



Research Article

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Assessment of Gender Variations in Weight Control Behaviours Amongst Undergraduates in Port Harcourt, Nigeria

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Abstract

Background of the study: Weight control is increasingly becoming one of the most discussed topics amongst the youths due to adverse social and medical conditions associated with extremes body weight. **Aim:** The aim of the present study was to assess the gender variations in weight control behaviors amongst undergraduates in Port Harcourt, Rivers state, South-South, Nigeria. **Materials and methods:** The study involved 600 apparently healthy students (including 249 males and 351 females) who responded to an interviewer-administered questionnaire. **Results:** The results showed that the weight control strategies applied by undergraduates are typically aimed at either maintaining or reducing their present body weight. More of the males are satisfied with their weight and would engage in regular exercise to maintain it. Females had a high tendency to be dissatisfied with their body weight and shape and would associate their overweight with overfeeding. Although exercise was the most common weight control measure adopted by both male and female respondents, only 20.5% of them engaged in regular exercise. 51.4% of subjects did not consider applying any weight control measure necessary. Dietary restriction was more commonly adopted by females. The most commonly skipped meal by both male and female undergraduates was lunch. However, more females skipped dinner in other to lose weight. **Conclusion:** The present study suggests that body weight perception is a very important determinant of weight control behavior. Social acceptance is a common phenomenon amongst female undergraduates who are also more concerned about their body weight and shape.

Keywords: Weight Control Behaviors, Gender Variation, Undergraduates, Males, Females.

INTRODUCTION

There is a growing concern about the size, shape and weight of the body due to psychosocial and medical reasons. Extremes of body weight have been linked with adverse health conditions (including cardio-metabolic and psychological) to the extent that weight management is usually considered in the prevention and/or treatment of these conditions. Literatures have associated extremes in body weight with certain medical conditions including type-2 diabetes mellitus, hypertension, tumors, fatty liver disease, musculoskeletal disorders, menstrual disorders and cardiovascular diseases resulting in low quality of life [1-7]. A greater number of students in the tertiary institutions of learning are within the youthful age group, 15-24 years [8]. These people care much about their physique and appearance and so tend to "watch their weight" to become socially acceptable since to a great extent the body size and shape would indicate how beautiful or handsome an individual is rated. How they handle their weight at this stage in life might define their health status later in life.

When the body weight is misinterpreted by an individual, then the weight control measures to be applied might be inappropriate resulting in either obesity or malnutrition with its consequences [9-11]. The aim of this study was to assess the gender variations in weight control behaviors among undergraduate students of selected tertiary institutions in Port Harcourt, Rivers state, South-South, Nigeria.

MATERIALS AND METHODS

A total of 600 undergraduate students (including 249 males and 351 females) from three tertiary institutions in Port Harcourt; University of Port Harcourt (372 students), Rivers State University (171 students) and Captain Elechi Amadi Polytechnic (57 students) were randomly selected for the study. The sample size was estimated using the Taro Yamane formula [12]. Apparently healthy undergraduate students aged 18-35 years who gave consent to participate were included in the study. Undergraduates who were on regular medications or those who were known drug addicts at the time of the study were

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excluded. Ethical approval for the study was obtained from the university of Port Harcourt ethics and research management committee (UPH/CEREMAD/REC/MM67/007). The study was well explained to the participants and each participant gave oral and written consent. There was no foreseen risks and discomfort expected by participating in this research. The participants at any point in time could decide to withdraw without any consequences.

Structured questionnaires were administered to the study participants to obtain information on demographics, lifestyle, body weight perception and weight control behaviors. Body weight perception was assessed by asking the participants to describe their weight. Responses were rated on a 5-point scale: 1, slightly underweight, 2, very underweight, 3, almost the optimal weight, 4, slightly overweight, 5, very overweight. Weight concern was assessed using the Eating Attitude Test (EAT-26) [13]. The item reads thus: 'Have you been told that your weight is abnormal?, Are you terrified about being overweight?, Are you terrified about being underweight? Are you worried about your hip circumference?, Are you worried about your abdominal fat?, Do you think your weight has any effect on your physical activity?, Do you have any known medical condition?. Responses were either Yes and No.

Weight control behaviors were also assessed using questionnaires to determine the efforts made by respondents to control their body weight.

Data analysis

Questionnaires were first sorted according to the demographic characteristics, perceived body weight and weight control measures of the respondents. Thereafter, data were analyzed using SPSS version 23.0. Data were presented in tables and discrete variables were expressed in percentages.

RESULTS AND DISCUSSIONS

The mean age of respondents was 20.94 ± 0.11 with gender difference as shown in Table 1.

Table 1: Demographic characteristics of respondents

Parameters	Total (600)	Male (249)	Female (351)
Age (years)	20.94 ± 0.11	21.65 ± 0.14	20.43 ± 0.15

Weight control is increasingly becoming one of the most discussed topics amongst young adults, not just because of the medical implications of overweight and obesity but also as it relates to social acceptance [14-16]. Social acceptance is a phenomenon commonly associated with young adults. This phenomenon has put a lot of pressure on many young people who would want to attain an "ideal" body weight and size.

Table 2: Reasons for weight control of undergraduates

Reason	Total (%)	Male (%)	Female (%)
Medical reason	308 (51.3)	66 (11.0)	242 (40.3)
Social acceptance	105 (17.5)	7 (1.2)	98 (16.3)
Cosmetic concern	49 (8.2)	2 (0.3)	47 (7.9)
Others	14 (2.3)	8 (1.3)	6 (1.0)

*Numbers in bracket are expressed in percentages. Total number did not sum up to 100% because not all the subjects responded to this question

Physiologically, there are gender variations in distribution of body fats such that females accumulate adipose tissues in their gluteal region whereas males accumulate fats in their abdomen [17], because of hormonal differences [19,20], during their reproductive ages. Of all the body parts, increased abdominal size was a source of concern for both female and male undergraduates. Increased size of hip was only of

minimal concern for the females as they considered large hip circumference as normal and probably an indicator of beauty. Previous studies showed that males have higher waist circumference compared to females because of their higher visceral adipose tissue [21,22]. However, in the present study it is the females that expressed more concern about their abdominal size.

Table 3: Responses of undergraduates about their perceived weight

	Total	Male	Female
Worried about being underweight	277 (46.2)	52 (8.7)	225 (37.5)
Worried about being overweight	276 (46.0)	38 (6.3)	238 (39.7)
Worried about increased hip circumference	157 (26.2)	3 (0.5)	154 (25.7)
Worried about waist circumference	244 (40.7)	28 (4.7)	216 (36.0)
Feels their weight affects physical activity	166 (27.7)	17 (2.8)	149 (24.9)
Known medical condition	66 (11.0)	3 (0.5)	63 (10.5)
Medical condition is related to weight	5 (0.8)	0 (0.0)	5 (0.8)
Worried about body shape	236 (39.3)	25 (4.2)	211 (35.1)
Acceptance of surgery for abdominal fat	91 (15.2)	3 (0.5)	88 (14.7)

*Numbers in bracket are expressed in percentages. Multiple responses needed in this question

Again, because of the redistribution of fats, a non-pregnant female would consider large abdominal size as abnormal and would try to apply any measure within her reach to reduce it. The desire for abdominal size control in females is apt since according to Schorr *et al.*, 2018 [21], visceral adipose tissue is more strongly associated with cardio-metabolic risk markers in women. Of the 11% of those with known medical conditions, only 0.8% believes that their condition is related to their body weight.

Amongst the perceived factors responsible for their overweight, lack of exercise and overfeeding ranked highest. More of the males associated overweight with a lack of exercise while the females associated it more commonly with overfeeding. This could explain the result in the present study where more females adopted dieting as a weight control measure whereas more males adopted exercise.

Table 4: Perceived factors responsible for overweight of undergraduates

Factor	Total (%)	Male (%)	Female (%)
Overfeeding	124 (20.7)	7 (6.0)	117 (19.5)
Lack of exercise	127 (21.2)	16 (2.7)	111 (18.5)
Genetic	8 (1.3)	0 (0.0)	8 (1.3)
Alcoholism	8 (1.3)	6 (1.0)	2 (0.3)
Smoking	25 (4.2)	7 (1.2)	18 (3.0)

*Numbers in bracket are expressed in percentages. Total number did not sum up to 100% because not all the subjects responded to this question

In spite of the numerous benefits of exercise, only 20.5% of undergraduates engaged in regular exercise. Even though exercise was the most common weight control measure adopted by both male and female respondents, more of the males engaged in exercise more frequently to achieve the target of maintaining their present weight [23], whereas the females considered dietary restrictions mainly aimed at deliberate weight loss.

Table 5: Weight control behaviours of undergraduates

Behaviour	Total (%)	Male (%)	Female (%)
Exercise	123 (20.5)	60 (10.0)	63 (10.5)
Dieting	53 (8.8)	0 (0.0)	53 (8.8)
Vomit/Laxatives	2 (0.3)	0 (0.0)	2 (0.3)
Diet pills	2 (0.3)	0 (0.0)	2 (0.3)
Wear girdle to lose abdominal fat	20 (3.3)	1 (0.1)	19 (3.2)
Eating more to gain weight	91 (15.1)	37 (6.1)	54 (9.0)
None	304 (51.4)	147 (24.9)	157 (26.5)

*Numbers in bracket are expressed in percentages

Table 6: Exercise as a weight control measure of undergraduates

Frequency	Total (%)	Male (%)	Female (%)
Rarely	332 (55.4)	96 (16.0)	236 (39.4)
Monthly	81 (13.5)	30 (5.0)	51 (8.5)
Weekly	135 (22.5)	89 (14.8)	46 (7.7)
Daily	51 (8.5)	34 (5.7)	17 (2.8)

*Numbers in bracket are expressed in percentages. Total number did not sum up to 100% because not all the subjects responded to this question

As much as 51.4% of subjects applied no weight control strategy or deliberately did not make any efforts to control their weights. Wearing of girdles to lose abdominal fat was very rare amongst undergraduates (3.3%) probably because abdominal obesity was uncommon in this age group.

Table 7: Actions about weight Management of undergraduates

Action	Total (%)	Male (%)	Female (%)
No action	203 (33.8)	95 (15.8)	108 (18.0)
Effort to maintain present weight	119 (19.8)	75 (12.5)	44 (7.3)
Effort to lose weight	133 (22.1)	19 (3.1)	114 (19.0)
Effort to gain weight	144 (24.0)	60 (10.0)	84 (14.0)

*Numbers in bracket are expressed in percentages. Total number did not sum up to 100% because not all the subjects responded to this question

The most commonly skipped meal by undergraduates was lunch (50.7%) followed by breakfast probably because most of these students would still be engaged in their academic activities at lunchtime. However, the females would rather skip their dinner than breakfast as a weight control strategy.

Table 8: Meals commonly skipped by undergraduates

Meal	Total (%)	Male (%)	Female (%)
Breakfast	197 (32.8)	37 (12.5)	160 (20.3)
Lunch	304 (50.7)	145 (24.2)	159 (26.5)
Dinner	95 (15.8)	27 (4.5)	68 (11.3)

*Numbers in bracket are expressed in percentages. Total number did not sum up to 100% because not all the subjects responded to this question

The social problems associated with obesity and the urge to maintain an “acceptable” body shape amongst the ladies could make them to continually skip meals even when their actual BMI classification is within normal or even underweight [24]. This can have some adverse effects on the nutritional status [25]. Heavy meals at dinner have been associated with the development of “potbelly” which is commoner in males. Although, potbelly tends to be prominent in older men because as one ages his caloric needs decline especially as he might become less active [26]. and consume more alcoholic beverages.

The present study suggests that male subjects were less concerned about their body weight and shape. The females on the other hand,

have a high tendency to be dissatisfied with their body weight and shape [27]. and would readily adopt weight control measures including cosmetic surgeries (when affordable to them). The present study agrees with the findings by Harring *et al.*, 2010 [28]. amongst US college students. Wrong weight perception together with inappropriate weight control strategy could lead to adverse health conditions. Therefore, the type of weight control measure adopted by an undergraduate student depends hugely on his/her body weight and size perception.

CONCLUSION

Weight control strategies by undergraduates are typically aimed at either maintaining or reducing their present weight. Whilst the males engaged in regular exercise as their main weight control measure, the females would rather restrict their diet to reduce body weight. 51.4% of subjects did not consider it necessary to apply any weight control measure. Therefore the type of weight control measure adopted by any undergraduate student depends hugely on his/her body weight and size perception.

Conflicts of interest

None declared.

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