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Research Article

Body Image Perceptions and Prevalence of Eating Disorders Among Adolescents in Private Schools in Surulere LGA, Lagos State, Nigeria

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Abstract

Body image perceptions describe a person's thoughts, feelings, and actions toward their body. They can be positive or negative and play a pivotal role in an individual's overall health and productivity. In adolescents, body image is of utmost importance, as having a negative one can put them at risk for mental illnesses. This study investigated the body image perceptions and prevalence of eating disorders among adolescents in secondary schools in Surulere Local Government Area of Lagos State. This was a descriptive, cross-sectional study carried out among 330 in-school adolescents aged between 10-19 years. A multistage sampling method was used, and the questionnaire was semi-structured and self-administered. It was developed from the Stunkard Figure Rating Scale and the Eating Attitudes Test (EAT-26). Data were analyzed with Epi-Info version 7.1. The level of significance was set at $p<0.05$. The prevalence of body image dissatisfaction was 57.0%, with a higher percentage among females (52.8%). The prevalence of eating disorders was 17.0%, and 59.6% occurred among females. There was a statistically significant association between the prevalence of eating disorders and family loss or trauma ($p=0.041$), feelings of stress ($p=0.010$), and being informed by people to lose weight ($p=0.043$). This study revealed a high rate of body dissatisfaction and eating disorders. There is a need for positive body image promotion and the creation of awareness of eating disorders among adolescents in secondary schools. These would be useful in reducing the prevalence of body dissatisfaction and eating disorders.

Keywords

Adolescents, Body Image, Body Dissatisfaction, Eating Disorders, Mental Health, Nigeria, Secondary Schools

1. Introduction

In recent times, there has been an increased awareness of body image perceptions among adolescents, and engagement in weight-changing practices, to achieve a perfect body [1, 2]. This can be largely attributed to society's ideals of beauty [1]. The ideal beauty standard is defined as having a slim or muscular body or both. Many adolescents often compare themselves to images of men and women presented by the media and perceive themselves differently, often

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negatively [1]. In trying to fit in with society's beauty standards, they become susceptible to developing body image dissatisfaction [3]. Body image is a multi-dimensional concept that describes how an individual thinks, feels, or acts concerning his or her body [2]. Body image dissatisfaction (BID) is a negative subjective evaluation of one's figure or body part and has been shown to play a key role in body image disturbance [5]. This dissatisfaction may deepen as the adolescent grows older, with the greatest dissatisfaction peaking during young adulthood [1]. It is usually accompanied by abnormal eating behaviors known as eating disorders (EDs) [6].

Eating disorders are psychological illnesses defined by abnormal eating habits that may involve either insufficient or excessive food intake, which impacts an individual's physical and mental health negatively [7]. In the most recent DSM-5 classification, the best-characterized eating disorders are anorexia nervosa (AN), bulimia nervosa (BN), and binge eating disorder (BED). These three are referred to as the typical EDs [8]. Other EDs, which are atypical, are referred to as other specified feeding or eating disorders (OSFEDs). An OSFED is defined as an eating disorder that causes clinically significant distress or impairment in social life but does not meet the full criteria for typical eating disorders. Examples include purging and night eating syndrome [8]. BID appears to be a potent force behind adolescents' dieting and weight control behaviors. These behaviors are related to adverse physical and psychological changes and can precipitate health conditions such as eating disorders. With rapid economic development and affluence, a progressive shift toward thinness as the ideal body shape has been observed. This has led to increased body weight concerns and dissatisfaction among adolescents [4].

Eating disorders are one of the most common psychiatric conditions among young people and pose a major public health challenge, having the greatest mortality rate of all mental disorders [9]. They may increase a person's risk of becoming obese, developing deficiency diseases, anxiety disorders, chronic fatigue and pain, infectious diseases, insomnia, and neurological symptoms [9]. Studies have also revealed their association with increased risk of depression, substance abuse, suicide, decreased quality of life, and significant disease burden [10]. Like any other illness, a loved one's affectation by an eating disorder may cause anguish, discomfort, or distraction, putting the family under perpetual pressure [11]. Eating disorders tremendously impact the affected individual and their family and can lead to high levels of psychological distress and conflict in a family [11]. Caregivers of people suffering from eating disorders also face major financial and opportunity costs. There may be loss of income due to treatment costs, taking time off work to cater for the care-dependent, and impacted educational or professional development [12].

In recent decades, body image dissatisfaction and eating disorders have become increasingly prevalent globally [12]. Although our global access to food has improved, our relationship with food seems to have become even more complicated as EDs are on the rise [13]. Adolescence represents a critical period for the development of a healthy or unhealthy body image [4]. This is because the human body undergoes many changes during this period. The way the adolescent perceives these changes has a significant influence on the level of body satisfaction and the development of body image [15]. Studies have shown that young people are particularly vulnerable to developing a negative body image [3]. The generalized acceptance of thinness as the beauty ideal standard puts a lot of young people under pressure to make abnormal weight changes and have an unhealthy preoccupation with their body sizes [3]. This could lead to the onset of body dissatisfaction and, subsequently, eating disorders [3]. Although some studies have been done on body image perceptions of adolescents and on the prevalence of eating disorders among adolescents, there is a paucity of research associating both in this local context [14]. In addition, previous studies focused majorly on young adults and not on in-school adolescents [6]. The present study determined the body image perceptions, prevalence of eating disorders, and their association among in-school adolescents in secondary schools.

2. Methodology

This was a descriptive, cross-sectional study carried out among 330 in-school adolescents, aged between 10-19 years, in private secondary schools in Surulere LGA. A list of all the private secondary schools in Surulere LGA was obtained from District IV, the education district with Surulere LGA under its jurisdiction. The list had a total of 24 private secondary schools. Six schools were chosen by simple random sampling using balloting method. A minimum of 60 respondents was estimated for each of the schools. Using a cluster sampling method, three arms (science, art, and commercial) of each class of the selected schools were selected. Convenient sampling method was used to attain the selected sample size from each school. Both male and female adolescents participated in this study. Respondents who were acutely ill were excluded from the study.

2.1. Data Collection

Data collected were manually checked for corrections, completion after collection, and thereafter coded for data entry. Body image perceptions were obtained with the use of the Stunkard figure rating scale. The silhouette figures of the figure rating scale were assigned body weight status as follows: Underweight (silhouette 1), Normal weight (silhouette 2, 3 and 4), Overweight (silhouette 5), and Obese (silhouette 6, 7, 8, and 9). The BMI of each respondent was calculated and compared to the perceived body images of the respondents. The prevalence of eating disorders was determined using the

EAT-26 questionnaire. Each item from questions 1-25 was scored as Always=3, Usually=2, Often=1, Sometimes=0, Rarely=0, Never=0. For question 26 only, the scoring for the items are Always=1, Usually=0, Often=0, Sometimes=1, Rarely=2 and Never=3. Item scores from all questions were added together. An EAT-26 score of 20 or more is indicative of a prevalence of an eating disorder.

2.2. Data Analysis

Data collected was analyzed electronically using Epi-Info 7.1 software program. Results are represented in a frequency table. Chi-square test was used to test for the association between body image perceptions, the prevalence of eating disorders, and factors influencing eating disorders. The level of significance (p) was set at (< 0.05).

3. Results

265 (84.4%) of the respondents were between the ages of 12-14 years, the highest frequency of all the age groups. The mean age was 14 ±1. Of the respondents, 50.3% were females, and 49.7% were males. 42.7% of the respondents were in SS1 class, while 37.9% and 19.4% were in SS2 and SS3 respectively. The predominant ethnic group was Yoruba (43.0%), 36.3% were Igbo, 3.5% were Hausa and 17.2% belonged to other ethnic groups like Efik, Itsekiri and Tiv. Christians made up 81.9% of the respondents, while Muslims made up 18.2%. Table 2 shows the psychosocial factors related to the development of eating disorders. A greater proportion of respondents (78.7%) hadn't suffered any family loss or trauma recently, however, 21.3% of them had. Of the affected respondents, 88.1% had experienced a recent family member loss, while 11.9% had experienced trauma. Majority of the respondents (72.9%) reported feeling stressed out lately; 50.6% experienced it 1-3 times a week, 30.6% experienced these feelings every day, and 18.8% of the respondents experienced this 4-6 times a week. From Table 3, a significant association between development of eating disorders and feeling stressed out lately (p=0.02), how often they have been feeling stressed out lately (p=0.01) and people informing them to lose weight (p=0.04), was shown. There was however no significant association between the prevalence of eating disorders and being in a low mood lately (p=0.10) or how often they had been in a low mood lately (p=0.10). Table 4 represents the association between eating disorders and body dissatisfaction of the respondents. The association was significant (p=0.013).

Table 1. *Socio-Demographic Characteristics of The Respondents.*

Socio-demographic characteristics	Frequency (n= 314)	Percentage (%)
Age (years)		
12-15	265	84.4
16-19	49	15.6
Mean ±SD = 14.4 ±1.		
Sex		
Female	158	50.3
Male	156	49.7
Class		
SS1	134	42.7
SS2	119	37.9
SS3	61	19.4
Religion		
Christianity	257	81.8
Islam	57	18.2
Tribe		
Yoruba	135	43.0
Igbo	114	36.3
Hausa	11	3.5

Socio-demographic characteristics	Frequency (n= 314)	Percentage (%)
Others	54	17.2

Table 2. *Psychosocial Factors Related to Eating Disorders Among Respondents.*

Variable	Frequency (n= 314)	Percentage (%)
Suffered a family loss or trauma recently		
Yes	67	21.3
No	247	78.7
Kind of loss or trauma (n=67)		
Family member loss	59	88.1
Trauma	8	11.9
Feeling stressed out lately		
Yes	229	72.9
No	85	27.1
Feeling stressed out lately (How often) (n=229)		
1-3 times a week	116	50.6
4-6 times a week	43	18.8
Everyday	70	30.6

Table 3. *Association Between Psychosocial Factors and Eating Disorder.*

Variable	Prevalence of eating disorder		Total (n=314)	Chi-square	P-value
	No N (%)	Yes N (%)			
Feeling stressed out lately					
Yes	184(70.2)	45(86.5)	229(79.2)	5.84	0.010*
No	78(29.8)	7(13.5)	85 20.8)	19.09	0.000*
Feeling stressed out lately (How often) (n=229)					
1-3 times a week	109(41.6)	18(34.6)	127(40.4)	2.74	0.100
4-6 times a week	32(12.2)	5(9.6)	37(11.8)	6.18	0.101
Everyday	43(16.4)	22(42.3)	65(20.7)	4.82	0.042*
Been in a low mood lately					
Yes	128(48.9)	32(61.5)	160(51.0)		
No	134(51.2)	20(38.5)	154(49.0)		
Been in a low mood lately (How often) (n=160)					
1-3 times a week	85(32.4)	17(32.7)	102(63.8)		
4-6 times a week	23(8.8)	6(11.5)	29(18.1)		
Everyday	20(7.6)	9(17.3)	29(18.1)		

Variable	Prevalence of eating disorder		Total (n=314)	Chi-square	P-value
	No N (%)	Yes N (%)			
People inform you to lose weight					
Yes	54(20.6)	18(34.6)	72(22.9)		
No	208(79.4)	34(65.4)	242(77.1)		

Table 4. *Association Between Body Dissatisfaction and Eating Disorders Among Respondents.*

Body Image Perceptions	Eating disorders (EAT-26)		Total (n=314)	X^2	P-value
	No	Yes			
Dissatisfied	135(79.0)	44(21.0)	179(57.0)	6.30	0.013*
Satisfied	121(89.6)	14(10.4)	135(43.0)		
Total	256(87.0)	58(13.0)	314(100.0)		

4. Discussion

The mean age of the respondents was 14.4 ± 1.2 years and is consistent with a similar study done in Benin, Nigeria, where the mean age was 15.6 years [16]. A little over half of the respondents were female (50.3%), which is in keeping with the findings of a study done in India which showed that 52% were females [17]. In the present study, over half of the respondents had normal body weight (52.5%), while 33.2% were underweight and 14.3% were overweight. This is consistent with the findings of a study done in Malaysia which showed a majority of respondents (49.4%) were of normal weight, followed by underweight and overweight (30.3% and 20.3%, respectively) [18]. These findings may be majorly attributed to the socio-demographics of the respondents, such as age and gender. Eating patterns, family history, and level of physical activity could have also played a significant role.

The present study showed that over half of the respondents (55.4%) perceived themselves to be normal weight. This is consistent with the findings of a study carried out in India [19]. The similarities in these studies could be as a result of prevalent body image perceptions in the individual countries, as well as socio-demographic factors and psychosocial factors. The present study found the rate of body image dissatisfaction to be 57.0%. This lends support to a study carried out in Malaysia, which showed a body image dissatisfaction rate of 60.1% [1]. A study in Brazil showed the rate of body image dissatisfaction to be 69.5% [20] while another in Peru showed a rate of 11.5%. [21] The varying rates among the different countries could be attributed to factors such as cultural beauty standards, the role of family and peers, and social media influence.

In the present study, the rate of body image dissatisfaction was higher among females (52.8%) than males (47.2%). This is in keeping with the findings of studies carried out in Brazil (46.4%) and China (41.2%) [22, 23]. This may result from the fact that, in general, society places a greater emphasis on how females should look than it does on males. This pressure often leads to a higher prevalence among females. To determine the prevalence of eating disorders, the present study used the EAT-26 scoring system and found the prevalence rate to be 17%. This is consistent with the findings of another study in Lagos, Nigeria which showed the prevalence rate of eating disorders to be 16% [6]. In a study carried out in Iran, the prevalence rate was shown to be 24.3% [24], while studies carried out in Nepal and India showed prevalence rates of 27.2% [25] and 26.7% [17] respectively. These prevalence rates are higher than that of the present study and may be due to different cultural norms of attractiveness and eating practices.

In contrast, a study in Egypt revealed a prevalence rate of 3.3% [29] while in Ethiopia, it was 8.6% [26]. These rates are low in comparison to that of the present study. They may be as a result of an increased level of awareness of eating disorders, an adequate number of specialists in the field, quality comprehensive healthcare services, and sufficient research. A study done in Malaysia showed a significant association between eating disorders and depressive symptoms, low self-esteem, and body dissatisfaction [27]. Although the present study did not assess self-esteem levels, it did assess respondents' feelings of low mood. This was found not to be significant with eating disorders prevalence. The difference in these findings may be due to psychosocial and environmental factors.

This study found a significant association between body image perceptions and the prevalence of eating disorders. Body dissatisfaction, a form of body image perception, was significantly associated with the prevalence of eating disorders. This is consistent with the findings of a study done in Iran which showed a significant association between eating disorders and body dissatisfaction [28]. Studies in Malaysia have also shown significant associations between eating disorders and body image perceptions [18]. These findings may be resultant of the negative perceptions of body image which precipitated abnormal eating patterns, compensatory behaviors, and consequently, eating disorders.

5. Conclusion

The study showed that the prevalence of body image dissatisfaction in the study group was 57.0%. The prevalence rate of eating disorders was 17%. The factors significantly associated with the prevalence of eating disorders were recent family loss or trauma, feelings of stress, and being informed by people to lose weight.

Abbreviations

LGA	Local Government Area
EAT-26	Eating Attitudes Test-26
BMI	Body Mass Index
EDs	Eating Disorders
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
AN	Anorexia Nervosa
BN	Bulimia Nervosa
BED	Binge Eating Disorder
OSFEDs	Other Specified Feeding or Eating Disorders
SS1, SS2, SS3	Senior Secondary School Year 1, 2, and 3 Respectively
Epi-Info	Epidemiological Information (Software by CDC)

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Author Contributions

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Ethical Clearance

Ethical approval was obtained from the Health Research and Ethics Committee of Lagos University Teaching Hospital. Written informed consent was obtained from each respondent before administering the questionnaire.

Conflicts of Interest

The authors declare no conflicts of interest.

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