

Knowledge and Prevalence of Eating Disorder Risks and Associated Risk Factors Among Medical Students at Rivers State University, Port Harcourt, Nigeria

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Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited. Citation: Nera Perpetual Kadiri-Eneh & Ositadinma Mberekpe Pius. (2026). Knowledge and prevalence of eating disorder risks and associated risk factors among medical students at Rivers State University, Port Harcourt, Nigeria. UKR Journal of Medicine and Medical Research, 2(5), 28-41.	Background: Eating disorders are important mental health conditions characterized by abnormal eating behaviours, disturbed attitudes toward food and body image, and potentially serious physical and psychological consequences. Medical students may be particularly vulnerable because of academic stress, demanding workloads, body-image concerns, and pressure associated with medical training. However, there is limited evidence on eating disorder risk among medical students in Rivers State, Nigeria. Objective: This study assessed the knowledge, prevalence of eating disorder risk, and associated risk factors among medical students at Rivers State University, Port Harcourt, Nigeria. Methods: A descriptive cross-sectional study was conducted among medical students from 100 to 600 level at Rivers State University. A total of 246 students were selected using a multistage sampling technique involving stratification by academic level, proportionate allocation, and simple random sampling but only 244 students completed the questionnaire. Data were collected using a structured self-administered questionnaire incorporating the Eating Attitudes Test-26 (EAT-26) and SCOFF (Sick, Control, One stone, Fat, Food) screening tools. Data were analysed using SPSS version 25. Descriptive statistics were presented as frequencies, percentages, means and standard deviations, while Chi-square tests, independent t-tests and other appropriate inferential procedures were used to assess associations. Statistical significance was set at $p < 0.05$. Results: Of the 244 respondents, 169 (69.3%) were females and 75 (30.7%) were males, while the largest age group was 22–24 years (35.2%). Overall, 83.3% of respondents demonstrated good knowledge of eating disorders. Awareness was particularly high regarding the existence, examples, complications and treatment of eating disorders; however, knowledge was lower concerning the common age group affected and the binge-purge pattern of bulimia nervosa. Screening identified 24 (9.8%) students as being at risk of an eating disorder, while 220 (90.2%) were not classified as at risk. Following diet trends ($p=0.001$), comparing body image with others ($p=0.021$), academic stress affecting eating habits ($p=0.001$), and having sought counselling ($p=0.001$) were significantly associated with eating disorder risk. Skipping meals ($p=0.650$) and perceived professional pressure ($p=0.260$) were not statistically significant. Conclusion: The study found a high level of awareness and knowledge of eating disorders among medical students at Rivers State University, but a substantial proportion (9.8%) remained at risk. The findings indicate that good knowledge alone may not translate into protective eating behaviours, as academic stress, diet trends and body-image comparison may contribute to vulnerability. Keywords: Eating disorders; medical students; knowledge; prevalence; eating disorder risk; academic stress; body image; Rivers State University.

1. Introduction

1.1 Background. Eating disorders (EDs) are serious mental health conditions characterized by persistent disturbances in eating behaviour, food intake, weight regulation, and perceptions of body weight or shape. They include anorexia nervosa, bulimia nervosa, binge-eating disorder, avoidant/restrictive food intake disorder, pica, rumination disorder and other specified feeding or eating disorders. Although traditionally associated with young women in high-income and Western countries, contemporary evidence demonstrates that eating disorders occur across diverse populations and geographical settings and represent an increasingly important global public-health concern. The clinical consequences may include nutritional deficiencies, metabolic and cardiovascular abnormalities, psychological distress, impaired social functioning and increased mortality, particularly when identification and treatment are delayed (1,2).

The epidemiology of eating disorders has also become increasingly complex because a substantial proportion of affected individuals do not present with the classical features of anorexia nervosa or bulimia nervosa. Binge-eating disorder and other specified or atypical eating disorders account for a considerable part of the contemporary burden. Consequently, studies that focus exclusively on classical eating disorders may underestimate the magnitude of disordered eating in young populations (1,2). A systematic review of the literature from 2000 to 2018 reported a substantial increase in the prevalence of eating disorders globally, highlighting the changing epidemiological profile of these conditions (3). More recent evidence continues to demonstrate a considerable burden of eating-disorder symptoms and risk in young people.

Medical students constitute a particularly important population in which eating-disorder symptoms warrant investigation. Medical education is characterized by prolonged periods of intensive study, frequent examinations, demanding clinical rotations, high academic expectations and exposure to emotionally challenging clinical situations. These demands may interfere with regular meals, physical activity, sleep and other health-promoting behaviours. Medical students may also experience anxiety, depressive symptoms, burnout, perfectionism and considerable pressure to achieve academically, all of which may interact with unhealthy eating and weight-control behaviours (4,5).

The burden identified among medical students is substantial. A global systematic review and meta-analysis involving 19 studies and 5,722 medical students estimated the pooled prevalence of eating-disorder risk at approximately 10.4%, although estimates varied considerably between studies (6). An updated systematic

review and meta-analysis involving 35 studies and 21,383 medical students subsequently estimated the pooled prevalence of feeding and eating-disorder symptoms at 17.35% (95% CI: 14.15–21.10%). The considerable heterogeneity observed across studies was partly related to differences in assessment instruments, culture and body mass index, emphasizing that estimates of eating-disorder risk should be interpreted in relation to the population and screening instrument used (7).

Recent research continues to demonstrate considerable variability in the burden among medical students. For example, a 2024 study among medical undergraduates in India found that 19.9% had EAT-26 scores suggestive of problematic eating behaviour. The study also reported relationships between eating attitudes and factors such as family history of mental illness, childhood obesity and experiences of bullying, while overall awareness of eating disorders among the students was relatively high (8). These findings suggest that good knowledge of eating disorders does not necessarily eliminate the possibility of problematic eating behaviours, and that individual, psychological and social factors may operate alongside knowledge.

The epidemiology of eating disorders on the continent of Africa remains comparatively under-researched. Historically, eating disorders have often been regarded as predominantly Western conditions, while cultural perceptions of body size, food and health have contributed to their under-recognition in many African settings. However, increasing urbanization, globalization, changing dietary practices, exposure to international beauty ideals and the expanding influence of social media may be contributing to changes in body-image perceptions and eating behaviours among African adolescents and young adults (9).

The most recent continent-wide systematic review and meta-analysis provides stronger evidence that eating disorders and related symptoms are present across Africa. The review included 75 studies and estimated a pooled point prevalence of clinically diagnosed eating disorders of 1.1%, while the pooled prevalence of eating-disorder risk was substantially higher at 16.0% and body-image dissatisfaction was 59.3%. The review also identified marked heterogeneity according to geographical region and assessment instrument, reinforcing the importance of context-specific epidemiological studies (9).

Evidence from individual African countries further illustrates this variability. In Uganda, a 2025 cross-sectional study involving medical students at a private university found that 16.6% screened positive for a possible eating disorder using the SCOFF questionnaire. Female sex and selected psychosocial factors were associated with eating-disorder risk, highlighting the relevance of mental-health

and behavioural factors among African medical students (10).

The existence of such findings in an East African medical-school population is particularly relevant to Nigeria because both settings share important contextual features, including rapidly changing social environments, resource constraints and limited specialized eating-disorder services.

Evidence from Nigeria also suggests that eating-disorder symptoms are present among university students, although available studies remain relatively limited. A study among female undergraduates at a Nigerian university reported that 17.1% were at high risk for eating disorders, with additional proportions screening positive for anorexia nervosa, bulimia nervosa and obesity-related eating concerns (11). More recently, a study conducted among undergraduates at Osun State University reported a prevalence of 28% and identified significant associations with sex, body-image dissatisfaction, parental educational status and overweight measures (12). These Nigerian findings must, however, be interpreted cautiously because estimates obtained from different studies may not be directly comparable. Differences in study populations, sampling procedures, definitions of eating disorders, screening instruments and thresholds can produce substantially different prevalence estimates. This methodological variation is also evident internationally and across Africa (7,9). Nevertheless, the available Nigerian evidence provides sufficient indication that disordered eating and eating-disorder risk are relevant health concerns among young adults and university students.

Medical students may represent an especially important subgroup within the university population. Their training exposes them to detailed information about anatomy, physiology, nutrition, disease and body weight, while simultaneously placing them under considerable academic and clinical pressure. The combination of academic stress, perfectionistic expectations, body-image concerns and potentially irregular eating patterns may create an environment in which unhealthy dietary practices can emerge or remain concealed. Furthermore, medical students may be reluctant to disclose psychological or behavioural difficulties because of concerns about stigma, professional expectations or perceived vulnerability.

This issue has implications beyond the students' immediate health. Medical students are future healthcare professionals who will encounter patients with eating disorders and other nutrition-related conditions during their careers. Adequate knowledge and appropriate attitudes are therefore important for future recognition, communication and referral of patients with eating disorders. Conversely, inadequate knowledge may contribute to missed opportunities for early recognition and appropriate

management. Evidence from medical-student populations suggests that awareness can be relatively high even where problematic eating behaviours remain present, indicating that knowledge alone may not be sufficient to prevent disordered eating (8).

The consequences of eating disorders further strengthen the need for early identification. Eating disorders may be associated with nutritional deficiencies, electrolyte abnormalities, cardiovascular and metabolic complications, psychiatric comorbidity, impaired functioning and premature mortality. A large systematic review and meta-analysis published in 2024 demonstrated substantial morbidity and chronicity across eating-disorder diagnoses, emphasizing that these conditions should not be regarded simply as transient dietary or lifestyle problems (13).

Within Nigeria, important gaps remain in the evidence base. Existing studies have predominantly examined general university populations or specific groups of female students, while comparatively fewer studies have focused specifically on medical students. Moreover, available Nigerian studies have produced markedly different estimates, reflecting differences in populations and measurement approaches (11,12). There is therefore a need for institution-specific research capable of describing knowledge of eating disorders alongside eating-disorder symptoms and associated behavioural factors among medical students.

This gap is particularly relevant to Rivers State University (RSU), where medical students undergo a demanding programme involving preclinical education, clinical training, frequent examinations and prolonged academic engagement. The university's medical students are drawn from a sociocultural environment in which traditional perceptions of body size coexist with increasingly influential global media and contemporary ideals concerning physical appearance. These circumstances make it important to understand how students perceive eating disorders and whether potentially harmful eating behaviours or other risk-related practices are present within this population.

At present, there is limited published evidence specifically describing eating-disorder knowledge and risk among medical students at Rivers State University. The absence of institution-specific evidence makes it difficult to determine the extent to which medical students recognize eating disorders, understand their manifestations and complications, or engage in behaviours that may place them at increased risk.

The proposed study therefore seeks to assess knowledge and eating-disorder risk among medical students at Rivers State University. In particular, it will assess students'

knowledge of eating disorders, determine the prevalence of eating-disorder symptoms or screening-defined risk, examine behavioural and psychosocial factors that may be associated with disordered eating, and explore the relationship between knowledge and these risk-related behaviours.

2. Methodology

2.1 Study Design

This study employed a descriptive cross-sectional study design to assess the knowledge, prevalence of eating-disorder risk, and associated behavioural and psychosocial factors among medical students of Rivers State University. The cross-sectional design was considered appropriate because information on knowledge, eating-disorder risk and associated factors was collected from the study participants at a single period.

2.2 Study Setting

The study was conducted at Rivers State University (RSU), Port Harcourt, Rivers State, Nigeria, specifically among students enrolled in the College of Medical Sciences.

Rivers State University is a public university located in Port Harcourt, Rivers State, in the South-South geopolitical zone of Nigeria. The university provides undergraduate and postgraduate education in several disciplines. For the purpose of this study, the setting was restricted to the medical school environment of Rivers State University, where undergraduate medical students undergo preclinical and clinical medical training.

The medical programme comprises students at different levels of training, from the first year through the final year. The academic environment involves intensive theoretical learning, practical sessions, examinations and clinical training. These characteristics make the setting appropriate for examining eating-disorder knowledge and risk among medical students, particularly given evidence that medical students experience substantial academic and psychological pressures [2,3].

2.3 Study Population

The study population comprised all undergraduate medical students enrolled in the College of Medical Sciences, Rivers State University, from 100 level to 600 level, during the period of the study.

The population therefore consisted specifically of students undertaking the Bachelor of Medicine and Bachelor of Surgery (MBBS) programme. Students from non-medical faculties and students from other universities were excluded from the study population.

2.4 Eligibility Criteria

2.4.1 Inclusion Criteria

Participants who were bona fide undergraduate medical students of Rivers State University, were present during the period of data collection and were willing to participate and provided informed consent were included into the study.

2.4.2 Exclusion Criteria

Students were excluded if they returned questionnaires with substantial missing information that made them unsuitable for analysis.

They were excluded if they were absent during the period of data collection and declined to participate in the study

2.5 Sample Size Determination

The sample size was calculated using the single-proportion formula: $n = Z^2 pq / d^2$

Where:

- n = minimum sample size
- $Z = 1.96$ at 95% confidence level
- p = previous prevalence = 17.35% = 0.1735 (14)
- $q = 1 - p = 0.8265$
- $d = 5\%$ margin of error = 0.05

Input into the formular;

$$n = (1.96)^2 (0.1735)(0.8265) / (0.05)^2$$

$$n = 220.9 \quad n = 220.9$$

Therefore:

$$n \approx 221$$

Allowing for 10% non-response:

$$n = 221 \times 1 - 0.10 = 245.6 \quad n = 246$$

2.6 Sampling Technique

A multistage sampling technique was used to select participants from the medical-student population.

In the first stage, the medical students were stratified according to their academic levels; 100, 200, 300, 400, 500 and 600 levels. This ensured that students at different stages of medical training were represented. The number of students selected from each academic level was determined using proportionate allocation based on the number of eligible students in each level.

In the second stage, eligible students within each academic level were selected using a simple random sampling procedure. This approach provided an opportunity for students at different stages of the MBBS programme to participate and reduced the likelihood of over-representation of a particular academic level.

2.7 Instrument for Data Collection

Data were collected using a structured, (Online) self-administered questionnaire. The questionnaire was developed to obtain information relevant to the objectives of the study and incorporated items adapted from established eating-disorder screening instruments, particularly the **Eating Attitudes Test-26 (EAT-26)** and the **SCOFF questionnaire**.

The EAT-26 is a widely used screening instrument for identifying disordered eating attitudes and behaviours. A score of 20 or above is commonly used as an indication of elevated eating-disorder risk, while the SCOFF questionnaire is another brief screening instrument in which a score of two or more positive responses suggests possible eating-disorder pathology [1,4]. Importantly, these instruments are screening rather than diagnostic tools; therefore, participants who screen positive should be regarded as being at risk or requiring further clinical assessment rather than as having a confirmed eating disorder.

Structure of the Questionnaire

The questionnaire was organized into the following sections:

Section A: Socio-demographic characteristics

This section obtained information on:

- age;
- sex;
- academic level;
- and other relevant demographic characteristics.

Section B: Knowledge of eating disorders

This section assessed students' knowledge and awareness of eating disorders, including:

- awareness of eating disorders;
- examples of eating disorders;
- anorexia nervosa;
- bulimia nervosa;
- binge-eating disorder;
- symptoms;
- causes;
- complications;
- treatment; and
- vulnerability of medical students.

Section C: Eating-disorder risk

This section incorporated screening questions adapted from the EAT-26 and SCOFF instruments to identify students

with eating attitudes or behaviours suggestive of increased eating-disorder risk.

Section D: Behavioural and psychosocial factors

This section assessed factors potentially associated with eating-disorder risk, including:

- following diet trends;
- meal skipping;
- body-image comparison;
- academic stress;
- perceived professional pressure;
- counselling-seeking behaviour.

2.8 Validity of the Instrument

The questionnaire was reviewed to ensure that its items adequately addressed the study objectives and the domains of knowledge, eating-disorder risk and associated behavioural and psychosocial factors.

The eating-disorder screening component was based on established instruments, particularly the EAT-26 and SCOFF, which have been widely used in studies of university and medical students [1,2,4]. The EAT-26 has also previously been used among Nigerian undergraduate students for screening disordered eating attitudes [5].

2.9 Reliability of the Instrument

The questionnaire was pretested among students with characteristics similar to those of the study population but who were not included in the final study sample. The pretest was used to assess clarity, comprehensibility and sequencing of questions.

2.10 Method of Data Collection

The questionnaires were administered online through WhatsApp to eligible medical students within the university environment. Participants were informed about the purpose of the study and were allowed adequate time to complete the questionnaire.

Because eating behaviour, body image and mental health are potentially sensitive issues, participants were encouraged to provide honest responses and were assured that their responses would be treated confidentially. No identifying information that could unnecessarily reveal individual responses was included in the analytical dataset.

Completed questionnaires were retrieved, checked for completeness and coded before data entry.

2.11 Data Management and Analysis

Completed questionnaires were coded and entered into the **Statistical Package for the Social Sciences (SPSS), version 25**.

Descriptive statistics were used to summarize the data. Categorical variables were presented using frequencies and percentages, while continuous variables were summarized using appropriate measures such as means and standard deviations.

The **Chi-square test** was used to determine associations between categorical variables. Independent t-tests were used where appropriate to compare mean knowledge scores between groups and results were presented using tables.

Statistical significance was set at: $p < 0.05$

2.12 Ethical Considerations

Ethical approval was obtained from the Rivers State University Teaching Hospital Ethics Research committee. Participants were informed about the purpose and procedures of the study. Participation was voluntary, and informed consent was obtained before questionnaire administration. Participants were informed that they could decline participation or withdraw without penalty.

Confidentiality and anonymity were maintained throughout the study. Completed questionnaires were handled securely, and information obtained from participants was used strictly for research purposes.

2.13 Limitations

The cross-sectional design allowed the study to estimate eating-disorder risk and examine associations between

variables but could not establish temporal or causal relationships between risk factors and eating-disorder symptoms.

The use of self-reported screening instruments may be associated with reporting or social-desirability bias.

2.14 Strength of the Study

The study addresses an important but under-investigated mental-health problem among medical students.

It provides institution-specific evidence from Rivers State University, where published data on eating-disorder risk among medical students are limited.

It assesses both knowledge and eating-disorder risk rather than focusing on awareness alone.

The study provides baseline evidence that could inform student-wellness programmes, early identification and future longitudinal or intervention studies.

CHAPTER THREE

Results

A total of 246 eligible participants were recruited into the study but 244 participants completed their questionnaires and were available for analysis giving a data completeness rate of 99.2%.

3.1 Socio-demographic Characteristics of Respondents

Table 3.1 presents the socio-demographic characteristics of the respondents.

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	16–18	52	21.3
	19–21	76	31.1
	22–24	86	35.2
	25 years or older	30	12.3
Sex	Female	169	69.3
	Male	75	30.7
Level of Study	100-level	48	19.7
	300-level	20	8.2
	500-level	64	26.2
	600-level	44	18.0

Of the 244 respondents, 86 (35.2%) were aged 22–24 years, 76 (31.1%) were aged 19–21 years, 52 (21.3%) were aged 16–18 years, while 30 (12.3%) were aged 25 years or older.

Females constituted the majority of respondents, accounting for 169 (69.3%), while males accounted for 75 (30.7%). With respect to level of study, 500-level students constituted the largest group with 64 (26.2%) respondents, followed by 100-level students with 48 (19.7%) and 600-level students with 44 (18.0%). The smallest group was 300-level students, with 20 (8.2%) respondents.

Eating disorders; medical students; knowledge; prevalence; eating disorder risk; academic stress; body image; Rivers State University.

3.2 Knowledge of Eating Disorders among Medical Students

Table 3.2 presents respondents' knowledge of eating disorders. Most respondents demonstrated awareness of eating disorders. A total of 226 (92.6%) respondents reported having heard of eating disorders, while the same

number recognized anorexia as an example of an eating disorder.

Knowledge was comparatively lower regarding specific clinical features. Although 158 (69.7%) respondents demonstrated knowledge of anorexia-related symptoms, 154 (63.1%) recognized the common age group affected and 146 (57.8%) recognized the characteristic binge-purge pattern associated with bulimia.

Knowledge was strongest regarding treatment and complications. Almost all respondents 241 (98.8%) knew that eating disorders can be treated, while 236 (96.7%) recognized possible complications. A total of 219 (89.0%) knew that medical students can be at risk, and 228 (92.7%) identified causes of eating disorders.

Overall, 210 respondents (83.3%) were classified as having good knowledge according to the study's knowledge scoring procedure.

Table 3.2: Knowledge of eating disorders among medical students (N = 244)

Knowledge item	Correct/positive response, n	Percentage, %
Had heard of eating disorders	226	92.6
Identified anorexia as an eating disorder	226	92.6
Identified common age group affected	154	63.1
Recognized binge-purge pattern of bulimia	146	57.8
Recognized symptoms of anorexia	158	69.7
Recognized possible complications	236	96.7
Knew that eating disorders can be treated	241	98.8
Knew that medical students can be at risk	219	89.0
Identified causes of eating disorders	228	92.7
Overall good knowledge	210	83.3

3.3 Proportion of Students at Risk of Eating Disorders

Table 3.3 presents the proportion of respondents classified as being at risk of eating disorders based on the study's screening assessment.

Twenty-four respondents (9.8%) screened positive for eating-disorder risk, while 220 (90.2%) did not screen positive. Thus, approximately one in ten respondents screened positive for eating-disorder risk.

Because the assessment was based on screening rather than clinical diagnostic evaluation, the result should be interpreted as the proportion of students at risk or screening positive for eating-disorder symptomatology, rather than the clinical prevalence of diagnosed eating disorders. The original study data report 24 (9.8%) and 220 (90.2%).

Table 3.3: Eating-disorder screening risk among medical students (N = 244)

Screening classification	Frequency, n	Percentage, %
Screened positive/at risk	24	9.8
Did not screen positive/not at risk	220	90.2
Total	244	100.0

3.4 Selected Behavioural and Psychosocial Factors

Table 3.4 presents the behavioural and psychosocial factors relevant to eating-disorder risk.

A substantial proportion of respondents reported following diet trends 193 (79.1%), while 185 (75.8%) reported that academic stress affected their eating habits. A total of 145 (59.4%) reported comparing their body image with others, while 102 (41.8%) reported intentionally skipping meals. Sixty-eight respondents (27.9%) reported feeling pressure to look a certain way because of their profession, while 201 (82.4%) reported having sought help or counselling for body-image or eating-related concerns.

Table 3.4: Behavioural and psychosocial factors related to eating-disorder risk (N = 244)

Behavioural/psychosocial factor	Yes, n (%)	No, n (%)	χ^2 *	p-value*
Ever intentionally skipped meals	102 (41.8)	142 (58.2)	0.203	0.650
Followed a diet trend	193 (79.1)	51 (20.9)	27.80	0.001
Compared body image with others	145 (59.4)	99 (40.6)	5.30	0.021
Academic stress affected eating	185 (75.8)	59 (24.2)	21.32	0.001
Felt professional pressure to look a certain way	68 (27.9)	176 (72.1)	1.22	0.260
Ever sought help/counselling	201 (82.4)	43 (17.6)	86.90	0.001

3.5 Relationship between Selected Risk-related Factors and Knowledge Scores

Table 3.5 compares mean knowledge scores among respondents according to selected behavioural and psychosocial factors.

There was no statistically significant difference in knowledge score between students who compared their bodies with others and those who did not (mean 7.42 ± 1.242 versus 7.61 ± 1.577 ; $t = 0.98$, $df = 242$, $p = 0.32$).

Students who reported skipping meals had a significantly lower mean knowledge score than those who did not skip meals (6.75 ± 1.029 versus 8.03 ± 1.463 ; $t = -7.54$, $df = 242$, $p < 0.001$).

Conversely, students who followed diet trends had a significantly higher mean knowledge score than those who did not (7.70 ± 1.287 versus 6.71 ± 1.712 ; $t = 4.57$, $df = 242$, $p < 0.001$).

Similarly, students who reported that academic stress affected their eating had a higher mean knowledge score than those who did not report this effect (7.69 ± 1.310 versus 6.88 ± 1.851 ; $t = 3.86$, $df = 242$, $p < 0.001$).

Students who had sought help or counselling also had higher mean knowledge scores than those who had not (7.72 ± 1.263 versus 6.47 ± 1.744 ; $t = 5.46$, $df = 242$, $p < 0.001$).

Finally, respondents who reported feeling pressure to look a certain way because of their profession had significantly lower knowledge scores than those who did not report such pressure (6.40 ± 1.039 versus 7.92 ± 1.350 ; $t = -8.39$, $df = 242$, $p < 0.001$).

These findings indicate that knowledge scores differed significantly across several behavioural and psychosocial groups, although the cross-sectional design does not establish causality.

Table 3.5: Mean knowledge scores according to selected behavioural and psychosocial factors

Factor	Yes: Mean (SD)	No: Mean (SD)	t (df)	p-value
Compared body with others	7.42 (1.242)	7.61 (1.577)	0.98 (242)	0.320
Skipped meals	6.75 (1.029)	8.03 (1.463)	-7.54 (242)	<0.001
Followed diet trend	7.70 (1.287)	6.71 (1.712)	4.57 (242)	<0.001
Academic stress affected eating	7.69 (1.310)	6.88 (1.851)	3.86 (242)	<0.001
Ever sought help/counselling	7.72 (1.263)	6.47 (1.744)	5.46 (242)	<0.001
Felt pressure to look a certain way	6.40 (1.039)	7.92 (1.350)	-8.39 (242)	<0.001

SD = standard deviation; df = degrees of freedom.

CHAPTER FOUR

4. Discussion

4.1 Discussion of Findings

This study assessed the knowledge, risk of eating disorders, associated behavioural and psychosocial factors, and the relationship between knowledge and selected risk factors among medical students of Rivers State University.

4.1.1 Knowledge of Eating Disorders among Medical Students

The study demonstrated a generally high level of knowledge of eating disorders among medical students. More than nine out of ten respondents (92.6%) had heard of eating disorders and could identify anorexia as an example. Similarly, 96.7% knew that eating disorders could result in complications, while 98.8% recognized that eating

disorders could be treated. Overall, 83.3% achieved the study's criterion for good knowledge.

The high level of awareness observed in this study may be partly attributable to the participants' medical education. Medical students are exposed to courses involving psychiatry, behavioural medicine, nutrition, public health and clinical medicine, which may provide greater opportunities to encounter information about eating disorders than students in other disciplines. Evidence from the international literature supports the relevance of eating-disorder knowledge among medical students. A systematic review and meta-analysis involving 21,383 medical students from 20 countries found substantial levels of feeding and eating-disorder symptomatology in this population, highlighting the importance of awareness and early recognition among future health professionals [15].

Similarly, an umbrella review published in 2024 reported an overall prevalence of approximately 15.1% for disordered eating among medical students and emphasized the need for medical schools to recognize early eating-disorder symptoms and provide appropriate preventive and treatment services [16].

Despite the high overall knowledge in the present study, important gaps were identified. Although 92.6% had heard of eating disorders, only 63.1% correctly identified the common age group affected, while 57.8% recognized the assessed bulimic pattern. Knowledge of anorexia symptoms was also lower than general awareness at 69.7%. This finding suggests that awareness does not necessarily mean comprehensive clinical understanding. Students may know the terminology associated with eating disorders without possessing sufficient knowledge to recognize less obvious presentations. This is important because eating disorders can manifest through a range of behavioural, cognitive and physical symptoms and may not always present in the stereotypical form of severe thinness.

A recent study among medical students in India similarly assessed both problematic eating behaviour and awareness of eating disorders, demonstrating the importance of considering knowledge alongside actual eating behaviours [17]. The study highlights the need for medical education to address not only definitions but also clinical recognition, risk factors, screening and appropriate referral.

The findings therefore suggest that the medical curriculum at Rivers State University could benefit from more structured teaching on eating disorders. Such teaching should cover anorexia nervosa, bulimia nervosa, binge-eating disorder, atypical presentations, risk factors, screening instruments, body-image disturbance and appropriate referral pathways.

4.1.2 Risk of Eating Disorders among Medical Students

The study found that 24 respondents (9.8%) were classified as being at risk of eating disorders, whereas 220 (90.2%) were not classified as being at risk. Thus, approximately one in every ten medical students in this study demonstrated features suggestive of eating-disorder risk.

This finding is clinically relevant even though the majority of students were not at risk. The result is also broadly consistent with the growing literature demonstrating that eating-disorder symptoms are present among medical students internationally. Fekih-Romdhane et al. reported a pooled prevalence of 17.35% among 21,383 medical students, although substantial heterogeneity was observed across studies, countries and assessment instruments [15]. The 2024 umbrella review likewise reported a pooled prevalence of approximately 15.1% among medical students [16]. These estimates are higher than the 9.8% observed in the present study, although direct comparisons should be made cautiously because different screening instruments, populations and definitions of risk were used.

Other individual studies have reported both lower and considerably higher estimates. For example, Iyer and Shriram found that 13% of medical and paramedical students in South India were at high risk for eating disorders, with high stress and severe body-shape concerns significantly associated with risk [18]. In Saudi Arabia, a cross-sectional study of 417 medical students reported an EAT-26-based prevalence of 32.1%, with female sex and overweight/obesity identified as important predictors [19].

Similarly, a study among medical students in Lebanon reported substantial eating-disorder risk using both SCOFF and EAT-26 instruments [20].

These differences demonstrate the substantial variation that exists between studies and reinforce the observation that prevalence estimates depend heavily on the characteristics of the study population and the screening instrument employed.

The 9.8% observed in the present study is also important when considered against more recent evidence from Africa. A 2026 systematic review and meta-analysis involving 75 studies estimated that approximately 16.0% of individuals across African populations were at risk of eating disorders and 59.3% reported body-image dissatisfaction [21]. Although the populations included in that review were heterogeneous and cannot be directly equated with medical students at Rivers State University, the findings demonstrate that eating-disorder vulnerability is present within African populations and should not be regarded as exclusively a Western phenomenon.

The lower estimate observed in the present study may reflect differences in cultural perceptions of body size, dietary practices, socioeconomic circumstances, gender

composition, academic environment, or the screening instrument used. Fekih-Romdhane et al. specifically identified BMI, culture and research instrument as important sources of variation in estimates of eating-disorder symptoms among medical students [15].

It is important to note that the 9.8% is interpreted as the proportion identified as being at risk, rather than the prevalence of clinically diagnosed eating disorders. This is because the instruments used in the study are screening tools and do not establish a formal psychiatric diagnosis. This distinction is particularly important because a systematic review of the SCOFF found good overall screening characteristics but cautioned against assuming that a positive screening result represents a definitive diagnosis [22].

4.1.3 Diet Trends and Eating-Disorder Risk

Following diet trends was one of the strongest behavioural factors associated with eating-disorder risk in this study. A total of 193 respondents (79.1%) reported following diet trends, and this factor was significantly associated with eating-disorder risk ($\chi^2=27.8$, $p=0.001$).

This finding is important because contemporary dieting culture increasingly exposes young adults to restrictive dietary practices, weight-loss programmes and online nutritional advice. Although dieting does not inevitably lead to an eating disorder, rigid or appearance-driven dietary restriction may contribute to unhealthy relationships with food.

The relationship between dieting and eating-disorder vulnerability is particularly relevant among students receiving health-related education. A systematic scoping review among nutrition and dietetic students reported substantial levels of eating-disorder risk, orthorexia symptoms and body dissatisfaction, demonstrating that extensive nutritional knowledge does not necessarily protect students from problematic eating behaviours [23].

The present study's finding is also consistent with evidence from university settings showing that eating-disorder prevention interventions can reduce dieting, body dissatisfaction and eating-disorder symptoms [24]. A systematic review and meta-analysis of university-based prevention programmes found significant improvements in eating-disorder symptoms, dieting, body dissatisfaction and weight concerns among intervention groups [24].

This suggests that interventions at Rivers State University should distinguish between healthy nutrition education and potentially harmful restrictive dieting. Students should be encouraged to develop balanced eating practices rather than pursue rapid weight loss or rigid diet trends.

4.1.4 Body Comparison and Eating-Disorder Risk

Body comparison was another significant factor in the present study. Approximately 59.4% of respondents reported comparing their bodies with those of others, and this was significantly associated with eating-disorder risk ($\chi^2=5.30$, $p=0.021$).

Body comparison may influence eating behaviour through dissatisfaction with one's physical appearance and internalization of perceived social ideals. Contemporary social-media environments may intensify this process by providing continuous exposure to idealized or edited images.

Rodgers and Rousseau reported that highly visual and appearance-focused social-media content is associated with poorer body image, with younger individuals and people for whom appearance is closely connected with self-worth potentially being particularly vulnerable [25]. Similarly, Mink and Szymanski found that TikTok use among young adult college women was associated

with body dissatisfaction through upward appearance comparison and body surveillance [26]. Although the current study did not specifically measure social-media exposure, the significant association between body comparison and eating-disorder risk is consistent with this broader literature.

A 2023 study of university students further demonstrated that the type of social-media content, particularly weight-loss-related content, may be more important than the duration of social-media use in predicting body-image disturbance and disordered eating [27].

A study among university undergraduates in Lagos found substantial body-image dissatisfaction and identified weight-control strategies among Nigerian university students [28]. This provides useful local evidence supporting the relevance of body-image concerns among Nigerian university populations.

The finding in the present study therefore suggests that university-based prevention should include body-image education and critical media literacy, rather than focusing exclusively on eating behaviour.

4.1.5 Academic Stress and Eating-Disorder Risk

Academic stress was another major factor associated with eating-disorder risk. In the present study, 75.8% of respondents reported that academic stress affected their eating, and the association with eating-disorder risk was statistically significant ($\chi^2=21.32$, $p=0.001$).

This finding is consistent with evidence that medical education can generate considerable psychological and academic pressure. Rostad et al., studying 1,044 medical students in two Norwegian medical schools, found that

disturbed eating behaviour was associated with medical-school stress, worries about work and competence, financial concerns, mental distress and BMI [29].

Similarly, an international umbrella review found that medical students experience substantial psychological and behavioural problems, with stress and other mental-health difficulties being particularly prominent [30]. Eating-disorder symptoms were estimated to affect approximately one in ten medical students in the broader evidence base [19]

Recent evidence from Saudi Arabia also demonstrates the relationship between academic stress and eating behaviour. A study of 297 medical students found that most students experienced moderate or high levels of stress during examinations and examined the association between academic stress and dietary behaviour [31].

More recent evidence provides even stronger support for this relationship. A 2025 study among medical students during externship training found that moderate and severe academic stress were associated with substantially higher prevalence of probable eating disorders [32].

The finding from Rivers State University is therefore consistent with the broader evidence that academic pressure may influence eating-related behaviour. Medical training involves prolonged study hours, examinations, clinical responsibilities, competition and expectations of professional competence. These pressures may interfere with regular eating patterns and may encourage maladaptive coping behaviours.

However, because the present study was cross-sectional, academic stress cannot be established as a cause of eating-disorder risk. It is possible that students already experiencing eating-related problems also experience greater psychological distress and perceive academic demands more negatively.

4.1.6 Seeking Counselling and Eating-Disorder Risk

A particularly strong association was observed between seeking counselling and eating-disorder risk. Among respondents, 82.4% reported having sought counselling, and the association was statistically significant ($\chi^2=86.9$, $p=0.001$). This means that students who experience psychological distress, eating difficulties or other personal problems may be more likely to seek counselling.

This interpretation is supported by the broader literature showing that eating disorders frequently coexist with psychological distress. Medical students represent a particularly important group because they experience multiple academic and psychological stressors. The relationship between mental distress and disturbed eating behaviour was demonstrated in the Norwegian medical-

student study by Rostad et al. [29]. This finding demonstrates the importance of university counselling services. Counselling units may provide an opportunity for early identification of students experiencing eating-related problems. Universities should therefore ensure that counselling personnel are trained to identify eating-disorder symptoms and have clear referral pathways for specialist assessment.

4.1.7 Meal Skipping and Eating-Disorder Risk

Meal skipping was reported by 41.8% of respondents but was not significantly associated with eating-disorder risk ($p=0.65$).

Although meal skipping is commonly discussed in relation to disordered eating, the absence of a significant association in this study suggests that meal skipping alone may not adequately distinguish students at risk from those who are not. Students may skip meals because of lectures, clinical activities, financial limitations, lack of time or other practical circumstances.

This finding emphasizes the importance of evaluating eating behaviours within their broader psychological perspective. A single behaviour such as missing meals may not necessarily indicate pathological eating. In contrast, restrictive dieting combined with body dissatisfaction, appearance comparison and psychological distress may provide a more meaningful indication of risk.

The finding is therefore not necessarily inconsistent with the broader literature. Rather, it suggests that the pattern and motivation underlying eating behaviour may be more important than an isolated behaviour.

4.1.8 Professional Pressure and Eating-Disorder Risk

Perceived professional pressure was not significantly associated with eating-disorder risk in this study ($p=0.26$).

This finding differs somewhat from evidence indicating that concerns about future competence, academic expectations and medical-school stress may contribute to disturbed eating behaviours among medical students. Rostad et al. found that worries about work and competence were independently associated with disturbed eating behaviour [29].

The discrepancy may be explained by differences in how professional pressure was measured. The single questionnaire item used in the present study may not capture the complexity of professional expectations, perfectionism, competition, fear of failure or concerns about future competence.

Evidence from college populations indicates that perfectionism may also play an important role in disordered eating. Rand-Giovannetti et al. reported that perfectionism

was associated with disordered eating among a racially and ethnically diverse college sample and examined self-compassion, distress tolerance and social problem-solving as possible mechanisms [33].

Future research at Rivers State University could therefore measure professional pressure using validated multidimensional scales rather than a single question.

4.1.9 Relationship between Knowledge and Risk Factors

The study demonstrated an important relationship between knowledge and eating-related behaviours. Students who skipped meals had significantly lower knowledge scores than those who did not skip meals (6.75 vs 8.03; $p=0.001$). Conversely, students who followed diet trends, reported academic stress affecting eating, or had sought counselling had significantly higher knowledge scores than their respective comparison groups. Body comparison was not significantly associated with knowledge score ($p=0.32$).

These findings suggest that knowledge alone may not be sufficient to prevent eating-disorder risk. Students can possess good theoretical knowledge of eating disorders while simultaneously engaging in behaviours that may increase vulnerability.

This is an important finding for medical education. Medical students may understand the health consequences of unhealthy eating but still engage in restrictive dieting, appearance comparison or maladaptive responses to stress. Such behaviours may be influenced by social pressures, emotional regulation, academic demands and personal body-image concerns.

The 2024 umbrella review supports this interpretation and emphasized that eating-disorder risk among medical students is influenced by several interacting factors, including BMI, body image and psychosocial characteristics [16].

Similarly, evidence from university-based prevention studies indicates that interventions targeting psychological and behavioural processes can improve eating-disorder symptoms and related risk factors [24].

The finding that students following diet trends had higher knowledge scores is particularly informative. It may indicate that knowledge about nutrition and eating disorders does not necessarily result in healthy behavior but in some cases, greater nutritional awareness may even provide students with more information that can be used to pursue restrictive or appearance-focused diets.

Authors' Contributions

Nera Perpetual K-E conceptualized, planned, collected the data for the study and prepared the manuscript.

Ositadinma M.P also conceptualized, planned the study, interpreted results and proofread the manuscript.

All the authors' read and approved the final version of the manuscript.

Conflict of Interest

The Authors declare no conflict of interest

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