

Mental conditions and eating disorders in patients in primary care, Ibarra, Ecuador

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ABSTRACT

In Ecuador, thirty out of every hundred people suffer from a mental health problem, with depression being the most common, followed by anxiety. This study aimed to explore the relationship between eating disorders (EDs) and mental health conditions in patients seeking primary care for morbidity in Ibarra, Ecuador, between March and June 2023. A total of 1,707 subjects over 18 years of age participated in this study; 66% were women, and 34% were men. The "Global Mental Health Assessment Tool - Primary Care" questionnaire was used to identify mental health problems. A multivariate analysis was conducted to examine the association between the variables, and a binary logistic regression model was used to assess the risk factors for EDs. The results showed that 57.3% of the participants were young adults (20-39 years old), and 12.6% of the population had an ED. The most common mental health conditions were anxiety (38.7%), depression (34.9%), and stress (27.9%). EDs were statistically associated with sex, with women being more affected, and with age, with young adults (20-39 years old) being the most affected. In conclusion, depression, stress, and anxiety are determinants of EDs in this population, with depression showing the highest risk of incidence, followed by stress and anxiety.

Keywords: Eating disorders, mental disorders, adult, primary care

INTRODUCTION

Mental illnesses cover a broad spectrum of disorders, including mild to moderate anxiety, depression, alcohol and drug use disorders, as well as bipolar disorder and schizophrenia ^[1]. According to recent studies, the burden of mental health problems has increased. Suicide is the second leading cause of death among people aged 15 to 29 years, and the annual global cost of depression and anxiety is estimated at 1 trillion dollars ^[2].

The Pan American Health Organization [PAHO] estimates that four out of every hundred people in the world suffer from a depressive disorder and three out of every hundred from anxiety ^[3]. In Ecuador, thirty out of every hundred people suffer from some mental health problem, with depression being the most common,

followed by anxiety. Despite the strengthening of primary care, with the implementation of the Comprehensive Health Care Model (MAIS) and the constitution of public health teams, it is evident that depression and anxiety continue to affect women more frequently, occurring three times more than in men ^[4]. In addition to this, people with psychiatric disorders have a higher risk of suffering from eating disorders, and those with eating disorders have a higher risk of suffering from other psychiatric disorders ^[5].

Eating disorders also arise from impulsive behaviors, poor regulation of emotions, a history of physical and emotional abuse in childhood, pain tolerance, and interpersonal fears such as the feeling of burden ^[6]. Mental health disorders and eating disorders can have a significant impact on the lifespan of the individual. They can cause problems in relationships, work, school, and daily life. They can also increase the risk of physical health problems, such as heart disease, diabetes, and sleep disorders. It has been observed that patients with signs of depression, anxiety, and stress present symptoms such as abdominal pain, nausea, and decreased appetite, which alters their eating patterns and behaviors ^[7].

According to Kolar and Mebarak ^[8], since 2020, few studies have been published on the epidemiology of eating disorders in Latin America. One study reported, in Latin American countries, such as Mexico, Brazil, Argentina, Chile, Peru, and Uruguay, a prevalence of 38% in clinical samples, and for non-clinical samples, 15%, similar to those found in other regions ^[9]. Although the importance of eating disorders in people with mental illness has been recognized, in Ecuador, there are no exact figures for these disorders.

Because eating disorders differ somewhat from other psychiatric disorders, for example, in terms of age of onset, gender distribution, and increased mortality ^[10], and because there is a lack of comparative analysis of the various mental health problems and their associations with eating disorders; This work aimed to explore the association between eating disorders and mental health conditions in patients seeking morbidity care at primary health care units in Ibarra Canton, Ecuador. Addressing this gap in current research could help researchers and clinicians develop a set of educational interventions to mitigate the impact of sociocultural factors on eating disorders, as well as implement strategies that promote education about body image, healthy eating, and eating disorders. Mental health can empower young people, fostering a healthier and more aware environment in the community that has the most significant impact on reducing mental health comorbidity in the emergency department.

MATERIAL AND METHODS

This is a quantitative, descriptive study based on a cross-sectional survey. The study was conducted on 1,707 people who came to see a doctor for morbidity at the primary health care units of the Ibarra canton (Health Subcenters of Caranqui, San Antonio, Alpachaca, La Esperanza, El Priorato, La Primavera and Health Center No. 1 of Ibarra) in the current year (2023). The participants in this study were invited to participate, explaining the scope, confidentiality of the data, and the right to withdraw from the study. Before applying the instrument, all patients gave informed consent to participate in the study.

Inclusion criteria

People over eighteen years of age who went to the Primary Care Centers and who expressed their willingness, in writing, to participate in the study were included in this work. Therefore, those who did not want to participate or voluntarily withdrew after accepting were excluded.

Application of the instrument

The "Global Mental Health Assessment Tool-Primary Care" (GMHAT/PC) questionnaire was used to obtain the information. The GMHAT/PC is a computerized clinical assessment tool developed to assess and identify mental health problems in primary care. The instrument consists of a series of questions that lead to a

comprehensive but rapid assessment of the mental state that focuses sequentially on the following symptoms or problems: worries; anxiety and panic attacks; concentration; depressed mood, including risk of suicide; sleep; appetite; eating disorders; hypochondria; obsessions and compulsions; phobia; mania/hypomania; thought disorder; psychotic symptoms (delusions and hallucinations); disorientation; memory impairment; alcohol abuse; drug abuse; personality problems; stressors. There are one or two screening questions for each primary clinical disorder. At the end of the interview, the instrument gives rating and diagnostic scores [11].

The instrument was applied physically and in person by health personnel adequately trained for this task. Subjects over 18 years of age were interviewed, who attended a general medicine or family medicine consultation due to morbidity at the health units mentioned above for three months (March-June 2023), obtaining 1,707 surveys after purification. For this study, there was no discrimination between the levels of mental conditions that the survey showed. The presence or absence of the same was considered.

Statistical analysis

The characteristics of the sample are presented in numerical values and percentages. A bivariate analysis was performed, using Chi-square tests, to test the association between mental conditions with eating disorders, as well as mental conditions present in patients with factors such as age, gender, and origin. A binary logistic regression model was also constructed and adjusted for possible predictive factors of eating disorders in the patients studied. This was followed by an omnibus test of the coefficients of said model, which allowed the risk of the factors that influenced eating disorders to be assessed.

Subsequently, the information obtained was organized in tables for interpretation. The statistical data analysis was performed with the SPSS statistical package for Windows (version 25.0, Chicago, IL, USA), accepting a significance level of $p < 0.05$.

RESULTS

The study population was 1707 people, of which 66.0% were women and 34.0% were men. 57.3% were young adults between 20 and 39 years old, and 38.9% were adults from 40 to 64 years old (classified according to the age groups considered by the Comprehensive Health Care Model (MAIS) [11]. The Health Operational Unit No. 1 of the city of Ibarra had the highest attendance, which was attended by 35% of the study population, 598 patients, by spontaneous demand for a general medicine consultation (Table 1).

		N (1707)	%
Gender	Female	1126	66,0
	Male	581	34,0
Age ranges	Young Adult	978	57,3
	Adult	664	38,9
	Senior Adult	65	3,8
Health Operational Unit	Centro de Salud de Ibarra	598	35,0
	Centro de Salud Alpachaca	229	13,4
	Centro de Salud La Esperanza	164	9,6
	Centro de Salud La Primavera	40	2,3
	Centro de Salud El Priorato	250	14,6
	Centro de Salud Caranqui	184	10,8
	Centro de Salud San Antonio	242	14,2

Table 1. Sociodemographic characteristics of the population that attended the primary care service, Ibarra, Ecuador, 2023.

The prevalence of the primary mental disorders found in this study was anxiety (38.7%), followed by depression (34.9%). The GMHAT/PC survey determined that eating disorders occurred in 12.6% of the study population. A statistically significant association was found between eating disorders and sex ($X^2= 7.832$; $p< 0.05$), with women being the most affected. Likewise, a statistically significant association was found between eating disorders and age groups ($X^2= 8.21$; $p<0.05$), determining that young adults aged 20 to 39 were the ones who most presented these disorders (Table 2). Regarding depression, stress, and anxiety, the chi-square calculation shows the significant association of these mental conditions with eating disorders ($X^2= 128.53$; $X^2= 101.33$, $X^2= 82.75$; $p< 0.05$; respectively (Table 2).

The predictive analysis of the determining factors in the development of eating disorders, proposed in the study, through the application of binary logistic regression, determined that in this population, depression, stress, and anxiety are determinants of eating disorders and, as such, are part of the predictive model. The assessment of the risk of depression, stress, anxiety, and sex in eating disorders in the population studied is shown in Table 3; according to the statistical analysis, the highest risk of incidence is represented by depression (3.026 times more, compared to the other determining factors of the model), followed by stress and anxiety, with a relative risk of 2,330 and 1,804, respectively. It should be noted that sex was not a determining factor as a risk factor for the presence of eating disorders in people with mental illness (Table 3).

Variables dimensions

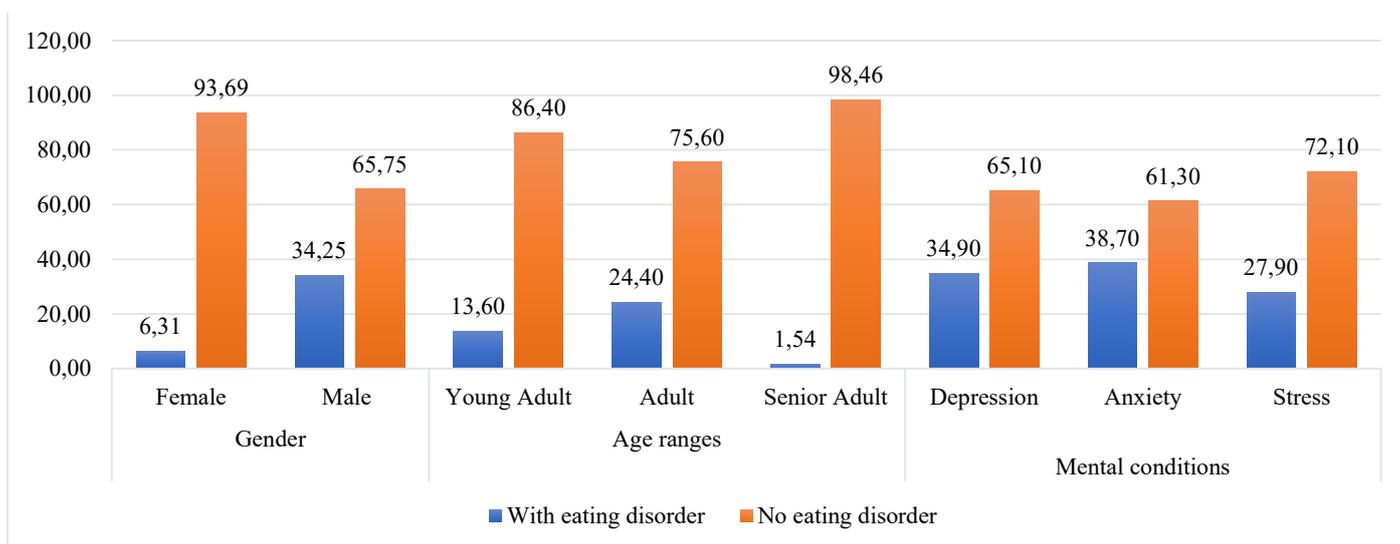


Figure 1. Variables associated with eating disorders and mental disorders in the population that attended the primary care service in Ibarra, Ecuador

Variables in the equation:						
	B	Standard error	Wald	gl	valor P.	Exp (B)
Anxiety	0,590	0,178	10,980	1	0,001	1,804
Sex	-0,301	0,174	2,974	1	0,085	0,740
Stress	0,846	0,166	26,009	1	0,000	2,330
Depression	1,107	0,181	37,524	1	0,000	3,026
Constant	-2,726	0,275	98,226	1	0,000	0,065

a. Specified variables: Anxiety, Sex, Stress, Depression

Table 2. Risk factors related to eating disorders in the adult population who attended primary care centers, Ibarra Ecuador 2023.

DISCUSSION

In this study, the application of the GMHAT/PC revealed a 12.6% prevalence of eating disorders in patients who attended different health units in the city of Ibarra, Ecuador, due to morbidity. This prevalence was similar to that reported by Zila ^[12] in Peru medical students aged 19-25. Although this study included people with a broader age range, it should be noted that the group with the highest prevalence of eating disorders was young adults [20-39 years]. It is documented that late adolescence and early adulthood are considered risk stages for the development of eating disorders. The search marks these stages of life for identity, hormonal changes, and social pressures, which could contribute to vulnerability to eating disorders ^[13, 14].

On the other hand, the gender disparity observed in this study, with a higher prevalence of eating disorders in women, is consistent with the results of previous research that have identified women as the group at most significant risk for developing eating disorders ^[15, 16]. Sociocultural factors and aesthetic pressures could influence this discrepancy; above all, the pressure exerted by advertising and fashion influences the social behavior of women and promotes a type of beauty related to patterns that affect eating behavior ^[17]. However, it should be noted that there are recent reports of an increase in eating disorders in men, especially in athletes from ethnic and sexual minorities ^[18].

The significant association found between eating disorders and mental illnesses demonstrates the complex interaction between mental health and eating behaviors. It has been reported that chronic stress increased the probability of developing eating disorders in young women [21 ±2 years], with the main stressful events that led to the development of eating disorders being family conflicts and changes in eating habits ^[19]. Likewise, a study on adults from the Riobamba, Ecuador, population found that stress was the mental condition that most influenced the adult population to develop TCA ^[20].

The Ibarra Health Center treats most cases of eating disorders with mental conditions; this Operating Unit is located in the urban area of the city of Ibarra, which suggests that people who live in urban areas have a greater tendency to present these disorders probably because in the town more than in rural areas, people are subjected to greater social pressure related to the system of material consumerism that impacts the economic conditions and the general context of the selected population.

Studies indicate that, during the year before the onset of eating disorders, stressful events occurred that frequently preceded the appearance of TCA in the population, determining the existence of severe chronic stress in these patients ^[21]. The Covid-19 pandemic could be considered a stressful event experienced by this population ^[22]. In Ecuador, during the COVID-19 pandemic, there was a negative change in eating habits in the population, which was more noticeable in women and young adults ^[23, 24]. This same population was the most affected in this period by mental illnesses ^[25, 26]. Our results indicate that even today, in the post-pandemic period, this segment of the adult population remains the most vulnerable to suffering from these disorders.

For this reason, it is necessary to update the statistics in Ecuador on these conditions and carry out early detection because they impact individuals' social, health, and work environments, which is why they should be considered a public health problem. The association between eating disorders, gender, age, and mental disorders demonstrates the need for multidisciplinary treatment approaches that address both the physical and psychological aspects of these disorders, which can guide early diagnosis policies to improve the quality of life and well-being of the affected population. The results of this study highlight the need to delve into the practical implications of primary care in the management of eating disorders. Health professionals must adopt specific early detection strategies, such as using validated questionnaires and clear protocols to identify risks. In addition, guidelines should be established for timely referral to specialized services, ensuring a multidisciplinary approach that includes nutritional treatment and psychological support. These actions are essential to improve patient outcomes and reduce the chronicity of these disorders at the first level of care.

CONCLUSIONS

The results of this study highlight the importance of early detection and comprehensive care of eating disorders in patients with mental illness in primary care. The association between eating disorders, gender, age, and cognitive disorders demonstrates the need for multidisciplinary treatment approaches that address both the physical and psychological aspects of these disorders. The article contributes mainly to generating a predictive model of the determining factors of the levels of eating disorders suffered by patients with mental illnesses, where it is established that the factor that most affects eating disorders is depression, followed by stress and anxiety, categorizing the young adult female sex as the group that presents the highest risk of suffering from mental illnesses that affect eating disorders, characterized by factors that contribute to vulnerability, mainly due to hormonal changes, search for identity and social pressure.

Author Contributions: The article involves several key contributions from the participants. Amparito del Rosario Barahona Meneses was responsible for the introduction, methodology, interpretation, and analysis of results, as well as the discussion of statistical reports and presentation of conclusions, highlighting contributions to science. José Fabián Hidrobo Guzmán led the research methodology, information processing, interpretation and statistical analysis, and hypothesis testing, contributing to the final reports. Jacqueline Andrea Pozo Benavides, Rodrigo Roberto Alvear Reascos, and Lola Yesenia Acosta Vinueza shared responsibilities in the survey application, monitoring, and control of data collection, tabulation, and Excel database presentation.

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Institutional Review Board Statement: The study was conducted following the guidelines of the Declaration of Helsinki and was approved by the Ethics Committee of the Faculty of Health Sciences of the Technical University of the North- Ibarra-Ecuador with an approval date of November 14, 2014, by the Honorable University Council.

Informed consent statement: In compliance with ethical and human rights protection regulations, all participants in this study received detailed information about the purpose, procedures, risks, and benefits of the research, ensuring their voluntary and informed participation. "Informed consent was obtained from all subjects who participated in the study." Before starting any procedure related to the study, they will be allowed to ask questions and receive clear and complete answers about the relevant aspects of the research.

Participants were guaranteed that their confidentiality would be strictly respected, protecting their identity and personal data by applicable laws. In addition, they were informed that their participation was completely voluntary and that they could withdraw at any time without affecting their relationship with the researchers or the institution.

This study was approved by the relevant ethics committee, complying with the principles set out in the Declaration of Helsinki and local and international regulations on research involving human subjects. Informed consent was obtained in writing before the inclusion of any participant in the study.

Data Availability Statement: This section details where the data supporting the reported results can be found, including links to publicly archived datasets analyzed or generated during the study. Please see the suggested Data Availability Statements in the "Bionatura Research Data Policies" section at <https://www.revistabionatura.com/policies.html>. You may opt out of this statement if the study did not report any data.

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