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QUALITY OF LIFE AND RISK BEHAVIORS FOR EATING DISORDERS IN UNIVERSITY STUDENTS

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Highlights: (1) Eating disorders harm health and quality of life. (2) Cross-sectional study with 353 health students from southern Brazil. (3) Students at risk for eating disorders had lower quality of life.

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QUALITY OF LIFE AND RISK BEHAVIORS FOR EATING DISORDERS IN UNIVERSITY STUDENTS

ABSTRACT

Eating disorders can lead to numerous health impairments, including poor quality of life. This study aimed to explore the association between quality of life and risk behaviors for eating disorders. A cross-sectional study was conducted with a sample of 353 health sciences university students from southern Brazil. Quality of life was assessed using the WHOQOL-BREF, while risk behaviors for eating disorders were evaluated through the EAT-26. Data analysis included descriptive statistics, non-parametric tests, and Poisson regression. The mean age of the sample was 25.9 ± 8.2 years, with a median (Med) total quality of life score of 66.3 points (interquartile range [IQR]: 58.6–74.0), and a prevalence of poor quality of life of 28.3% (95% Confidence Interval [CI]: 23.6–33.0). A lower quality of life score was observed among students with risk behaviors (Med: 63.0; IQR: 52.9–70.2) compared to those without risk behaviors (Med: 67.3; IQR: 60.6–75.0; p=0.002). After adjustment, university students with risk behaviors for eating disorders had a 79% higher probability of experiencing poor quality of life (Prevalence Ratio [PR] = 1.79; 95% CI: 1.28–2.50; p=0.001) compared to those without risk behaviors. Thus, the findings of this study indicate a poorer quality of life among university students with risk behaviors for eating disorders.

Keywords: quality of life; eating disorders; university students.

INTRODUCTION

Interest in studies on quality of life has increased significantly in recent decades, particularly since the 1980s.[1] Quality of life is a multifactorial concept, encompassing an individual's self-perception across four major domains: (1) physical condition; (2) psychological, emotional, and cognitive well-being; (3) social relationships; and (4) interaction with the surrounding environment.[1] Quality of life is, therefore, a broad, dynamic, and subjective concept that goes beyond symptom control, reduced mortality, or increased life expectancy. Instead, it considers the impact of health status on an individual's ability to live fully.[1] Moreover, quality of life is one of the expected outcomes of public health policies aimed at disease prevention.[1] Thus, improvements in quality of life are anticipated as a positive outcome resulting from the adoption of more effective treatment strategies for patients.[1]

QUALITY OF LIFE AND RISK BEHAVIORS FOR EATING DISORDERS IN UNIVERSITY STUDENTS

Individuals affected by eating disorders may experience a variety of symptoms that require medical attention and pose risks to their physical and mental health, potentially increasing the risks of mortality and suicide.[2, 3] Eating disorders are characterized by persistent disturbances in eating behavior[4], and affect approximately 2% to 4% of the adult population.[2] The primary eating disorders include anorexia nervosa, bulimia nervosa, and binge eating disorder.[4] Risk behaviors for eating disorders, on the other hand, precede the onset of the disorders themselves and are associated with excessive concerns about weight and body shape,[3] abnormal eating habits such as restrictive dieting and fasting, as well as unhealthy weight control practices, including the use of laxatives, weight-loss medications, and self-induced vomiting.[3, 5]

Previous findings suggest a possible association between eating disorders, as well as risk behaviors for eating disorders, and quality of life. A systematic review that included a total of 79 studies aimed at investigating the relationship between health-related quality of life and eating disorders found that, in addition to having a significantly lower quality of life compared to the general population, patients with eating disorders also incurred higher healthcare costs due to high hospitalization rates, outpatient care, and the need for emergency hospital services.[6] Another study that evaluated 40 patients diagnosed with eating disorders hospitalized at the Hospital das Clínicas of the Ribeirão Preto Medical School, University of São Paulo, observed impairments in six of the eight quality of life domains among patients who had higher scores on the risk behavior scale for eating disorders.[7] Moreover, severe and persistent symptoms impact quality of life, with the most affected domain being emotional-affective well-being.[6, 7]

University students can be considered a population at risk for engaging in risk behaviors for eating disorders, as they must cope with various challenges characteristic of early adulthood. These include adapting to new social norms, which require lifestyle changes and adjustments in study organization methods, as well as stress and uncertainties related to career choices, potential financial difficulties, among other factors.[8] Data indicate that the prevalence of risk behaviors for eating disorders among university students in the five regions of Brazil ranges from 23.7% to 30.1%.[5] Previous findings among health sciences university students have reported a prevalence of 12.6% among Turkish students[9] and 17.4% in a meta-analysis including data from 20 countries.[10] Moreover, previous studies also suggest a

potential association between risk behaviors for eating disorders and quality of life among university students, highlighting that those who engage in such behaviors tend to have lower quality of life,[6, 7, 11] including among students in the health sciences.[12]

Thus, based on the considerations, the primary objective of this study was to explore the association between quality of life and risk behaviors for eating disorders among health sciences university students at a private higher education institution located in Serra Gaúcha (Rio Grande do Sul, Brazil).

METHODS

Participants

This is an observational epidemiological study with a cross-sectional design, consisting of a sample of university students of both sexes, aged 18 years or older, enrolled in health sciences programs at a private higher education institution located in Serra Gaúcha (Rio Grande do Sul, Brazil). The institution had a total of 2,898 students enrolled in health sciences programs during the study period (second semester of 2020).

Instruments

A self-administered questionnaire was used, consisting of demographic, socioeconomic, and academic questions, which were developed by the researchers themselves, as well as questions related to two previously validated instruments for assessing quality of life and risk behaviors for eating disorders.

Regarding covariates, demographic, socioeconomic, and academic characteristics were collected. The demographic variables included sex (female, male), age (collected in full years and later categorized into age groups: 18–25 years, 26–35 years, 36–45 years, and 46–60 years), marital status (single, married, divorced), whether the participant lives with a partner (yes, no), whether they live alone (yes, no), monthly family income (categorized as 1–5 minimum wages, 5–10 minimum wages, 10–15 minimum wages, and >15 minimum wages), and the number of courses taken during the semester (collected as a quantitative variable and categorized based on the mean and median values as <4 courses and ≥4 courses).

The main exposure variable in this study, the presence of risk behaviors for eating disorders, was assessed using the EAT-26 (Eating Attitudes Test) instrument, considering its translated and validated version for Brazilian Portuguese.[13] This instrument consists of a total

of 26 questions, with response options on a Likert scale ranging from never to always, generating a total score ranging from zero (0) to seventy-eight (78) points, represented by the sum of the values assigned to each response. A score of 21 points or higher indicates the presence of risk behaviors for eating disorders.[13]

The outcome variable in this study, quality of life, was assessed using the WHOQOL-BREF (World Health Organization Quality of Life Assessment) instrument, in its translated and validated version for Brazilian Portuguese.[14] This instrument consists of a total of 26 questions, covering four domains: Physical (related to physical aspects such as the need for medication and medical treatment, experiences of pain and discomfort, changes in energy levels, fatigue, sleep and rest, as well as mobility and the ability to perform daily life and work activities); Psychological (includes the ability to think, learn, have memory and concentration, as well as spirituality, religion, and personal beliefs, in addition to body image, appearance, and self-esteem); Social relationships (addresses personal relationships, social support, and sexual activity); and Environment (concerns physical safety and security, financial resources, availability and quality of healthcare, as well as opportunities for participation in recreational and leisure activities).[14] Responses follow a Likert scale format, ranging from one (1) to five (5), where higher scores indicate better quality of life.[14] The scoring of the quality of life questionnaire and its domains followed the guidelines originally established by Fleck *et al.*, (2000).[14] First, domain scores were calculated by summing the mean scores of the questions within each domain. Additionally, for domains composed of up to seven questions, scores were only calculated if the number of unanswered questions was fewer than two. For domains with more than seven questions, scores were calculated only if the number of unanswered questions was fewer than three. The resulting scores were then multiplied by four, generating a scale ranging from four (4) to twenty (20) points, and the domain scores were also converted into a final score ranging from zero (0) to one hundred (100) points.[14] Quality of life was also explored dichotomously, classifying individuals with poor quality of life as those scoring below 60 points (cutoff <60) on the final score. This cutoff was determined based on the median identified in the lowest tertile of the sample and previous references on the subject.[15, 16] It is important to note that respondents who left more than six questions unanswered or incorrectly answered (80% of the total questions in the instrument) were excluded from the study.

Data collection

University students enrolled in health sciences programs, specifically in the undergraduate courses of Biomedicine, Physical Education, Nursing, Aesthetics and Cosmetics, Pharmacy, Physiotherapy, Veterinary Medicine, Nutrition, Dentistry, Psychology, and Occupational Therapy, were invited to participate in the study. The inclusion criteria comprised all university students of both sexes, aged 18 years or older. A sample size calculation was conducted using simple random sampling,[17] considering a 95% confidence interval, a 5% margin of error, an effect magnitude of 25%, and a 10% loss percentage, resulting in a required sample size of 340 students.

Data collection was conducted during the months of October, November, and December 2020. The study was announced to university students through dissemination by professors and the academic directories of each course. Subsequently, students received a link to access the questionnaires, which was shared via email by professors and through social media managed by the academic directories. The data collection instrument was made available through an electronic form using the Google Forms® platform. All participating university students read and agreed to the Informed Consent Form, which authorized their participation and the anonymous publication of the results. Additionally, this study was approved by the Research Ethics Committee of Centro Universitário da Serra Gaúcha under opinion number 4.026.278.

Data analysis

Qualitative variables were described using absolute (n) and relative (%) frequencies. The normality of the data was assessed using the Shapiro-Wilk test, which indicated a non-normal distribution. Therefore, quantitative variables were presented using measures of central tendency (median (Med)) and their respective dispersion values (interquartile range (IQR) – 25th and 75th percentiles). The Mann-Whitney U test or the Kruskal-Wallis test with Bonferroni post-hoc analysis were performed, as appropriate, to identify differences in total and domain-specific quality of life scores (outcome) according to the categories of the main exposure variable and covariates.[17] Additionally, Fisher's exact test was used to assess the heterogeneity of proportions of poor quality of life across variable categories.

Unadjusted and adjusted Prevalence Ratios (PR) and their respective 95% confidence intervals (95% CI) were obtained using Poisson regression with robust variance,[18] to assess

the association between risk behaviors for eating disorders and quality of life. In the adjusted analysis, all variables associated with the outcome at $p<0.30$ in the bivariate analysis were considered and included as potential confounding factors. All analyses were conducted using the Statistical Package for the Social Sciences (SPSS), version 18.0, with a significance level set at 5% ($p<0.05$).

RESULTS

A total of 353 university students, with a mean age of 25.9 years (standard deviation = 8.2), agreed to participate in the study and comprised the final sample. Regarding undergraduate programs, the majority were enrolled in Nutrition (25.8%), followed by Nursing (17.3%), Biomedicine (16.4%), Physiotherapy (11.3%), Psychology (10.8%), Dentistry (7.9%), Physical Education (4.8%), Veterinary Medicine (2.8%), Pharmacy (2.3%), Aesthetics and Cosmetics (0.3%), and Occupational Therapy (0.3%), respectively (data not presented in tables). Table 1 presents the general characteristics of the sample. The majority of participants were female (90.4%), aged between 18 and 25 years (65.2%), single (79.3%), and living alone (93.8%). Additionally, most students (63.7%) reported a family income between 1 and 5 minimum wages and were enrolled in four or more courses (56.7%). Regarding risk behavior for eating disorders, its presence was identified in 25.5% of the sample (Table 1).

Table 1. Description of the sample and quality of life score according to demographic, socioeconomic, and behavioral variables among health sciences university students from a higher education institution in southern Brazil. 2020. (n=353).

		Quality of Life (WHOQOL-BREF)			
		Total Score		Cut-off point < 60	
Variables	**n (%)**	**Med (P25–P75)**	**p-value***	**n (%)**	**p-value****
Sex			0.590		0.689
Female	319 (90.4)	66.3 (58.3–74.0)[a]		92 (28.8)	
Male	34 (9.6)	69.2 (60.3–73.3)[a]		8 (23.5)	
Age (years)			0.272		0.214
18 – 25	230 (65.2)	66.3 (57.7–73.3)[a]		68 (29.6)	
26 – 35	75 (21.2)	68.2 (58.6–75.0)[a]		22 (29.3)	
36 – 45	31 (8.8)	68.2 (63.4–78.8)[a]		4 (12.9)	
46 – 60	17 (4.8)	68.2 (55.7–73.5)[a]		6 (35.3)	
Marital status			0.781		0.849
Single	280 (79.3)	66.3 (58.6–74.0)[a]		79 (28.2)	
Married	67 (19.0)	65.4 (59.6–72.1)[a]		20 (29.9)	
Divorced	6 (1.7)	67.3 (62.0–73.1)[a]		1 (16.7)	
Living with a partner			0.282		0.107
No	319 (90.4)	66.3 (58.6–74.0)[a]		86 (27.0)	
Yes	34 (9.6)	64.4 (55.7–71.1)[a]		14 (41.2)	
Living alone			**<0.001**		**<0.001**
No	331 (93.8)	66.3 (59.6–74.0)[a]		85 (25.7)	
Yes	22 (6.2)	55.7 (48.3–66.1)[b]		15 (68.2)	
Monthly family income (MW)			**<0.001**		**<0.001**
1 – 5	225 (63.7)	63.4 (55.7–70.7)[a]		80 (35.6)	
5 – 10	83 (23.5)	70.2 (62.5–75.9)[b]		12 (14.5)	
10 – 15	22 (6.2)	69.7 (59.1–73.5)[ab]		6 (27.3)	
> 15	23 (6.5)	71.1 (66.3–80.7)[b]		2 (8.7)	
Number of courses			**0.042**		0.285
< 4	153 (43.3)	64.4 (56.7–74.0)[a]		48 (31.4)	
≥ 4	200 (56.7)	67.3 (59.6–74.0)[b]		52 (26.0)	
Risk behaviors for eating disorders			**0.002**		**0.001**
Absent	263 (74.5)	67.3 (60.6–75.0)[a]		62 (23.6)	
Present	90 (25.5)	63.0 (52.9–70.2)[b]		38 (42.2)	

Legend: Med – Median. P25 – 25th percentile. P75 – 75th percentile. MW – Minimum Wage. n (%), Absolute and relative frequency. Categorical variables were described by absolute and relative frequency, while continuous numerical variables were described by median and interquartile range (25th and 75th percentiles).
* Mann-Whitney U test or Kruskal-Wallis test with Bonferroni post-hoc analysis was used to identify differences in quality of life scores according to variable categories.
** Fisher's exact test was used to identify heterogeneity of proportions according to variable categories.
ab – Different letters indicate differences between the medians of quality of life. Bold values are statistically significant (p<0.05).

The median total quality of life score was 66.3 points (IQR: 58.6–74.0), with a prevalence of poor quality of life of 28.3% (95% CI: 23.6–33.0). A lower total quality of life score, as well as a higher prevalence of poor quality of life, was observed among university students who reported living alone, having a lower family income, and taking four or fewer courses (Table 1). Regarding the association between quality of life and risk behaviors for eating disorders, a lower total quality of life score was identified among students with risk behaviors (Med: 63.0; IQR: 52.9–70.2) compared to those without risk behaviors (Med: 67.3;

IQR: 60.6–75.0; p=0.002). Similarly, the prevalence of poor quality of life was significantly higher among university students with risk behaviors for eating disorders (42.2%) compared to those without risk behaviors (23.6%) (Table 1).

Regarding the physical, psychological, social relationships, and environmental domains of quality of life, the median scores were 71.4 (IQR: 60.7–78.6), 66.6 (IQR: 54.1–70.8), 66.6 (IQR: 50.0–75.0), and 65.6 (IQR: 56.2–71.9) points, respectively. Table 2 presents the comparisons of quality-of-life scores across its domains according to the explored covariates. A lower physical domain score was observed among those who lived alone, while a lower psychological domain score was found among individuals aged 18 to 25 years, those who lived alone, and those with lower family income. For the social relationship's domain, lower scores were observed among university students who lived alone and those taking fewer than four courses. In the environmental domain, lower scores were observed among those who lived alone, those with lower family income, and those taking fewer than four courses (Table 2). Regarding the association between risk behaviors for eating disorders and quality of life domain scores, a lower quality of life score was observed among those with risk behaviors for eating disorders in the psychological domain (Med: 54.1; IQR: 45.8–66.6 vs. Med: 66.6; IQR: 54.1–70.8; p<0.001) and in the environmental domain (Med: 59.4; IQR: 53.1–71.9 vs. Med: 65.6; IQR: 56.2–71.9; p=0.016) (Table 2).

Table 2. Description of demographic, socioeconomic, and behavioral variables in relation to quality-of-life domains (WHOQOL-BREF) among health sciences university students from a higher education institution in southern Brazil. 2020. (n=353).

Variables	Domain I Physical Med (P25 – P75)	p-value*	Domain II Psychological Med (P25 – P75)	p-value*	Domain III Social Relationship Med (P25 – P75)	p-value*	Domain IV Environment Med (P25 – P75)	p-value*
Sex		0.557		0.385		0.317		0.886
Female	71.4 (60.7–78.5)[a]		66.6 (54.1–70.8)[a]		66.6 (50.0–75.0)[a]		65.6 (56.2–71.8)[a]	
Male	71.4 (67.8–78.5)[a]		62.5 (54.1–79.1)[a]		66.6 (50.0–75.0)[a]		65.6 (59.3–71.8)[a]	
Age (years)		0.094		**0.001**		0.559		0.787
18 – 25	71.3 (60.7–78.6)[a]		62.5 (50.0–70.8)[a]		66.6 (50.0–75.0)[a]		62.5 (56.2–71.8)[a]	
26 – 35	75.0 (64.3–82.1)[a]		62.5 (50.0–75.0)[ab]		66.6 (50.0–75.0)[a]		65.6 (56.2–71.8)[a]	
36 – 45	75.0 (64.3–82.1)[a]		70.8 (66.6–75.0)[b]		66.6 (58.3–75.0)[a]		65.6 (59.3–71.8)[a]	
46 – 60	60.7 (55.3–78.5)[a]		70.8 (66.6–75.0)[b]		66.6 (29.1–75.0)[a]		62.5 (46.8–81.2)[a]	
Marital status		0.445		0.102		0.448		0.480
Single	71.4 (60.7–78.5)[a]		62.5 (54.1–70.8)[a]		66.6 (50.0–75.0)[a]		65.6 (58.2–71.8)[a]	
Married	67.8 (57.1–78.5)[a]		66.6 (50.0–70.8)[a]		66.6 (50.0–75.0)[a]		65.6 (56.2–71.8)[a]	
Divorced	67.8 (59.8–78.5)[a]		70.8 (69.8–79.1)[a]		75.0 (64.9–75.0)[a]		62.5 (49.2–66.4)[a]	
Living with a partner		0.585		0.661		0.440		0.124
No	71.4 (60.7–78.6)[a]		66.6 (54.1–70.8)[a]		66.6 (50.0–75.0)[a]		65.6 (56.2–71.9)[a]	
Yes	71.4 (57.1–75.9)[a]		64.6 (53.1–71.9)[a]		62.5 (50.0–83.3)[a]		62.5 (55.4–68.7)[a]	
Living alone		**0.004**		**0.043**		**0.023**		**0.001**
No	71.4 (60.7–78.6)[a]		66.6 (54.1–70.8)[a]		66.6 (50.0–75.0)[a]		65.6 (56.2–71.9)[a]	
Yes	60.7 (55.3–75.0)[b]		56.2 (41.6–70.8)[b]		58.3 (31.2–75.0)[b]		56.2 (40.6–65.6)[b]	
Monthly family income (MW)		0.074		**0.003**		0.214		**<0.001**
1 – 5	67.8 (60.7–78.7)[a]		62.5 (50.0–70.8)[a]		66.6 (50.0–75.0)[a]		59.4 (53.1–68.7)[a]	
5 – 10	75.0 (67.8–82.1)[a]		66.6 (54.1–70.8)[ab]		66.6 (58.3–83.3)[a]		68.7 (59.4–75.0)[b]	
10 – 15	71.4 (52.7–78.6)[a]		64.6 (61.4–75.0)[ab]		66.6 (50.0–75.0)[a]		71.9 (61.1–75.8)[bc]	
> 15	75.0 (67.8–85.7)[a]		70.8 (62.5–75.0)[b]		66.6 (58.3–75.0)[a]		75.0 (68.7–84.4)[c]	
Number of courses		0.446		0.623		**0.028**		**0.008**
< 4	67.8 (60.7–78.6)[a]		66.6 (54.1–70.8)[a]		66.6 (50.0–75.0)[a]		62.5 (56.2–68.7)[a]	
≥ 4	71.4 (60.7–78.6)[a]		62.5 (54.1–70.8)[a]		66.6 (58.3–75.0)[b]		65.6 (57.0–75.0)[b]	
Risk behaviors for eating disorders		0.102		**<0.001**		0.160		**0.016**
Absent	71.4 (60.7–78.6)[a]		66.6 (54.1–70.8)[a]		66.6 (50.0–75.0)[a]		65.6 (56.2–71.9)[a]	
Present	67.8 (57.1–78.6)[a]		54.1 (45.8–66.6)[b]		66.6 (50.0–75.0)[a]		59.4 (53.1–71.9)[b]	

Legend: WHOQOL-BREF, World Health Organization Quality of Life Assessment. Med – Median. P25 – 25th percentile. P75 – 75th percentile. n – Absolute frequency. SM – Minimum Wage. Continuous numerical variables were described by median and interquartile range (25th and 75th percentiles).

* Mann-Whitney U test or Kruskal-Wallis test with Bonferroni post-hoc analysis was used to identify differences in quality of life scores based on exposure variables.

ab – Different letters indicate differences between the medians of the studied domains. Bold values are statistically significant (p<0.05).

Table 3 presents the unadjusted and adjusted prevalence ratios for the association between risk behaviors for eating disorders and quality of life. A statistically significant association was observed between risk behaviors for eating disorders and poor quality of life. After adjustment, university students with risk behaviors for eating disorders had a 79% higher probability of experiencing poor quality of life (PR = 1.79; 95% CI: 1.28–2.50; p=0.001) compared to those without risk behaviors (Table 3).

Table 3. Unadjusted and adjusted Prevalence Ratios (PR) and their respective 95% Confidence Intervals (95% CI) for the association between risk behaviors for eating disorders and quality of life among health sciences university students from a higher education institution in southern Brazil. 2020. (n=353).

	Quality of Life (WHOQOL-BREF)		
Risk behaviors for eating disorders	**Lower quality of life Cut-off point < 60**	**Unadjusted**	**Adjusted****
	n (%)	RPR (95% CI)	PR (95% CI)
Absent	62 (23.6)	1.00 (Reference)	1.00 (Reference)
Present	38 (42.2)	1.79 (1.29 – 2.48)	1.79 (1.28 – 2.50)
p-value*		**<0.001**	**0.001**

* p-value for the Wald test for heterogeneity of proportions obtained through Poisson regression with robust variance.
** Prevalence Ratios adjusted for age, living with a partner, living alone, income in minimum wages, and number of courses enrolled.

DISCUSSION

This study aimed to explore the association between risk behaviors for eating disorders and quality of life among health sciences university students at a private higher education institution located in Serra Gaúcha (Rio Grande do Sul, Brazil). Among its findings, a significant association was observed between risk behaviors for eating disorders and lower quality of life, with students exhibiting such risk behaviors having a 79% higher likelihood of experiencing poorer quality of life.

In the present study, university students exhibiting risk behaviors for eating disorders demonstrated lower quality of life. Previous studies have shown that quality of life tends to decline among university students who engage in risk behaviors for eating disorders, both among students in general courses,[12, 19] and specifically among health sciences students.[11] In this regard, a study analyzing 399 Brazilian health sciences university students identified a lower quality of life—considering all domains of the WHOQOL-bref—among those exhibiting risk behaviors for eating disorders.[11] Similarly, another study investigating the association between eating habits and quality of life among 1,212 Chilean university students

found a higher quality of life among students who did not present risk behaviors for eating disorders.[19] Potential mechanisms have been proposed to explain the relationship between risk behaviors for eating disorders and a decline in quality of life. A systematic review suggests that loss of control over eating, which leads to compensatory behaviors, appears to significantly contribute to the deterioration of quality of life, negatively impacting its perception.[20] Among compensatory behaviors, purging—particularly self-induced vomiting—has been shown to substantially impair quality of life, as it is associated with anxiety and depressive symptoms.[20]

Regarding quality of life, the present study identified a median score of 66.3 points in the total quality of life score. Previous studies have reported similar findings, including one that analyzed 1,350 health sciences university students from 22 Brazilian higher education institutions, which found an average score of 63.57 points,[21] and another that analyzed 399 health sciences university students and reported an average score of 65.70 points.[11] Regarding the quality of life domains, the present study identified median scores of 71.4 (IQR: 60.7–78.6), 66.6 (IQR: 54.1–70.8), 66.6 (IQR: 50.0–75.0), and 65.6 (IQR: 56.2–71.9) for the physical, psychological, social relationships, and environment domains, respectively. Similar findings have also been observed in previous studies, including a similar median score of 67.85 for the physical domain among university students in Minas Gerais[11] and a median score of 68.34 among final-year health sciences university students in China.[22] For the other domains, these same studies reported median scores of 62.50[11] and 65.12[22] for the psychological domain, 75.00[11] and 64.68[22] for the social relationships domain, and 62.50[11] and 55.83[22] for the environment domain.

In the present study, a lower total quality of life score was observed among university students who reported living alone and those with lower family income, while a higher score was observed among students enrolled in four or more courses. In this regard, previous studies have indicated that living with others may serve as a protective factor for better quality of life, as individuals living with family or parents tend to exhibit higher quality of life compared to those who live alone.[23] Regarding family income, previous findings also reported better quality of life—particularly in the physical and social domains—among university students with higher family income.[11] As for the number of courses taken, this association can potentially be explained by the fact that students enrolled in more courses are also likely to have a higher family income, considering that the university in question is private.

Regarding the occurrence of risk behaviors for eating disorders, the present study identified a prevalence of 25.5% among university students. Similar prevalence rates have been reported in previous studies, including a prevalence of 26.1% among 2,483 female health sciences university students from the five regions of Brazil[5] and 26.8% among 1,608 first-year university students from various courses, including 15.4% from health sciences, at a public university in the state of Mato Grosso, in Brazil's central-west region.[24] A similar prevalence was also observed among 1,493 French university students from different fields (22.9% from health sciences), with 24.8% exhibiting risk behaviors for eating disorders.[25] Regarding specific risk behaviors, a study conducted among female health sciences university students from the five regions of Brazil identified that 40.7% engaged in dieting for weight loss, 35.6% used dietary or compensatory methods, 23.9% skipped meals, 12.6% relied solely on liquids or refrained from eating to lose weight, and 3.3% engaged in self-induced vomiting.[5] These conditions indicate potential harmful consequences of risk behaviors for eating disorders, particularly purging, which has been associated with impairments in quality of life, as highlighted in a meta-analysis study.[20]

Among the strengths of the present study, it is noteworthy that it addresses a topic that remains relatively unexplored in the Brazilian context, focusing on a specific population group—health sciences university students. Additionally, the study sample reached the initially calculated size, possibly due to the use of an online survey format. Furthermore, the study employed previously tested and validated instruments for assessing quality of life (the study outcome) as well as for evaluating risk behaviors for eating disorders (the primary exposure variable). However, some limitations should be acknowledged. One limitation of this study concerns its design, as cross-sectional studies are limited in their ability to establish causal relationships. This design does not allow for the observation of temporality, an essential element for determining cause-and-effect associations, as both exposure and outcome were assessed simultaneously. Consequently, the potential for reverse causality between risk behaviors for eating disorders and quality of life cannot be entirely ruled out. In this regard, the findings of this study should be interpreted with caution, and longitudinal studies are needed to confirm the relationships identified. Additionally, potential recall bias cannot be completely dismissed, as participants responded to the data collection questionnaire based on their experiences over the past two weeks. Given the multifactorial nature of quality

of life, a potential limitation is the lack of collection and inclusion of variables such as physical activity and nutritional status in the analyses. Finally, the use of self-administered questionnaires may have contributed to interpretation errors by the respondents.

CONCLUSIONS

The present study revealed a significant association between risk behaviors for eating disorders and quality of life among health sciences university students at a private higher education institution located in Serra Gaúcha (Rio Grande do Sul, Brazil). A lower quality of life was observed among students exhibiting risk behaviors for eating disorders. Thus, our results suggest that eating-related behaviors may influence the health and quality of life of university students. These findings reinforce the necessity and importance of actions, programs, and health policies aimed at promoting health and well-being within this population group, with the goal of reducing the occurrence of eating disorders and improving quality of life.

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