as an intermediary factor in the relationship of perfectionism [5]. In relation to depression, this disorder is generated more in the Anorexia and Nervous Bulimia, the reason is that it is influenced by body dissatisfaction and is at the same time by the IMC [6]. Knowing how to distinguish between a depression and eating disorder is very important, because the symptoms and signs are related; Regarding this reciprocity, studies show that the depressive state is observed more effectively in individuals who manifest eating disorders, thus generating characteristics similar to major depression [15]. Research indicates that the higher the score in the BMI or the apperception of being obese, the higher the grade score that occurs in depression, in which case these variables would be predictors of this pathology [6]. In addition, studies indicate that the appearance of depression in obesity can generate other ED such as bulimia or over-ingestion [16]. The thought of an ideal and slender body has been influenced to a large extent by technologies and society itself whose factors have a severe impact on adolescence, especially on women who are the most vulnerable, because it is an age of change and crisis Initial that disconcert the mind of this population group of diverse ages and socioeconomic levels [15]. Epidemiological studies show that in recent years, eating disorders have increased significantly, affecting women between 13 and 17 years of age, showing an estimate of 0.5% to 3.7% with Anorexia Nervosa and 1, 1% to 4.2% suffer Bulimia Nervosa, which forge a fear of fattening and a distortion of

body perception [17] relating in this way to emotional states such as depression and anxiety [10]. As a result, this background shows that women with Anorexia Nervosa are continually anxious in the case not only of their silhouette and weight, but also because of their nutrition [6]. As for depression, this is related to the increase in food, evidencing in this way that obese women experience greater physical concern, and more binge episodes are generated, which indicates that emotions can manifest themselves in the act of the vehement intake [18]. According to these investigations, we have seen the need to perform an investigation whose objective is to know the relationship between anxiety and depression factors with the risks of anorexia nervosa and bulimia nervosa; also know if the age is related to the risk of suffering from anorexia nervosa and bulimia nervosa in women of 11 and 17 years of the Catholic Special Education Unit of Cuenca.

Materials and Methods

The present research with a quantitative approach, had a non-experimental transversal design, with a type of descriptive study. The population was made up of female adolescents students from 11 to 18 years ($M = 14.11$, $SD = 1.73$) of the secondary school Particular Educative Catholic of Cuenca of Ecuador, by a sample equiprobabilística with a sampling selection by stratified monoetherapeutic conglomerates of $n = 190$ per sample size formula, determined by Epidat software version 4.2, a program for epidemiological and statistical analysis created by the Public Health Division of the Consellería de Sanidade in association with the Pan American Health Organization (PAHO-WHO), the level of confidence was 95%, a design effect of 1.0 and an absolute error of 5%. The instruments used were: Food Attitude Test (EAT - 40) with a Cronbach's alpha of 0.93, a self-applied instrument of 40 items (EAT-40) valued on a Likert scale of 6 points, ranging from never to always the point of cut is 30 in a score range of 0 to 120, is used for the evaluation of anorexia nervosa and bulimia nervosa [19]. The Goldberg Anxiety and Depression Test has a Cronbach's alpha of 0.79 for the anxiety scale and 0.86 for the depression scale, this instrument is composed of two subscales for both anxiety and depression, both scales have 9 questions. The last 5 questions of each scale are only formulated if there are positive answers to the first 4 questions, which are obligatory [20]. The procedure was carried out after the corresponding permissions by the academic direction of the secondary school, after that the parents were summoned to a meeting indicating the purposes of the investigation, mentioning the privacy in the personal data of each participant in the study, followed by the signed authorization of the informed consent and informed consent by the adolescents. The analysis of the data was carried out using the statistical package for social sciences in its initials SPSS version 24.0. The tests and statistical tests that were carried out for the fulfillment of the objectives in the bivariate analysis was the chi-square test of Pearson to analyze the differences between the categorical variables, as well as Fisher's exact test to analyze the differences between the variables. variables, whose expected value was <5 . Similarly, the student's t test worked to quantify the association between the quantitative variable and the categorical variable. The ethical guidelines for research with

human beings were followed, costing the authorization AOTG2-B, issued by the research department of the Catholic University of Cuenca for Ecuador.

Results

A moderately high percentage of absence of anxiety without risk of anorexia nervosa with possible anxiety without risk is determined (95.7% vs. 92.9%). On the other hand, there is a low percentage at risk of anorexia nervosa and similar values between absence of anxiety and possible anxiety (4.3% vs. 7.1%), (RM 1.70, 95% CI 0.48-5.98, p = .41), The estimator used was Pearson Square chi χ^2 (1) = .68, p = .41, which shows that the association is not statistically significant Table 1. Following this line, a high percentage was obtained in the absence of depression without risk of anorexia nervosa, compared to possible depression with low risk (97.6% vs. 93.2%). To this, there is a low percentage at risk of anorexia nervosa and similar values between depressive absence and possible depression (2.4% vs. 6.8%), (RM 2.97, 95% CI 0.37-23.90, p = .46), the estimator used was Fisher’s exact test, p = .46, which shows that the association is not statistically significant Table 2. Regarding

bulimia nervosa without risk, a similar percentage of absence of anxiety and possible anxiety was obtained (94.6% vs. 94.9%). And between risk of bulimia nervosa similar values were also presented in the absence of anxiety and possible anxiety (5.4% vs. 5.1%), (RM 0.94, 95% CI 0.26-3.34, p = 1.0), the estimator used was the exact test Fisher, p = 1.0, an association is not statistically significant Table 3. And finally, bulimia nervosa without risk presents an equal percentage in the absence of depression and possible depression (95.2% vs. 94.6%); likewise, similar percentages between the risk of bulimia nervosa with the absence of depression and possible depression (4.8% vs. 5.4%), (RM 1.14, 95% CI 0.23-5.60, p = 1.0). The estimator used to meet the objective was Fisher’s exact test, p = 1.0 which was not statistically significant (Tables 4-8). On the other hand, while fulfilling the objective of knowing if the data obtained from anorexia nervosa and bulimia nervosa in the sample investigated are related to age, it was found that there are no statistically significant differences between the values of eating disorders with age. , both for anorexia nervosa (t (188) = -.43, ns), and for bulimia nervosa (t (188) = 1.61, ns). The statistics of the groups are mentioned in tables five and seven, as well as the coefficients of the estimator in tables six and eight.

Table 1: Crossed table of anorexia nervosa and anxiety of adolescent women of the Particular Educative Catholica Cuenca.

			Anxiety		
			Absence of anxiety	Possible anxiety	Total
Anorexia nervosa	Risk free	Count	88	91	179
		Expected count	86.7	92.3	179
		% within Anxiety	95.70%	92.90%	94.20%
	Risk	Count	4	7	11
		Expected count	5.3	5.7	11
		% within Anxiety	4.30%	7.10%	5.80%
	Total	Count	92	98	190
		Expected count	92	98	190
		% within Anxiety	100.00%	100.00%	100.00%

Table 2: Crossed table of anorexia nervosa and depression of adolescent women of the Particular Educative Catholica Cuenca.

			Depression		
			Absence of depression	Possible depression	Total
Anorexia nervosa	Risk free	Count	41	138	179
		Expected count	39.6	139.4	179
		% within Depression	97.60%	93.20%	94.20%
	Risk	Count	1	10	11
		Expected count	2.4	8.6	11
		% within Depression	2.40%	6.80%	5.80%
	Total	Count	42	148	190
		Expected count	42	148	190
		% within Depression	100.00%	100.00%	100.00%

Table 3: Crossed table of bulimia nervosa and anxiety of adolescent women of the Particular Educative Catholica Cuenca.

			Anxiety		
			Absence of anxiety	Possible anxiety	Total
Bulimia nervosa	Risk free	Count	87	93	180
		Expected count	87.2	92.8	180
		% within Anxiety	94.60%	94.90%	94.70%
	Risk	Count	5	5	10
		Expected count	4.8	5.2	10
		% within Anxiety	5.40%	5.10%	5.30%
	Total	Count	92	98	190
		Expected count	92	98	190
		% within Anxiety	100.00%	100.00%	100.00%

Table 4: Crossed table of bulimia nervosa and depression of adolescent women of the Particular Educative Catholica Cuenca.

			Depression		
			Absence of depression	Possible depression	Total
Bulimia nervosa	Risk free	Count	40	140	180
		Expected count	39.8	140.2	180
		% within Depression	95.20%	94.60%	94.70%
	Risk	Count	2	8	10
		Expected count	2.2	7.8	10
		% within Depression	4.80%	5.40%	5.30%
	Total	Count	42	148	190
		Recuento esperado	42	148	190
		% within Depression	100.00%	100.00%	100.00%

Table 5: Anorexia nervosa, adolescent women of the Particular Educative Catholica Cuenca.

	Anorexia nervosa	N	Mean	Standard deviation	Standard error mean
Age	Risk free	179	14.1	1.734	0.13
	Risk	11	14.33	1.716	0.517

Table 6: Test t for independent samples anorexia nervosa and age of adolescent women of the Particular Educative Catholica Cuenca.

	Test of Levene	T test for equality of means								
		F	Sig.	t	gl	Sig. (bilateral)	Difference of means	Standard error difference	95% confidence interval of the difference	
									lower	Higher
Age	Equal variances are assumed	0.008	0.931	-0.43	188	0.668	-0.231	0.538	-1.293	0.831
	Equal variances are not assumed			-43.30%	11.291	0.673	-0.231	0.533	-1.402	0.939

Table 7: Bulimia nervosa, adolescent women of the Particular Educative Catholica Cuenca.

	Bulimia nervosa	N	Mean	Standard deviation	Standard error mean
Age	Risk free	180	14.16	1.717	0.128
	Risk	10	13.26	1.807	0.571



Table 8: Test t for independent samples bulimia nervosa and age of adolescent women of the Particular Educative Catholica Cuenca.

		Test of Levene	T test for equality of means							
		F	Sig.	t	gl	Sig. (bilateral)	Diferencia de medias	Difference of means	95% confidence interval of the difference	
								lower	Higher	
Age	Equal variances are assumed	0.01	0.922	1.614	188	0.108	0.903	0.559	-0.201	2.006
	Equal variances are not assumed			1.542	9.925	0.154	0.903	0.586	-0.403	2.209

Discussion

Through research conducted in the Particular Catholic Unit of Cuenca, Ecuador, valuable information was obtained because the results reflect that in the Ecuadorian adolescent population, eating disorders are not related to emotional factors, as well as the age of the participants do not act as an influential factor for the development of these, however it is possible that the percentages found may be due to the fact that the students are in the beginning period of classes, so they do not exhibit during periods of stress or emotional changes, as it is usually suffered at the end of the academic cycle in exam times, together with it, the results obtained in this research are different from other studies conducted in European countries, where it is determined that anxiety is one of the components of risk for the appearance of eating disorders in women of average age of 18 years [21], these may have a relationship with the risk of suffering from anorexia and bulimia nervosa [5]. Likewise, another study showed that adolescents between 12 and 17 years of age who show depression manifest predispositions to the intense application of diets, excessive food intake and weight control [18]. Therefore, it is said that adolescence in women is a period characterized by notable changes both physically and mentally, it is a stage of life where a greater number of biopsychosocial difficulties are generated, the same ones that are found affected with idealized opinions about attractiveness and physical beauty, whose components favor the appearance of eating disorders, which may be related to pathologies such as anxiety and depression due to exaggerated perception of body image and feelings of guilt and sadness that occur when Large amounts of food are ingested. In relation to the risk factors of eating disorders, these are related to chronic diets and concern for weight and food, this is undoubtedly due to the stereotypes of beauty and perfect body spread in the 21st century by technologies and the same society. The results in proportion to the levels of anxiety and depression show that the young women of the researched group do not have a tendency to suffer from these emotional disorders, this may be influenced by biopsychosocial factors or the pressure of the educational environment that greatly affected the percentages. The research showed that there is no association that determines that anxiety and depression are related to eating disorders within the educational establishment, however in countries like Spain and Mexico, explorations affirm that these emotional disorders can affect the anorexia and bulimia nervosa. The complication that arose in the study was the lack of availability of the time given by

the teachers in the application of the psychometric scales to the investigated participants.

Conclusion

The research showed that there is no association that determines that anxiety and depression are related to eating disorders within the educational establishment, however in countries like Spain and Mexico, explorations affirm that these emotional disorders can affect the anorexia and bulimia nervosa. The complication that arose in the study was the lack of availability of the time given by the teachers in the application of the psychometric scales to the investigated participants.

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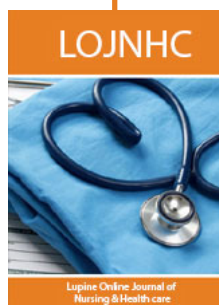


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