

## WEIGHT CONTROL PERCEPTION AMONG FEMALE ADOLESCENTS IN BOTSWANA

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*This study examined the weight control perception and the factors associated with it among female adolescents in Gaborone, Botswana. The subjects were two hundred and twenty 15-17 year-old students from five Community Junior Secondary Schools in Gaborone, representing 7 ethnic backgrounds with 75% of them being Batswana. A quantitative descriptive survey comprising questionnaires with open- and closed-ended questions was used. Heights and weights of the students, to calculate the Body Mass Index, were taken before questionnaire administration. Only 18.2% of the respondents thought they were underweight as opposed to a figure of 47.7% who were actually underweight. Twenty-nine and a half percent thought they were overweight and hence need to slim whereas actually only 4.6% were overweight. The majority of the respondents (61.3%) rely on their own evaluation of body perception. Seventy and a half percent do not diet, and the same number use exercise as the method of weight control. Twenty-nine and a half per cent eat more meals in a day to gain weight. Forty-five and a half percent believe that changing body weight will have personal advantage. Among other things, the study concluded that there is need to educate female adolescents about the physical changes they undergo during this period and the expected normal increase in weight and also the relationship between height and ideal weight. They also need to be counselled about the source of information on body control aspects. Parents need to be sensitised about their children's developmental changes in relation to perceptions of body weight.*

*Key words: Body weight perception, female adolescents.*

### INTRODUCTION

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Adolescence is a period during which one's body undergoes rapid and marked changes. An individual is maturing sexually, emotionally, cognitively and physically. The adolescents are also at a stage where they are in search for independence and identity.

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Girls, in particular, have a general natural tendency to increase their body fat. This can be an anxious time for some female adolescents and a few resort to a variety of strategies to cope with these physical and emotional changes. One strategy followed by adolescents is weight control.

It appears a well-established fact, certainly among adolescents, that females tend to be more sensitive than males about matters such as body weight and shape. They are also more sensitive to obesity than males and more frequently express the desire to lose weight (Davies & Furnham, 1986a; 1986b; Paxton, Wertheim & Gibbons, 1991). On the other hand, in recent years sliminess has become more fashionable; society also advocates for this. Due to the influence of society, the female adolescents have become preoccupied with the need to be thin and as a result try to control their weight. They are more likely to diet to control their weight.

Kanarek & Marks-Kaufman (1991) reported that as a result of both psychological and physiological factors, weight control has become a preoccupation for many female adolescents. This preoccupation is evident even in physician offices, media, grocery stores and bookstores. Family and friends, also, play a role, since they determine what is acceptable for the adolescent.

Body dissatisfaction among women, in general, is widely documented (Grogan & Wainwright, 1996). It is widely held that dieting is endemic among adolescent females in the western world. Many studies have identified their high levels of body dissatisfaction and participation in weight loss behaviour (Dixon, Adair & O'Connor, 1996). In Botswana there is no reported work on the issue of female adolescent behaviour towards

dicting and weight control. The present study aims to investigate the extent of preoccupation with weight control among female adolescents in five Community Junior Secondary Schools in Gaborone, Botswana and to determine the factors that affect their need to control their weights.

## METHODS

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### *Subjects:*

Two hundred and twenty female students from five community junior secondary schools in Gaborone, Botswana participated in this study. Both government and private schools were selected for the study. Subjects' ages ranged from 15 to 17 years (mean = 15.9, S.D. = 0.75). Choice of this age group was based on the fact that their growth spurt would be at its optimum and consequently their body weight perception is important to their psychological well being. The ethnic composition of the sample was as follows: 75.0% Batswana, 11.3% Indian, 4.5% Belgian and 2.3% from each of the following: Scotch, South African, English and Israeli.

### *Research design:*

A quantitative descriptive survey method was used to find out whether female adolescents are preoccupied with weight control perceptions and the factors that lead to such a phenomenon. A cluster sampling method was used.

*Instruments for data collection:*

A structured questionnaire was used in the study. It mostly, consisted of open-ended questions; close-ended questions were also included. The questionnaire was pre-tested in a different group prior to the study.

*Procedure:*

Approval to undertake the study was granted by the respective schools administrations. The heights and weights of students taking part in the study were measured before the administration of the questionnaires. An electronic weighing scale was used to take weights. Heights were measured using a tape measure. A Body Mass Index (BMI) was calculated for each subject using the formula:  $BMI = \text{weight (kg)} / \text{height}^2 \text{ (m)}$ .

*Statistical analysis:*

SPSS (Windows 7.5) was used to analyse the close-ended questions.

*Limitations of the study:*

The study covered only five schools in Gaborone, the capital of Botswana. The findings cannot therefore, be generalised to the population of female adolescents in the whole country.

**RESULTS**

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Body Mass Index (BMI) results (Table 1) indicated that 47.7% of the respondents had BMI < 20, 47.7% with BMI in the range 20-25 and 4.6% had BMI above 25 i.e. 47.7% were underweight, 47.7% within normal weight range and 4.6% overweight. Compared

**Table 1: Perception of respondents about their weights compared to actual BMI**

BMI Category	Perception		BMI	
	Frequency	%	Frequency	%
Underweight < 20	40	18.2	105	47.7
Normal weight 20-25	115	52.3	105	47.7
Overweight > 25	65	29.5	10	4.6
Total	220	100.0	220	100.0

to the respondent's self report about their weight 52.3% stated that they were about the right weight, 18.2% underweight and 29.5% reported themselves as being overweight. The respondents were asked about perception of body size. The majority (61.3%) considered their own perception about body as most important. Thirteen and a half percent (15.5%) consider the family's perception as most important (Table 2).

**Table 2: Sources of body size perception by respondents**

Source	Frequency	Percentage
1. Myself	135	61.3
2. Family	30	13.5
3. Friends	10	4.6
4. Boyfriend	10	4.6
5. 1 & 3	5	2.3
6. 1, 2 & 3	15	6.8
7. 1 & 4	15	6.8
8. Total	220	100.0

The respondents were further asked where they got information for weight control. The results given in Table 3 show that 34.1% indicated that they got their information from media, followed by 30.9% who stated friends and 30% from family. Only 5% stated biology classes and physicians. From the results it can be observed that a minimum number of respondents depend on a more reliable source for information on weight control.

**Table 3: Sources of information on weight control**

Source	Frequency	Percentage
1. Media	75	34.1
2. Friends	68	30.9
3. Family	66	30.0
4. Biology classes & Physicians	11	5.0
5. Total	220	100.0

**Table 4: Perception on whether change of weight will change lifestyle**

Response	Frequency	Percentage
Yes	100	45.5
No	120	54.5
Total	220	100.0

Forty five and a half percent of the respondents reported that changing their weight would change their life style while 54.5% stated that changing their weight have no impact on

their life style (Table 4). Those who reported that changing their weight would have an impact on their life style stated one or more of the following:

1. they will be able to wear more daring clothes and no offensive comments will be made about their bodies;
2. they would be able to find clothes suitable for their sizes since they will have the "perfect body";
3. they would get noticed more;
4. they would be more confident about themselves.

**Table 5: Frequency and Percentage of students who diet**

Do you diet?	Frequency	Percentage
Yes	65	29.5
No	155	70.5
Total	220	100.0

**Table 6: Weight control methods used by respondents**

Method	Frequency	Percentage
1. Exercising	155	70.4
2. Skipping meals	20	9.1
3. Laxatives	5	2.3
4. Others	5	2.3
5. 2 & 4	25	11.3
6. 1 & 2	5	2.3
7. 2 & 3	5	2.3
8. Total	220	100.0

Table 5 shows that 29.5% of the respondents diet, while 70.5% do not i.e. a large proportion do not diet. Of those who diet it was found that 25% diet to lose weight, 20.5% diet to gain weight and 44.5% diet for other reasons. The weight control method most commonly used by respondents (Table 6) was exercising (70.4%). The mostly used method to gain weight was eating more meals in a day (29.5%). Twenty nine percent use none of the methods to gain weight (Table7).

**Table 7: Methods used to gain weight among respondents**

Method	Frequency	Percentage
1. Eating more meals in a day	65	29.5
2. Nutritional supplements	45	20.5
3. Exercising	30	13.6
4. Others	10	4.6
5. None	65	29.5
6. 2 & 3	5	2.3
7. Total	220	100.0

## DISCUSSION

A variety of external agencies shape adolescent attitudes about weight control. Females appear to be strongly influenced by television, magazines, friends and physicians. In most cases females look to unreliable resources of information about



weight and weight control (Desmond, Price & Gray, 1986). Sometimes there are false views about fatness and thinness among female adolescents. These views result in strenuous activities that include dieting, exercising and other inappropriate weight control methods. The activities vary from country to country and race to race. The general trend, however, seems to be the same. Many female adolescents try to reduce their weight, often through unnecessarily and inappropriate weight control methods such as dieting, fasting but seldom by increased activity.

The findings of the present study suggest that a large proportion of female adolescents who participated in the study were preoccupied with their body weights, and had BMI less than 20 i.e. were underweight. Twenty five percent still diet to lose weight and most of the respondents classified themselves as having normal weights, when in actual fact they were underweight. A small proportion of the respondents diet to gain weight.

The tendency for social comparison led to body concerns. While most of the girls (52%) reported that they were about the right weight, 47.7% of these respondents were actually underweight with a BMI less than 20. These adolescents were still swayed in their own self-evaluation. These findings are in agreement with the findings of Desmond et al (1986) who found that female adolescents were more likely to classify themselves as overweight. Moreover, 6% who were classified as thin were in fact dieting to lose weight; thus female adolescents classify themselves as overweight. The findings are however in disagreement with those of Davies & Furnham (1986b). In their assessment of weight of

16 year-olds they found that the adolescents were less likely to view their own weight as just right. Forty-nine percent who had normal weight classified themselves as overweight. These results show that adolescents are keen on losing weight. They also found that these girls used exercise as a method of weight control, this agrees with the present findings, which revealed that 70% reported the use of exercise as a method of weight control.

In a study conducted in the USA, Desmond et al (1986) found that males were more likely to classify themselves as normal weight while females were more likely to classify themselves as heavy or normal weight. Generally many females view being thin as a distinct advantage and believe that thinness leads to greater happiness, more success and more dates. They also believe that they are likely to be healthier and better looking (Paxton et al., 1991). A similar study (Davies & Furnham, 1986a) was conducted among a group of British girls aged 12-18 years. The authors were interested to find out how girls gain or lose weight and whether they desired to gain or lose weight and whether they would alter the amount and type of food to gain or lose weight. It was found that older girls were less likely than younger girls to view their weight as "just right". More older (49.1%) than younger girls (26.1%) thought they were overweight. The results of an Australian study (Paxton et al., 1991) suggest that female adolescents were more likely than boys to attempt to crash diet calorie counting, skipping meals and not eating between meals.

It would therefore, appear that ages 14-16 are most crucial for young females with respect to changes in their perception of body weight, as it is during this time that they may begin altering their food intake so as to control their weight (Davies & Furnham, 1986b). The evidence points to clear development trends in this regard, suggesting that at this young stage females may not only be susceptible to media image about attractiveness, but also to the actual physical changes they are experiencing. Much empirical evidence points to the fact that female adolescents are concerned with and sensitive about body weight and shape. A significant portion of those classified as having "normal weight" diet to lose weight as they regard being thin as a personal advantage (Heaven, 1996). Themes emerging from this study suggest that socio-cultural factors have major influence on female needs to control their body weights. Female adolescents saw media (television and magazines) (34%) as an important source of weight control information. Peers (30.9%) and family (30.0%) reinforce this. Peers influences could also encourage body acceptance and healthy eating habits.

## CONCLUSIONS

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The present study indicates that female adolescents aged between 15 and 17 do not base their weight on their height-weight ratio; therefore they are likely to incorrectly assess their weights. Some considered themselves to be the right weight when they were actually underweight.

Female adolescents look to unreliable resources for information about weight and very few adolescents depend on doctors, biology books for information on weight control. Female adolescents depend more on media, friends and family who in most cases could provide information that is not accurate.

There is need to educate female adolescents especially those between ages 15 and 17 years on the relationship of increase in fat tissue to physical development since most see this as a need for weight control. They should also be educated on the relationship between weight and height in the assessment of the ideal weight, since it appears that most respondents do not consider height in their assessment of the ideal weight. Nutritionists and teachers, especially science and home economics teachers, should be involved in educating adolescents. Nutritionists provide information on dieting in relation to nutrition and physical development. In collaboration with teachers they could provide seminars where adolescents could be educated.

Parents should be sensitised and educated about their adolescents and children developmental changes in relation to weight. They are in most cases potential role models in preventive efforts related to female adolescent preoccupation with body weight and shape. Parents should also be made aware of the impact negative comments have on adolescents since these could have destructive effects on the adolescents self image and eventually result in eating disorders.

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