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Socio-demographics and Mental Health Status on Eating Disorders among In-School Adolescents in Ile-Ife, Nigeria

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Abstract

The study explored the roles of socio-demographic variables (age, gender, and socioeconomic status) and mental health status in the prevalence of eating disorders among in-school adolescents in Ile-Ife Central Local Government Area, Osun State. A descriptive survey design was employed for this study, using a purposively selected sample of 205 respondents (82 females and 123 males) aged 14 to 19 years (M = 16.5 years; SD = 1.5 years). Data were collected on socio-demographic variables such as age, gender, religion, family socioeconomic status, Eating Disorder Examination Questionnaire Short (EDE-QS), and General Health Questionnaire (GHQ). The results revealed that only one percent of the respondents reported severe levels of eating disorders, while 62% reported inadequate (poor) mental health. The results also revealed that the prevalence of eating disorders was influenced by age ($F_{2,203} = 1.91$, $p < 0.05$), with the late-adolescents (17-19 years old) dominating the moderate eating disorder category. There was a gender difference between Males (M = 17.73; SD = 4.87) versus females (M = 10.75; SD = 5.19) in the prevalence of eating disorders (t203 = 0.93, $p < 0.05$). The results further demonstrated the influence of socioeconomic status ($F_{2,203} = 1.01$, $p<0.05$) and mental health status ($F_{2,203} = 1.44$, $p< 0.05$) in the prevalence of eating disorders. The study concluded that though the prevalence of eating disorders found among these in-school adolescents was relative, there was a pressing need to develop strategies to prevent the situation from getting worse.

Keywords: Age, Eating disorder, Family socioeconomic status, Gender, In-school adolescents, Mental health.

Introduction

Eating disorders, characterised by severe disturbances in eating behaviours and attitudes, represent a significant global public health concern, with far-reaching consequences for individuals' physical and psychological well-being. Among the demographic groups affected by eating disorders, adolescents, particularly those attending schools, constitute a vulnerable population. The transitional phase of adolescence, marked by physical, emotional, and social changes, can give rise to heightened susceptibility to eating disorders. In Nigeria, a country experiencing rapid socio-cultural shifts and urbanisation, understanding the dynamics of eating disorders among in-school adolescents is paramount. Like many other nations, Nigeria

grapples with the rising prevalence of eating disorders among its youth (Adebimpe et al., 2021). Therefore, this study aims to explore the multifaceted interplay of age, gender, socioeconomic status, and mental health in predicting eating disorders among in-school adolescents in the Ile-Ife Local Government Area of Nigeria. Eating disorders (ED) are serious mental health conditions characterised by pathological disturbances in attitudes and behaviours related to food. According to the American Psychological Association (APA, 2023), eating disorders include anorexia nervosa, bulimia nervosa, and binge-eating disorder. Other eating-related disorders, such as pica and rumination, are usually diagnosed in infancy or early childhood (American Psychological Association, 2023). The National Institute of Mental Health (NIMH, 2023) states that individuals with anorexia nervosa avoid food, severely restrict food intake, or eat very small quantities of only certain foods. They may also weigh themselves repeatedly, even dangerously underweight (National Institute of Mental Health, 2023). According to López-Gil et al. (2023), EDs are defined according to individual signs and symptoms and with degrees of severity detailed in the *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition) (*DSM-5*) (APA, 2022), as well as in the World Health Organisation *International Classification of Diseases, 11th Revision (ICD-11) (*World Health Organisation - WHO, 2023). Similarly, EDs are recognised among the mental disorders in the Global Burden of Diseases (GBD, 2022), Injuries and Risk Factors Study (2019) and are currently a public health concern in most mid- and high-income countries. Treasure et al. (2010) acknowledged earlier this trend because the prevalence of EDs in young people has markedly increased over the past 50 years. Chesney et al. (2014) mentioned that EDs are among the most life-threatening of all mental health conditions, further accounting for 17 361.5 years of life lost (between 1990 and 2019) and caused 318.3 deaths worldwide in 2019 (GBD, 2022).

Adolescence is a crucial developmental stage, marked by rapid physical, cognitive, and socio-emotional changes. These transformations, coupled with societal pressures and the quest for identity, can make adolescents particularly vulnerable to mental health challenges, including eating disorders. Problems associated with eating disorders among in-school adolescents worldwide and in Nigeria are multifaceted. According to a systematic review and meta-analysis published in the JAMA Pediatrics by López-Gil et al. (2023), disordered eating is prevalent among children and adolescents. Emotional suffering often underlies eating disorders, and mental health problems such as anxiety and depression play a significant role (McCarthy, 2022). Considering that mid to late adolescence is a peak period of eating disorders and their symptoms, knowing and understanding the proportion of disordered eating among youths is crucial. Eating disorders can lead to severe malnutrition, affecting nearly every organ in the body. According to Hopkins University (2023), malnutrition can cause a dangerously low heart rate, abnormal heart rhythm, dizziness, fainting, and even heart failure. In Nigeria, adolescents with chronic health conditions requiring dietary control may be at an increased risk of disordered eating (Hornberger et al., 2021). Although the prevalence varies according to study populations and definitions used, it is recognised that eating disorders are common in adolescents and even more common in young adults (Smink et al., 2012; Galmiche et al., 2019). The consequences of eating disorders are far-reaching and require comprehensive support systems to address affected individuals' physical, psychological, and emotional well-being. As a reflection of maturity and cognitive development, age may play a pivotal role in shaping adolescents' perceptions about their bodies and relationships with food. Hazlett (2022) mentioned that caregivers play a crucial role in helping teens develop a peaceful relationship with food and their bodies. According to Harbron and Booley (2013), caregivers in Nigeria need to address their feelings about and relationships with food, as this can impact how they communicate with their teens. Literature has suggested promoting healthy body image by discussing how food fuels the body and avoiding labeling foods as good or bad (Russell & Ryder, 2001; Diedrichs et al., 2011; Mapis, 2020). Adolescents' body image

problems can stem from believing their mothers want them to be thin (Oloruntoba-Oju, 2007; Frisén & Holmqvist, 2010). By fostering open conversations about food and body image, caregivers can help adolescents develop a positive relationship with their bodies and make informed choices about food.

Also, gender, as a determining factor in the onset of eating disorders, has been a central focus in psychological and medical research. Globally, a pattern emerges where females consistently exhibit a higher susceptibility to these disorders compared to their male counterparts (Murray, 2017). The Diagnostic and Statistical Manual of Mental Disorders (DSM-V) underscores this disparity, highlighting that within the age bracket of 11-19 years, the prevalence rates for eating disorders stand at a striking 5.7% for girls, in contrast to a notably lower 1.2% for boys. This trend, worryingly, has shown a rise over the years (Smink et al., 2012). As societies worldwide, including Nigeria, undergo rapid cultural and societal shifts, the traditional understanding of gender roles is evolving. This change brings new pressures and challenges for both males and females, which may alter the dynamics of gender-related prevalence of eating disorders. Hence, there is an imperative need to investigate how these global trends and findings translate within the specific socio-cultural milieu of Nigeria. Family socioeconomic status (SES) serves as a multifaceted measure reflecting not only a family's financial footing but also their reach into societal resources and their perceived position within the societal hierarchy (Huryk et al., 2021). A family's SES can significantly influence an adolescent's dietary patterns; for instance, families with higher SES might have better access to nutritious foods, while those on the lower end might rely on less healthy, cost-effective options. Additionally, societal standards of beauty, which often propagate thin ideals, might be more acutely felt by those in higher SES brackets due to their increased exposure to media and greater purchasing power for beauty and fashion products. Furthermore, the unique stressors and pressures stemming from one's socioeconomic position, be it the anxieties of maintaining a particular lifestyle in higher SES groups or the struggles of financial instability in lower SES groups, can contribute to the mental and emotional factors that predispose adolescents to eating disorders (Huryk et al., 2021). Furthermore, mental health, a crucial and often overlooked component, is intrinsically linked to eating behaviours. Adolescents grappling with mental health challenges, such as depression or anxiety, may be predisposed to a heightened risk of manifesting eating disorders (NIMH, 2023). Johnson et al. (2002) reported that Adolescents with eating disorders had a substantially elevated risk for physical and mental health conditions. Problems with eating or weight during adolescence predicted poor health outcomes during adulthood, regardless of whether an eating disorder had been present (Johnson et al., 2002). Understanding the link between overall mental well-being and eating behaviours can offer invaluable insights into preventive and interventional measures. Research on eating disorders among Nigerian in-school adolescents is scarce, especially in the Ile-Ife region. The purpose of this research is to provide important new information about the prevalence and risk factors of eating disorders in this particular group. This study seeks to address these gaps in the literature and contextually examine the dynamics between age, gender, family socioeconomic status, mental health, and their combined influence on predicting eating disorders among in-school adolescents in Nigeria, specifically in the Ile-Ife Central Local Government Area of Osun State. Through this research, the researchers aim to provide a comprehensive understanding of the multifaceted determinants of eating disorders in Nigerian adolescents and offer recommendations for targeted interventions.

Objectives

i. To ascertain the prevalence of eating disorders and mental health status among in-school adolescents in Ile-Ife Central Local Government Area, Osun State.
ii. To examine the degree to which age predicts eating disorders among in-school adolescents.
iii. To investigate the extent to which gender differences also predict eating disorders among in-school adolescents.

iv. To examine the extent to which family socioeconomic status predicts eating disorders among in-school adolescents.
v. To examine the extent to which mental health status predict eating disorder among in-school adolescents.

Hypotheses

i. Age will significantly predict eating disorders among in-school adolescents.
ii. There will be a significant gender difference in eating disorders among in-school adolescents
iii. Family socioeconomic status will significantly predict eating disorders among in-school adolescents.
iv. Mental health status will significantly predict eating disorders among in-school adolescents.

Methods

The study adopted a descriptive survey design with the aim of examining the role of sociodemographic variables and mental health as predictors of eating disorders among in-school adolescents in Nigeria. This necessitated the use of primary data sourced through administering a questionnaire. The independent variables for the study are sociodemographic variables (age, gender, and socioeconomic status of family) and mental health status, while the dependent variable is eating disorders.

Study Population

The population of this study comprised 205 in-school adolescents purposely selected from two secondary schools (public and private registered secondary schools) in the Ile-Ife metropolis. The sample of 205 in-school adolescent teachers was determined using Araoye's (2004) Sample Size Calculator.

$$n = \frac{Z^2 * P(1-P)}{d^2}$$

Where:
n = is the sample size,
Z = is the statistic corresponding to the level of confidence,
P = is the expected prevalence rate, which is 14.1%, as Fadipe et al. (2017) reported in Disordered eating attitudes.
d = is precision (corresponding to effect size)

$$n = \frac{1.96^2 X 14.1\%(1-148.1\%)}{0.05^2}$$

$$n = \frac{3.8416X0.141X0.859}{0.0025}$$

n = 186.178 ~ 186.18
Considering a 10% attrition rate = 18.62
Total respondents = 186.18 + 18.62 = 204.79 ~ 205 respondents

Demographic characteristics showed that their age ranges from 14 to 19 years (M = 16.5 years; SD = 1.5). Their gender revealed that 82 (40.1%) were female while 123 (59.9%) were male. In terms of religion, 69 (33.7%) practised Islam, 135 (65.9%) were Christians, and one (0.4%) practised traditional religion. In terms of socioeconomic status of the family, 41 (20.0%) reported high, 103 (50.0%) reported moderate, and 61 (30.0%) reported low. Regarding parent's level of education, first, for mothers, it was reported that 62 (30.0%) reported their highest level of education as secondary or below, 41 (20.0%) had a diploma, 82 (40.0) had a bachelor's degree, and 20 (10%) had a postgraduate degree. For the father's highest level of education, 62 (30.2%) had secondary or below as their highest level of education, 27 (13.2%) had a diploma, 73 (35.6%) had a bachelor's degree, and 43 (21%) had a postgraduate degree. As for school

attended, 103 (50.2%) attended Private school, while 102 (49.8%) attended public school.

Instrumentation

The instrumentation for this study was divided into three segments. The first segment has the personal data form (PDF), which has the sociodemographic variables of respondents like age, gender, religion, family socioeconomic status (High, Moderate, Low), mother's highest level of education, father's highest level of education, and school attended (public or private).

Eating disorder: The 12-item Eating Disorder Examination Questionnaire Short (EDE-QS), developed by Gideon et al. (2016), was used to measure eating disorders in this study. The EDE-QS was derived from the Eating Disorder Examination Questionnaire (EDE-Q) by Fairburn and Beglin (1994) and intended to be shorter. The EDE-QS was developed and validated by Gideon et al. (2016) for use with individuals with eating disorders such as Anorexia Nervosa – Restrictive subtype, Anorexia Nervosa – Binge/Purge subtype, Bulimia Nervosa, Binge Eating Disorder, and other specified feeding and eating disorders (OSFED). It was designed for use in routine outcome assessment, including session-by-session monitoring. The EDE-QS comprises four domains: Eating concern (items 1-3), Weight concern (Items 4-6), Shape concern (Items 7-9) and Dietary restraint (Items 10-12). These domains and items in the EDE-QS are designed to assess key aspects of eating disorder symptomatology over the past 7-days, with sample questions including "Have you been deliberately trying to limit the amount of food you eat to influence your weight or (whether or not you have succeeded)?"; "Has thinking about your weight or shape made it very difficult to concentrate on things you are interested in (such as working, following a conversation or reading)?"; "Have you tried to control your weight or shape by making yourself sick (vomit) or taking laxatives?"; and "On how many of these days *(that is, days on which you had a sense of having lost control over your eating*) did you eat what other people would regard as an unusually large amount of food in one go?". Each item carries the 4-point Likert-type response form, ranging: "0 days" = 0, "1-2 days" = 1, "3-5 days" = 2, and "6-7 days" = 3. Item scores were added together to obtain a total of eating disorder scores. The total score ranged from 0 to 36, with higher scores indicating a higher level of eating disorder experienced. Researchers and clinicians use the EDE-QS as a brief screening tool to evaluate these domains in individuals at risk for or experiencing eating disorders. The computed scores were categorised into three levels of ED: low (1–12), moderate (13–24) and severe (25–36). The response scale was shortened during the development of the EDE-QS to reduce cognitive demand and because respondents were not making full use of the 0–6 scale (some original categories were not used consistently with respondents' ED severity), as observed in Rasch analysis results (Gideon et al., 2016). Cronbach's alpha obtained in this sample was .91, indicating excellent internal consistency (Gideon et al., 2016). The current study found a reliability coefficient of 0.85 among in-school adolescents.

Mental Health: The 28-item General Health Questionnaire (GHQ) by Goldberg (1978) was used to measure mental health status in this study. The GHQ-28 comprises four domains: a) Somatic symptoms (items 1-7), b) Anxiety-insomnia (items 8-14), c) Social Impairment (items 15-21), and d) Depression (items 22-28). The GHQ instrument assesses the general perception of health based on 28 items, and sample questions include items like Have you "been feeling perfectly well and in good health?, "Lost much sleep over worry?", "been managing to keep yourself busy and occupied?", and "been able to enjoy your normal day-to-day activities?". For this study, responses are scored based on a four Likert format, ranging from 0-3, where 0 = "Not at all", 1 = "No more than usual"; 2 = "Rather more than usual" and 3= "Much more than usual". The four sections' overall values are further added to obtain the overall presence of a psychiatric case. Thus, total scores can range from zero to 84. Using this method, a total score of 23/24 is the threshold for the presence of distress. Alternatively, the GHQ-28 can be scored with a binary method where "Not at all" and "No more than usual" score '0', and "Rather more than usual" and "Much more than usual" score '1'. Using this method, any score above 4

indicates the presence of distress or 'caseness'. In the current scientific literature, the reliability of Cronbach´s α = .94 (Vergara-Moragues & González-Saiz, 2020) and α = .95 (Gibbons et al., 2004) has been reported. The GHQ-28 has been used in Nigeria among cleft lip patients in Sokoto by Yunusa and Obembe (2013). The current study found a reliability coefficient of 0.89 for in-school adolescents.

Procedure

While administering the questionnaires, the researchers engaged with the selected schools' respondents. Upon their arrival at these schools, the researchers initiated the process by obtaining permission from the school principals. Once the principals granted permission, they introduced the researchers to the respective head teachers of each class. These head teachers then guided the researchers to various classrooms where the participants were located. The researchers took a moment to briefly explain the study's purpose to the participants, ensuring they understood the essential information required to complete the questionnaire. Importantly, the researchers sought the participants' consent to participate in the study, which was documented through signing consent forms. It was emphasised that participation in the study was entirely optional, and participants had the freedom to withdraw at any point if they chose to do so. Following the consent process, participants received copies of the research questionnaire for completion. The researchers expressed their appreciation to the participants for their involvement and reassured them about the confidentiality of the information they provided. If participants had any further questions or needed clarifications regarding the study, the researchers left their contact details as a resource for additional inquiries.

Data Analysis

Data collected in the study were analysed using both descriptive and inferential statistics. Descriptive statistics, such as mean, standard deviation, frequency, and percentage counts, were used to describe the respondents and aggregate the data. Inferential statistics such as analysis of variance (ANOVA) was used to ascertain hypotheses one, three and four, while hypothesis two was tested using an independent test, which all stems from the objective present study. The analysis was carried out with the IBM/SPSS Version 26.0.

Results

Description of Participant Mental Health Status and Eating Disorders

The descriptive statistics indicated that 127(62%) of the participants scored below 24, indicating that 62% had a presence of discomfort while 78(38%) did not. This suggests that in this particular study, more than half of the participants experienced some kind of health discomfort based on the evaluation using GHQ. The result also indicated that 35(17%) had no or low eating disorder, 168(82%) had moderate eating disorder, and 2(1%) had high eating disorder. Table I present those as mentioned earlier:

Table 1: Eating Disorder and Mental Health Evaluation

S/N	Variables	Low/Adequate Frequency (%)	Moderate Frequency (%)	High/Inadequate Frequency (%)
1	Eating Disorder	35(17)	168(82)	2(1)
2	Mental Health	78(38)	0(0)	127(62)

A cross-tabulation was also carried out to understand the relationships between the above categories. Table 2 presents the outcome of cross-tabulation descriptive analysis.

Table 2: Cross Tab. Descriptive Analysis

	Levels	Mental Health	
Eating Disorder		Inadequate Freq(%)	Adequate Freq(%)
	Low/Absence	22(62.85)	13(37.15)
	Mod	104(61.90)	64(38.10)
	Severe/High	1(50.00)	1(50.00)

Table 2 provides a cross-tabulation exploring the relationship between 'Eating Disorder Levels' and 'Mental health'. There are three levels of eating disorders: Low/Absence, Moderate, and Severe/High. Mental health has two categories: 'Inadequate' and 'Adequate'.

In the Low/Absence of Eating Disorder category, 62.85% (22 individuals) have inadequate Mental health, while 37.15% (13 individuals) have adequate Mental health. This indicates that even those with low or no apparent eating disorder have a significant majority with inadequate Mental health. For those with a Moderate Eating Disorder, 61.90% (104 individuals) have inadequate Mental health, and 38.10% (64 individuals) have adequate Mental health. This pattern is similar to the Low/Absence level, suggesting that about 62% of individuals have inadequate health, even with only a moderate eating disorder. The Severe/High Eating Disorder category presents an even split. One individual (50%) has inadequate Mental health, and one individual (50%) has adequate Mental health. Given that only two individuals are in this category, it is challenging to derive a broad conclusion. Across the categories, the proportion of individuals with inadequate Mental health remains relatively consistent, especially between the Low/Absence and Moderate levels. This consistency might indicate a potential relationship between eating disorders and inadequate Mental health. However, to form robust conclusions, further statistical analysis would be required.

Profile of Eating Disorders among Participants

This aspect of the result provides descriptive symptoms of the participants. Table 3 presents the outcome of the symptoms.

Table 3: Symptoms of Eating Disorder among Participants

Eating Disorder	**Body Concern**		**Weight Concern**		**Shape Concern**		**Dietary Concern**	
	Below Average Freq(%)	Above average Freq(%)	Below Average Freq(%)	Above average Freq(%)	Below Average Freq(%)	Above average Freq(%)	Below Average Freq(%)	Above average Freq(%)
Low/Absence	35(100)	0(0)	35(100)	0(0)	35(100)	0(0)	15(42.86)	20(57.14)
Mod	74(44.05)	94(55.95)	74(44.05)	94(55.95)	126(75.00)	42(25.00)	79(47.00)	89(53.00)
Severe/High	0(0)	2(100.00)	0(0)	2(100.00)	0(0)	2(100.00)	0(0)	2(100.00)

Table 3 breaks down symptoms of eating disorders among participants into four main concerns: Body, Weight, Shape, and Dietary. For each concern, participants are grouped as 'Below Average' and 'Above Average' based on the intensity or frequency of the symptom. Participants with a Low/Absence level of eating disorder show 100% (35 participants) below average for body, weight, and shape concerns. This indicates that none of these participants with low or no eating disorders manifest above-average concerns in these areas. However, in dietary concerns, there is a distribution of 42.86% (15 participants) below average and 57.14% (20 participants) above average, suggesting that dietary concerns are relatively prevalent even among this group. Those with a Moderate eating disorder have 44.05% (74 participants) below average and 55.95% (94 individuals) above average for both body and weight concerns. For shape concern, 75% (126 individuals) are below average, while 25% (42 participants) are above average. For dietary concerns, 47% (79 participants) are below average and 53% (89 participants) are above average, indicating a roughly even distribution. For the Severe/High eating disorder group, all participants (100% or 2 participants) score above average across all concerns: body, weight, shape, and dietary. This means those with severe symptoms consistently show high levels of concern in all areas. From this table, as the severity of the eating disorder

increases, there seems to be a trend towards above-average concerns across all categories. Nevertheless, specific nuances, like the pronounced dietary concerns even in the low or absent symptom group, offer deeper insights.

Description of in-school adolescents: Age and eating disorder

Table 4: Descriptive analysis of the developmental stage of in-school adolescents and eating disorders.

Eating Disorder	**Ages**		
	Early Adolescents	**Mid Adolescents**	**Late Adolescents**
Low/Absence	2(5.70)	8(22.85)	25(71.45)
Mod	11(6.55)	57(33.92)	100(59.53)
Severe/High	0(0)	1(50.00)	1(50.00)

The participants' ages were grouped into three developmental categories associated with in-school adolescents according to World Health Organisation (WHO, 2003). Participants within the age limits of 10-13 years were grouped as early-adolescents; 14-16 years were grouped as mid-adolescence; and 17-19 years were grouped as late-adolescence. The table shows eating disorders across three adolescent age groups: Early, Mid, and Late Adolescents. In the Low/Absence of Eating Disorder category, only 5.70% of Early Adolescents exhibit these symptoms, compared to 22.85% in Mid-Adolescents. However, a notable 71.45% of Late-Adolescents show low or absent signs, suggesting that as adolescents grow older, the likelihood of them having minimal eating disorder symptoms seems to increase. For those with a Moderate Eating Disorder, 6.55% of Early-Adolescents show symptoms. This percentage rises in Mid-Adolescents to 33.92% and is highest among Late-Adolescents at 59.53%. This pattern indicates that moderate symptoms of eating disorders become more common as adolescents age. In terms of Severe/High Eating Disorder, there are no reported cases among Early Adolescents. Mid and Late Adolescents have an individual with severe symptoms, representing 50% for each group. Given the small numbers, drawing a definite conclusion is challenging, but it suggests that more intense symptoms might emerge or become identifiable in the later adolescent years. The data implies that while minimal symptoms might increase with age, moderate symptoms are more prevalent in older adolescents. Although rare in this data set, severe symptoms appear during the mid to late adolescent years, emphasising the need for vigilance and support throughout adolescence.

Description of gender and eating disorder

Table 5: Descriptive analysis of eating disorders based on gender.

Eating Disorder	**Gender**	
	Male	**Female**
Low/Absence	19(54.29)	16(45.71)
Mod	103(61.31)	65(38.69)
Severe/High	1(50.00)	1(50.00)

The table offers a breakdown of eating disorders based on gender: In the Low/Absence of Eating Disorder category, there is a close distribution between males and females. 54.29% (or 19 individuals) are males, while 45.71% (or 16 individuals) are females, indicating a slightly higher number of males with minimal symptoms. For the Moderate Eating Disorder category, there is a more noticeable difference. Males represent 61.31% (or 103 individuals), while females account for 38.69% (or 65 individuals). This suggests that more males in this sample experience moderate symptoms compared to

females. In the Severe/High Eating Disorder category, the distribution is evenly split. Both males and females have one individual, representing 50% for both genders. Given the small numbers in this category, broad conclusions are challenging. From this data, it appears that males tend to have low to moderate symptoms slightly more than females. However, for severe symptoms, the distribution is equal between the genders. The broader context, including societal and cultural influences, would be essential for a comprehensive interpretation.

Description of family socioeconomic status and eating disorder

Table 6: Description of the participants' family socioeconomic status and eating disorders among participants.

Eating Disorder	**Family Socioeconomic status**		
	High	**Moderate**	**Low**
Low/Absence	8(22.86)	17(48.57)	10(28.57)
Mod	33(19.64)	85(50.59)	50(29.77)
Severe/High	0(0.0)	1(50.00)	1(50.00)

The table breaks down the occurrence of eating disorders across three family socioeconomic statuses (High, moderate and low). In the study, the occurrence of eating disorders was analysed in relation to the family socioeconomic status of participants. Three degrees of socioeconomic status were identified: High, signifying families with greater financial resources; Moderate, signifying families with medium financial resources; and Low, signifying families with financial difficulties. The participants' placement into these socioeconomic groups was done in an effort to investigate any relationships that might exist between the participants' eating disorders and their families' financial circumstances. In the Low/Absence of Eating Disorder category, 22.86% are from high socioeconomic families, 48.57% from moderate, and 28.57% from low socioeconomic backgrounds. This distribution suggests that individuals from moderate socioeconomic backgrounds have the highest occurrence of low or absent eating disorder symptoms.

For the Moderate Eating Disorder category, individuals from high socioeconomic backgrounds make up 19.64%, those from moderate backgrounds comprise 50.59%, and those from low socioeconomic backgrounds represent 29.77%. This indicates that individuals from moderate socioeconomic backgrounds also dominate the prevalence of moderate eating disorder symptoms. No individuals from high socioeconomic backgrounds are represented in the Severe/High Eating Disorder category. Both moderate and low socioeconomic groups have an individual each, accounting for 50.00% representation for both groups. This suggests an even distribution of severe symptoms between the moderate and low socioeconomic groups, but given the small numbers, broad conclusions are challenging. Overall, individuals from moderate socioeconomic backgrounds appear to be the most represented across all levels of eating disorder symptoms.

Hypotheses Testing

Table 7: ANOVA Showing the relationship between age and eating disorder

Groups	**Sum of Squares**	**Df**	**Mean Square**	**F**	**P-value**
Between Groups	45.37	2	22.68	1 .91	.04
Within Groups	5035.74	203	24.93		
Total	5081.10	205			

Table 7 indicated that age does have a significant relationship with eating disorders among in-school adolescents {F (2,203) = 1.91, p<0.05}. Thus, the hypothesis which states that age will significantly predict eating disorders among in-school adolescents is accepted. Testing for gender differences in eating disorders among in-school adolescents is presented in Table 8 below.

Table 8: Gender difference in eating disorders among in-school adolescents

Variable	**Department**	**N**	**Mean**	**S. D**	**Df**	***t***	***P***
Gender	Male	123	17.73	4.87	203	2.10	.03
	Female	82	10.75	5.19			

Table 8 revealed that there was a significant gender difference in eating disorders among in-school adolescents {t (203) = 0.93, p<0.05}. Thus, the hypothesis, which states that there were gender differences in eating disorders, is accepted. The result further indicates that family socioeconomic status will significantly predict eating disorders among in-school adolescents. Table 9 presents the summary of the analysis.

Table 9: ANOVA Showing the relationship between family socioeconomic and eating disorder

Groups	**Sum of Squares**	**Df**	**Mean Square**	**F**	**P-value**
Between Groups	55 .41	2	.20	1.01	.02
Within Groups	5080.70	203	25.15		
Total	5136.11	205			

Table nine indicated that there was a significant relationship between family socioeconomic status and eating disorders. Likewise, the higher the family socioeconomic impact increases the risk of eating disorders the lower the socioeconomic status, the higher the likelihood of having an eating disorder. In brief, the hypothesis which states that family socioeconomic status will significantly predict eating disorders among in-school adolescents is accepted. The last hypothesis was tested using ANOVA. The outcome of the analysis is presented in Table 10.

Table 10: ANOVA Showing the relationship between mental health and eating disorder

Groups	**Sum of Squares**	**Df**	**Mean Square**	**F**	**P-value**
Between Groups	1292.58	39	33.14	1.44	.029
Within Groups	3788.52	166	22.96		
Total	5081.10	205			

Table 10 revealed that mental health had a significant relationship with eating disorder {F (2,203) = 1.44, p<0.05}. Thus, the hypothesis which states that mental health has an impact on eating disorders among in-school adolescents is thereby accepted.

Discussion

The data paints a complex picture of eating disorders, characterised by interplays between age, gender, mental health, and family socioeconomic status. The study findings indicated that 84% of the participants had

moderate eating disorder, 17% had low/no eating disorder, and 1% had severe/high eating disorder. This finding was similar to Idehen et al. (2023) indication that several students (171 female undergraduates) were prone to eating disorders. However, prevalence differs, which could be due to the nature of the population under study. This was also noticed by Smink et al. (2012) and Galmiche et al. (2019). This study finding further showed intricate patterns of these three levels of eating disorder prevalence. These patterns were similar to Hornberger et al. (2021), who stressed that dietary control or concern is crucial in mitigating eating disorders. Similarly, Oloruntoba-Oju (2007) and Frisén and Holmqvist (2010) stressed that shape concern has been identified as a concern to adolescents, which could be linked to body image and dietary issues. Focusing on those with a low or absent level of eating disorder, there is an apparent lack of concern about body, weight, and shape, which suggests that these are potential indicators for more severe eating disorder presentations. Likewise, this suggests their potential role as markers for heightened severity of the disorder. However, it is worth noting that even among this group, dietary concerns were still relatively prevalent. This might indicate that such concerns could stem from broader societal pressures or general health considerations rather than being indicative of an eating disorder. For those with a moderate eating disorder, body and weight concerns seem almost evenly split, with a slight predominance of individuals exhibiting above-average concerns. Such a distribution suggests that while a considerable portion of this group has heightened concerns about body and weight, there remains a substantial cohort that does not perceive these areas as problematic despite the presence of a moderate eating disorder. This could indicate a nuanced relationship between subjective perception and objective symptom manifestation. Conversely, shape concerns show a distinct skew, with three-quarters of the group reflecting below-average concerns. This stark difference relative to body and weight concerns suggests that individuals with moderate eating disorders might differentiate or prioritise their concerns in unique ways. The reason for such a pronounced lack of shape concern demands further exploration. It might be rooted in cultural or social perceptions or stem from specific individual experiences and histories that deemphasise shape relative to other concerns. Dietary concerns, on the other hand, show a nearly even distribution. This might indicate that dietary concerns, irrespective of their intensity, are universal among those with a moderate eating disorder. Given that dietary habits and perceptions have a direct bearing on physical health, this nearly even distribution might underscore the intricate balance between perceived dietary adequacy and the risk of disordered eating patterns.

The Severe/High eating disorder group's unanimous above-average score across all concern domains is both revealing and concerning. When every individual within this category demonstrates pronounced concerns in body, weight, shape, and dietary habits, it brings to light the profound depth and breadth of distress associated with severe eating disorders. Such pervasive and intensified concerns suggest that severe eating disorders are not merely an exacerbation of symptoms seen in milder forms. Instead, they may represent a qualitatively distinct experience. The encompassing nature of these concerns, where no facet of one's physical self or dietary behaviour remains untouched, evokes the image of a relentless storm that leaves no corner unscathed. Every aspect of the individual's self-perception, from the silhouette they discern in the mirror to the food they contemplate on their plate, is a potential trigger for distress and negative introspection. This all-consuming nature of severe eating disorders transcends the physical realm. It is not merely about dissatisfaction with one's body or weight. It implies a deep-rooted psychological tumult where the individual's identity, self-worth, and sense of agency might be intertwined with these concerns. In such cases, the distress is not isolated to moments of dietary decision or self-evaluation but might permeate every moment of their daily life. The study findings interestingly revealed that as adolescents age, there seems to be a corresponding reduction in eating disorder symptoms. However, the majority of late adolescents still exhibit moderate symptoms. This highlights the need for age-specific interventions, possibly leveraging age-related

protective factors that come into play later in adolescence. There is a relatively balanced distribution of concerns among those with moderate eating disorders, but the pronounced lack of shape concerns stands out. This nuance needs to be explored further to effectively tailor therapeutic approaches. This further echoes Oloruntoba-Oju (2007) and Frisén and Holmqvist's (2010) notion that body shape is of major concern among adolescents. While most participants exhibit moderate eating disorder symptoms, there is a slight male predominance in both the low/absence and moderate categories. This does not outrightly echo Striegel-Moore et al. (2009), who indicate female dominance/preexposure to an eating disorder. This finding reflects Murray et al. (2017) notion that historically, the perception of males as rare in presenting eating disorders results in underrepresentation. The common ground between this study's findings and others (Striegel-Moore et al., 2009; Murray et al., 2017) is that there is a gender difference in eating disorders. However, the bone of contention is the marginal difference in favour of males and females. As this study finding indicated, males are at the receiving end regarding eating disorders, with Murray et al. (2017) buttressing it. In contrast, Striegel-Moore et al. (2009) difference was in favour of females. Thus, this calls for re-evaluating the gender dynamics in eating disorders. Contrary to common belief, males might be equally or even more susceptible to these conditions, underscoring the need to understand the male experience and pathology in the context of eating disorders.

The relationship between socioeconomic status (SES) and health outcomes has been extensively explored in various health research domains (Arentoft et al., 2015; Koch et al., 2022; Czepielewski et al., 2022). However, as our findings indicate, the intricacies of this relationship concerning eating disorders offer fresh insights that diverge from some conventional understandings. At first glance, it is noteworthy that individuals from moderate socioeconomic backgrounds appear prominently in both the low/absence and moderate eating disorder categories. Traditionally, eating disorders, especially anorexia nervosa, were often misconstrued as afflictions of the affluent (Andersen & Hay, 1985; Bruch, 2001; Thompson et al., 2023), perhaps due to the higher visibility of such cases in privileged demographics and popular media. This finding was in line with Koch et al. (2022) findings that individuals with high socioeconomic backgrounds are potentially at risk for eating disorders. However, individuals with lower socioeconomic status are more likely to be exposed to the condition. However, the strong representation of the moderate SES group in this study underscores that the relationship between economic status and eating disorders is more complex. This prevalence in the moderate SES category can be indicative of the unique challenges faced by this demographic. This study showed that the moderate bracket might grapple with aspirations and pressures associated with upward mobility while dealing with insecurities and vulnerabilities tied to their socioeconomic standing. The juxtaposition of wanting to fit into a higher SES bracket while contending with inherent limitations could lead to increased susceptibility to disorders related to body image and dietary habits. Conversely, the glaring absence of severe cases from the high socioeconomic group is intriguing. This does not necessarily imply that affluence is protective against severe eating disorders. Instead, it might suggest that individuals in higher socioeconomic brackets have better access to early interventions, leading to underrepresentation in severe categories due to timely treatment. Alternatively, societal and familial expectations, coupled with resources available to this group, might manifest differently regarding disorders, diverting from the traditional spectrum of eating disorders. Moreover, the struggles of those in the lower socioeconomic strata cannot be ignored. Limited access to nutrition, education, and healthcare, compounded by the daily stressors of financial instability, could increase vulnerability to various health issues, including eating disorders. The nature of these disorders might differ from those of higher SES groups, with factors such as food insecurity playing a significant role. In terms of implications, it underscores the need for targeted interventions that cater to the unique needs and stressors of each socioeconomic group. Awareness campaigns, early screening programs, and interventions should be designed with an

appreciation of these intricacies to ensure optimal efficacy.

A striking observation from the study is the significant prevalence of inadequate mental health, irrespective of the severity of eating disorder symptoms. This suggests that addressing only the eating disorder might not suffice; a comprehensive mental health approach is imperative, possibly focusing on underlying or coexisting conditions. This reflects the American Psychological Association's (APA, 2023) description of ED as a mental condition characterised by pathology disturbance in attitude. The prevalence of inadequate mental health, regardless of eating disorder severity, suggests that the two are not linearly related. It is plausible that an individual might manifest minor eating disorder symptoms but grapple with profound mental health challenges, or vice versa. This dispels any oversimplified assumptions that the severity of an eating disorder can be a direct gauge of one's overall mental well-being. Furthermore, it implies that the roots of eating disorders are multi-faceted. While societal, cultural, or familial pressures around body image and dietary habits might be immediate triggers, deeper underlying psychological struggles or traumas might be driving these manifestations. It is also plausible that individuals with pre-existing mental health challenges could be more susceptible to developing eating disorders as a coping mechanism or as a manifestation of their broader psychological distress. Given this intricate relationship between eating disorders and mental health, intervention strategies must evolve beyond symptom-based treatments. Addressing only the eating disorder through dietary regulation or body-image counselling might provide temporary relief. However, it risks neglecting the deeper, underlying psychological challenges that could perpetuate the disorder or lead to relapses. The findings underscore the multifaceted nature of eating disorders, calling for holistic and nuanced interventions. Whether it is the individual's age, gender, mental health, or socioeconomic status, each factor brings its own set of challenges and considerations to the table.

Conclusion

The data reveals that eating disorders are far more intricate than dietary dysfunctions or body image disturbances. They exist at the confluence of age, gender, mental health, and socioeconomic dynamics. While significant portions of the studied group exhibited moderate eating disorder symptoms, it is vital to appreciate that behind this categorisation lies a myriad of individual experiences, perceptions, and struggles. The gendered understanding of eating disorders, historically biased towards females, requires recalibration. The nearly equal vulnerability underscores the necessity to understand and address the male experience within this domain. Socioeconomic implications are particularly noteworthy. Whereas affluence was once misconstrued as a predominant risk factor, our findings suggest that individuals from moderate SES backgrounds are significantly represented. This underscores the pressing need for tailored interventions that appreciate the unique challenges faced by different socioeconomic brackets. However, the heart of our discourse lies in the profound intersectionality of eating disorders with overall mental health. The two, while interrelated, are not always proportional in their manifestation. This emphasises the dire need for a comprehensive, multi-pronged approach to intervention. Simple symptom-based treatments might only scratch the surface, neglecting underlying psychological challenges. In conclusion, to effectively combat the prevalence and severity of eating disorders, society must move beyond simplistic interpretations or interventions to more holistic, nuanced interventions that recognise the profound intersections of age, gender, mental well-being, and socioeconomic factors. The task is undeniably complex, but understanding the depths of these disorders is the first step towards meaningful change.

Recommendations

Given the complexity surrounding the prevalence of eating disorders across genders, it is imperative for interventions and awareness campaigns to cater to both males and females equally. The historical bias, which underscores one gender over the other, needs re-evaluation ensuring that

the vulnerability of both genders is adequately addressed. Furthermore, individuals from different socioeconomic backgrounds face unique challenges regarding eating disorders. This underscores the need for interventions tailored to cater to specific vulnerabilities, stressors, and resources associated with each socioeconomic class. Simultaneously, the significant overlap between broader mental health challenges and eating disorders necessitates a comprehensive approach to treatment. Instead of merely addressing the eating disorder symptoms, an integrated mental health approach must be at the core of intervention strategies. Adolescence emerges as a critical period for the onset and progression of eating disorders. Given the variability in prevalence across different age groups, it is crucial to develop and implement strategies tailored for specific age groups, leveraging potential age-related protective factors. The nuanced aspects, like the pronounced lack of shape concerns among certain groups or the representation of certain socioeconomic classes in severe categories, also warrant deeper research. These areas hint at underlying factors that require a more profound understanding. Promoting awareness surrounding eating disorders should be prioritised, targeting institutions like schools and colleges. This should encompass not only the direct aspects of the disorder but also the myriad associated risk factors, from societal pressures about body image to the broader theme of mental well-being. It is also vital to ensure interventions are accessible and affordable, spanning across all socioeconomic backgrounds. This accessibility should cover the entire spectrum, from preventive measures and early screening to comprehensive treatments. Moreover, equipping healthcare professionals with the requisite knowledge and skills to recognise and address eating disorders early on can play a pivotal role. This includes understanding the associated mental health challenges and delivering holistic care. At a macro level, the role of governments and policy-making bodies becomes paramount. The formulation of policies that emphasise mental well-being, with a spotlight on the interconnectedness of mental health challenges and eating disorders, can be transformative. Lastly, the importance of community-based support systems cannot be overstated. Establishing platforms where individuals can seek assistance, share their experiences, and learn can provide much-needed support and guidance to those grappling with eating disorders. To address the multifaceted challenge of eating disorders effectively, a concerted effort from all stakeholders, underpinned by these recommendations, can pave the way forward.

Contributions to Knowledge

The study focused on a single local government in Ile-Ife, Osun State, offers invaluable insights into the nuanced landscape of eating disorders. By delving deep into this specific locale, the research provides a detailed picture, revealing patterns and tendencies that might be missed in broader geographic analyses. The research emphasises the multi-dimensional nature of eating disorders. While many might view these disorders through a single lens—perhaps gender or age—this study demonstrates that factors like age, gender, mental health, and socioeconomic status intertwine, creating a complex web of influences. Another pivotal revelation from this study is the potential susceptibility of males to eating disorders. Traditionally overshadowed by the focus on females in this realm, the research compels a re-evaluation of how gender dynamics play out in the context of eating disorders. This is crucial because it challenges long-standing assumptions and opens the door for further research and tailored interventions for males. The socioeconomic angle explored in this study also challenges pre-existing notions. While eating disorders were often associated with affluence, the data shows a significant representation from moderate socioeconomic backgrounds. This suggests that the interplay between aspirations, societal pressures, and actual socioeconomic standing could create unique vulnerabilities. Additionally, as brought out by this research, the connection between mental health and eating disorders reshapes the understanding of these conditions. Eating disorders are not isolated; they often coexist or manifest alongside broader psychological challenges. This realisation moves the conversation from symptom treatment to a more holistic mental health approach. This research enriches the existing body of knowledge

by providing a detailed, interconnected view of eating disorders within a specific local context. Its findings highlight the importance of considering multiple factors in tandem and underscore the need for multifaceted, comprehensive interventions.

Limitation of the Study

The confinement of this study to a single local government in Ile-Ife, Osun State, brings about several limitations, primarily concerning its generalisability and scope. With Osun State consisting of 30 local governments, focusing only on one significantly narrows the potential diversity of participants and their experiences, which may not represent the entirety of the region's population. From a quantitative perspective, while quantitative data offers a structured and statistically interpretable view, it may not delve deep into the nuanced personal experiences and underlying reasons behind the observed trends. The rich narratives, personal histories, societal pressures, and lived experiences crucial for understanding a multifaceted issue like eating disorders might remain unexplored. Furthermore, while effective in determining prevalence and correlations, quantitative approaches may not adequately address the "why" behind the data. This is particularly relevant for a condition interwoven with an individual's psychological, cultural, and societal contexts. The study may present numbers and trends but may not offer a comprehensive understanding of the deeper underlying triggers and manifestations. In conclusion, while the study provides valuable insights for the specific local government in Ile-Ife, its confinement limits its generalisability to schools in Ife central local government, Ile-Ife, Osun State. Future studies and improvements on this limitation will further robust insight into the research focus.

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