CORRESPONDENCE

Eating disorders among medical students at a private university in Uganda: a cross-sectional study

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Summary

Eating disorders are serious conditions that affect how people think and behave around food, and their body image. This study investigated how common eating disorders are among medical students in Uganda, and the factors linked to their occurance. The findings revealed that 16.6% of medical students showed signs of possible eating disorders based on the SCOFF screening tool. Those at high risk included female sex, individuals with multiple sexual partners, and those experiencing suicidal thoughts. These results highlight the importance of raising awareness about eating disorders in academic settings, particularly in medical institutions, and underscore the need for early identification and targeted interventions. Further research is necessary to explore sociocultural influences on eating disorders in Uganda and other low-resource settings to inform culturally appropriate prevention and treatment strategies.

Keywords Eating disorders, Bulimia, Medical students, University students, Sexual partners, Suicidal ideation, Mental health, Females, Feeding disorders, Uganda

Short communication

Eating disorders are severe mental health conditions characterized by disordered eating behaviors and preoccupations with body weight and shape, adversely affecting physical health and psychosocial well-being [1, 2]. While prevalence data from high-income countries suggest rates of 10–20% among university students [3, 4], evidence from low- and middle-income countries

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This analytical cross-sectional study examined the prevalence and factors associated with eating disorders among medical students at King Ceasor University (KCU), a private university in Kampala, Uganda. The study, conducted between September and December 2024, targeted students enrolled in the Bachelor of Medicine and Bachelor of Surgery programs. Of the 571 eligible students, 224 participated, yielding a response rate of 58.3%. Data were collected using validated tools, including the SCOFF questionnaire for screening for possible eating disorder [9, 10] and the nineth item from the Patient Health Questionnaire-9 (PHQ-9) for suicidal ideation [11, 12], which asks, "During the past two weeks, have you had thoughts that you would be better off dead

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or of hurting yourself in some way?" with a Yes or No response. Sociodemographic and behavioral factors such as age, gender, marital status, substance use, and sports participation were assessed. Questions on sexuality,

Table 1	Participant characteristics	distribution	prevalence	of a
positive !	SCOFF screen			

Variable	All par- ticipants n (%)	SCOFF screen positive for eating disorders		t/χ² (p value)
	224	No n (%)	Yes n (%)	
Age [mean (SD)]	27 (5.6)	28 (5.7)	26 (5.0)	1.93 (0.054)
Sex				
Male	141 (63.0)	121 (64.7)	20 (54.0)	1.50
Female	83 (37.0)	66 (35.3)	17 (46.0)	(0.220)
Year of Study				
1st Year	28 (12.5)	22 (11.8)	6 (16.2)	2.70
2nd Year	9 (4.0)	8 (4.3)	1 (2.7)	(0.611)
3rd Year	43 (19.2)	35 (18.7)	8 (21.6)	
4th Year	86 (38.4)	70 (37.4)	16 (43.2)	
5th Year	58 (25.9)	52 (27.8)	6 (16.2)	
Marital Status				
Single	168 (75.0)	139 (74.3)	37 (78.4)	0.27
Married	56 (25.0)	48 (25.7)	8 (21.6)	(0.603)
Employment Status				
Unemployed	157 (70.1)	130 (69.5)	27 (73.0)	0.18
Employed	67 (29.9)	57 (30.5)	10 (27.0)	(0.675)
Had children				
No	171 (76.3)	139 (74.3)	32 (86.5)	2.53
Yes	53 (23.7)	48 (25.7)	5 (13.5)	(0.112)
Age at Sexual Debut				
Virgin	110 (49.1)	89 (47.6)	21 (56.8)	2.64
<18	21 (9.4)	20 (10.7)	1 (2.7)	(0.267)
>18	93 (41.5)	78 (41.7)	15 (40.5)	
No. of Current sexual partners				
0 or 1	193 (87.7)	163 (88.6)	30 (83.3)	0.77
>1	27 (12.3)	21 (11.4)	6 (16.7)	(0.380)
History of Sexual abuse				
No	211 (94.2)	176 (94.1)	35 (94.6)	0.01
Yes	13 (5.8)	11 (5.9)	2 (5.4)	(0.910)
Active sports participation				
No	156 (69.6)	132 (70.6)	24 (64.9)	0.48
Yes	68 (30.4)	55 (29.4)	13 (35.1)	(0.489)
Recent history of Substance Use				
No	162 (72.3)	136 (72.7)	26 (70.3)	0.09
Yes	67 (27.9)	51 (27.3)	11 (29.7)	(0.0760)
Suicidal ideations				
No	210 (93.8)	178 (95.2)	32 (86.5)	3.99
Yes	14 (6.2)	9 (4.8)	5 (13.5)	(0.046)

including sexual debut and number of sexual partners, were collected to explore their potential role as psychosocial stressors contributing to positive screen for possible eating disorders. Sexual health and behavior are often intertwined with body image concerns, societal expectations, and mental health outcomes, making them critical factors to assess in this context [13–15]. Additionally, research suggests that impulsivity, a trait commonly associated with disordered eating, may also manifest in high-risk sexual behaviors, including having multiple sexual partners [16, 17]. This association underscores the importance of evaluating sexual behaviors in studies on eating disorders, as they may reflect broader patterns of dysregulated impulsive behaviors.

Data analysis was conducted using STATA version 17.0. Descriptive statistics were summarized with frequencies, percentages, means, and standard deviations. Normality was assessed using the Shapiro-Wilk test and histograms. Chi-square and Student's t-tests identified differences in categorical and continuous variables, respectively. Logistic regression was used to identify factors associated with a positive screen for possible eating disorders, with statistical significance set at p < 0.05.

The average age of the 224 participants medical students enrolled in the study was 27 ± 5.6 , and the majority were male (63%). Most were unmarried (75%), unemployed (75.1%), and in their fourth year of study (38.4%). A positive SCOFF screen was more among individuals with suicidal ideations than those without suicidal ideations (13.5% vs. 4.8%, $\chi^2 = 3.99$, *p*-value = 0.046). (Table 1).

The prevalence of a positive SCOFF screen was 16.5% (n = 37), with that of possible bulimia nervosa being 13.4% (n = 30). (Fig. 1)

At logistic regression analysis, the likelihood of having a positive SCOFF screen increased with with being female [adjusted odds ratio (aOR) = 2.59, 95% confidence interval (CI) = 1.07-6.30, *p*-value = 0.035], having multiple sexual partners [aOR = 4.48, CI = 1.12-17.88, *p*-value = 0.034] and having suicidal ideations [aOR = 4.64, CI = 1.18-18.21, *p*-value = 0.028]. See Table 2.

In this first study about eating disorders in Uganda, the finding that 16.5% of medical students in a private university in Uganda had a positive SCOFF screen is within the range reported in previous studies conducted among university students globally, with documented rates of 10–20% in high-income settings [18, 19] and around 5–15% in LMICs [5, 6]. However, it exceeds the 7.5% reported among female medical students in India, potentially due to differences in screening tools [7]. The SCOFF identifies positive screen possible eating disorder [9], whereas the EAT-26



Fig. 1 Frequency of eating disorders

used in India evaluates the severity of disordered eating behaviors [20]. Additionally, cultural differences may explain this disparity, as sociocultural pressures in Uganda—shaped by both traditional and Western ideals—may drive higher body dissatisfaction [21]., compared to India, where cultural norms may reduce emphasis on thinness [22].

Female students in this study were more likely to have positive SCOFF screen, reflecting global trends [21, 23, 24]. This gender disparity may stem from biological factors, psychological tendencies like perfectionism, and sociocultural pressures emphasizing an idealized thin body image [24]. These findings underscore the need for gender-sensitive interventions, such as culturally tailored mental health programs, to address body image concerns and challenge societal norms promoting unrealistic beauty standards.

An intriguing finding was the association between having multiple sexual partners and an increased prevalence of positive SCOFF screen. This may reflect underlying psychosocial stressors, such as anxiety, low self-esteem, and emotional instability, all of which are known risk factors for disordered eating [13–15, 25, 26]. Individuals with disordered eating often experience heightened impulsivity, which has been linked to both high-risk sexual behaviors and maladaptive eating patterns [16, 17]. Impulsivity-driven behaviors, such as binge eating, purging, and risky sexual encounters, may serve as coping mechanisms for underlying emotional distress, including anxiety, low self-esteem, and emotional instability-all of which are established risk factors for disordered eating [27]. The relationship may also be influenced by societal stigma surrounding sexuality, which disproportionately affects women in Uganda, compounding distress related to body image and sexual behavior [28, 29]. Additionally, individuals with multiple partners may engage in risk-taking behaviors or unhealthy eating patterns, further contributing to the observed association [30]. These findings highlight the importance of integrating sexual health, emotional well-being, and body image support into university mental health interventions.

The association between positive SCOFF screen and suicidal ideation observed in this study aligns with established evidence linking these conditions to psychological distress, depression, and low self-esteem [31-35]. This highlights the urgency of holistic mental health interventions for medical students. Universities should prioritize mental health education, reduce stigma, and provide accessible counseling services to support students at risk of eating disorders and related mental health challenges.

Table 2 Logistic regression analysis for factors associated with ED

Variable	Bi variable analysis		Multivariable analysis	
	Crude Odds ratio (95% confidence interval)	<i>p</i> -value	Adjusted Odds ratio (95% confidence interval)	<i>p-</i> value
Age	0. 0.93 (0.86–1.00)	0.057	0.95 (0.83–1.08)	0.422
Gender				
Male	1 (reference)		1 (reference)	
Female	1.56 (0.76–3.18)	0.222	2.59 (1.07-6.30)	0.035
Year of Study				
1st year	1 (reference)		1 (reference)	
2nd year	0.46 (0.48–4.42)	0.500	0.31 (0.02-3.93)	0.364
3rd Year	0.84 (0.26–2.74)	0.770	0.73 (0.18–2.97)	0.662
4th Year	0.84 (0.29-2.40)	0.742	0.91 (0.25-3.32)	0.893
5th Year	0.42 (0.12-1.46)	0.173	0.41 (0.09–1.90)	0.257
Marital status				
Single	1 (reference)		1 (reference)	
Married/cohabiting	0.80 (0.34-1.87)	0.604	4.33 (0.75-25.00)	0.101
Employment Status				
Unemployed	1 (reference)		1 (reference)	
Employed	0.85 (0.38-1.86)	0.675	1.83 (0.59–5.70)	0.297
Had children				
No	1 (reference)		1 (reference)	
Yes	0.45 (0.17–1.23)	0.119	0.17 (0.22–1.28)	0.085
Age at Sexual Debut				
Virgin	1 (reference)		1 (reference)	
<18	0.21 (0.03-1.67)	0.141	0.14 (0.22–1.28)	0.107
>18	0.82 (0.39–0.38)	0.582	0.69 (0.01–1.52)	0.435
No. of Current sexual partners				
0 or 1	1 (reference)		1 (reference)	
>1	1.55 (0.58–4.17)	0.383	4.48 (1.12–17.88)	0.034
History of Sexual abuse			0.98 (0.37-2.61)	0.968
No	1 (reference)			
Yes	0.91 (0.19-4.31)	0.910	1 (reference)	
Involvement in sports			4.64 (1.18–18.21)	0.028
No	1 (reference)		1 (reference)	
Yes			1.64 (0.70–3.82)	0.251
Recent history of substance Use				
No	1 (reference)		1 (reference)	
Yes	1.13 (0.52–2.45)	0.760	1.67 (0.50–2.75)	0.720
Suicidal ideations				
No	1 (reference)		1 (reference)	
Yes	3.09 (0.97–9.82)	0.056	4.01 (1.09–14.67)	0.036

These findings emphasize the need for further research to explore cultural, psychological, and behavioral determinants of eating disorders in Uganda and to develop targeted interventions to improve the mental health and well-being of medical students. While this current study provides valuable insights, we recommend that future research should include a broader demographic to better understand eating disorder prevalence and associated factors across different socioeconomic backgrounds.

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Author contributions

J.A. wrote the main manuscript text and S.O.S. prepared Table 1, and 2; Fig. 1. All authors reviewed the manuscript.

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Data availability

Data will be made available to appropriate academic parties on request from the corresponding author.

Declarations

Ethics approval and consent to participate

The Mulago Hospital Research Ethics Committee (MHREC 2810) approved the study, which was conducted according to the 2013 Declaration of Helsinki guidelines. Before enrollment, all participants provided written informed consent, and the university dean of students granted permission for data collection.

Competing interests

The authors declare no competing interests.

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