

The relationship between body mass index and self-concept among adolescent black female university students

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The study investigated the relationship between body mass index and self-concept among adolescent black female university students.

The study used a mixed research design (quantitative and qualitative methods).

Media images of handsome faces and beautiful bodies are used to sell almost everything, from clothes and cosmetic to luncheon, meats, and so on. These images reinforce the western cultural stereotype that women should be thin and shapely to be attractive. Thus, as some girls go through puberty they may become dissatisfied with their weight, and to a lesser extent, with their shape, thus, developing low self-concept or image of themselves. It is in this context that the study was conceptualised.

First year female students from three different Schools and Faculties at the University of Limpopo, Turfloop Campus, South Africa, participated in the study. Using the availability and convenient sampling method, 75 students were selected for this study. For the quantitative aspect of the study, the Rosenberg Self-esteem Measure was used to measure self-esteem. For the qualitative part, a topic guide was used for the focus group discussions. Analysis of Variance (ANOVA) and the Pearson's Product Moment Correlation were used to analyse the quantitative data, while the phenomenological principle of open coding used for the thematic analysis. Results showed that there is a relationship between body mass and self-concept and that overweight participants tend to have a low self-esteem. Low self-esteem was perceived to be aggravated by a number of factors, like the attitude of the media and the society. Participants who are overweight also indicated that they are limited in certain activities of daily living (e.g., sports) as a result of their body mass. They expressed mixed feelings and frustration when it comes to such activities.

The above results did not differ from those reported from western cultures. Support groups, life-skills programmes and psychotherapy should be made available and attainable for overweight female adolescent students.

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Introduction

Due to media and modern societal association of being slim with beauty, many adolescent females mostly believe that they are overweight even if they are not, and by the 12th Grade the majority of them are reported to be dieting to loose weight, even when it is not necessary (Kubersky, 1996: 54). The message being sent out by the westernized society is that it is undesirable to have a large body size (Kubersky, 1996: 54). Adolescents receive powerful messages from the broader social environment. Media images of handsome faces and beautiful bodies are used to sell almost everything, from clothes and cosmetic to luncheon, meats, and so on. These images reinforce the western cultural stereotype that women should be thin and shapely to be attractive (Berger, 2000).

As some girls go through puberty they may become dissatisfied with their weight, and to a lesser extent, with their shape. For example, the (US) National Health Survey (1995: 5) reported that almost 40% of young women aged 15 to 24 estimated they were heavier than their Body Mass Index (BMI) indicated. Additionally, 27% of young women who were underweight considered themselves to be in an acceptable weight range (Women's Health Queensland, 2003: 6). Smolak, Levine and Striegel-Moore (1996: 30) also stated that as girls go through puberty they perceive themselves as moving away from their ideal body shape for women. The body development may affect the self-concept of many female adolescents and may also put them under pressure to keep or receive their perceived shape/weight (as determined by the society or media) as a result they may feel that they need to be slim in order to be accepted socially (Nessar, 1997: 40-44).

Some theories have tried to explain the relationship between body mass and self-concept. The Learning Theory (Fouts & Burgraff, 1999: 19-20) holds that one's body mass determines one's popularity with dating partners. It states that the thinner the female character the more positive comments she receives about her body from male characters. It concludes that the message for female viewers is that, in order to be attractive and to receive positive comments from males, one has to be slim; and the message for male viewers is that it is acceptable to make positive comments about women's

bodies when they are thin and to withhold these comments from heavier women (Fouts & Burgraff, 1999: 19-20). Thus, many adolescent females who are slim may view themselves negatively as being unattractive and unworthy. Often some of the consequences of these behaviours are eating disorders (like bulimia or anorexia nervosa) and a low self-concept (Kubersky, 1996: 54). According to the Biological View (Egger & Swinburn, 1997: 477-480), there are some population groups, which appear to have a greater genetic predisposition to weight gain. Gender plays a role in that biologically, women carry more fat than men. Maintenance of a healthy body weight becomes more difficult with age and there are people who are born with a predisposition to heavy body weight or obesity (Egger & Swinburn, 1997: 477-480).

Most of the above-cited studies were carried out in America or Europe. How body mass and self-concept relate to each other among adolescent black females in South African cultural settings are still under-research and documented. Thus, the presents researchers are interested in studying the relationship between weight and the self-concept of female adolescents of the University of Limpopo, to see whether the outcome of the research would be the same or would differ from those reported by authors from other countries and cultures. Because many black South African women have ties with non-Western cultural values which favours a large *body* size (Kubersky, 1996: 54) it may be speculated that the current process of westernization and urbanization taking place in this country, could contribute to a rise in dissatisfaction with body shape and weight among the youth.

Research Problem

Generally girls are less happy with their bodies and have more negative body images, as compared to boys during adolescence (Kubersky, 1996: 54). As pubertal changes proceed, girls often become dissatisfied with their bodies, probably because their body fat increases. They tend to become insecure, have negative attitudes about themselves and about life in general they then live with the ideology that life would be more fun and interesting if they could loose weight. As a result they start going on diets and as mentioned earlier some end up having eating disorders

(Kubersky, 1996: 54). Therefore, the authors are interested in studying the relationship between weight and the self-concept of female adolescents of the University of Limpopo, to see whether the outcome of the research would be the same or would differ from those reported by authors from other countries and cultures.

Aim of the Study

The main aim of the study is to determine the relationship between body mass (using the Body Mass Index) and self-concept among female adolescents at the University of Limpopo in South Africa.

Objectives of the Study

- (i) To explore adolescents' attitudes, feelings and needs regarding their body mass.
- (ii) To identify the social limitations encountered by female adolescents as a result of their body mass.
- (iii) To investigate what their feelings are in relation to the way the media emphasize weight loss.
- (iv) To investigate what their feelings are in relation to the way society emphasizes weight loss.
- (v) Find out what the exact relationship is between body mass and self-concept.
- (vi) To identify whether there are differences in self-concept between female adolescents with a low, average and high BMI.

Research Design

This study used mainly a quantitative approach and the qualitative aspect was included only to complement the qualitative aspect. According to De Vos et al. (2002: 6-11), the quantitative paradigm is based on positivism, which takes scientific explanation to be nomothetic (i.e. based on universal laws). Its main aims are to measure the social world objectively, to test hypotheses and to predict and control human behaviour. A quantitative study may therefore be defined as an inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers and analysed with statistical procedures in order to determine whether the predictive generalizations of the theory hold true (De Vos et al., 2002: 6-11).

In contrast, the qualitative paradigm stems from an antipositivistic, interpretive approach, is idiographic and thus holistic in nature, and aims mainly to understand social life and the meaning that people attach to everyday life (De Vos et al., 2002: 6-11). Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpreted phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials—case study, personal experience, introspective, life story, interview, observational, historical, interactional and visual texts—that describe routine and problematic moments and meaning in individual's lives (Creswell, 1998: 18-25).

The qualitative research paradigm in its broadest sense refers to research that elicits participant accounts of meaning, experiences or perceptions. It also produces descriptive data in the participants' own written language or spoken words. It thus involves identifying the participants' beliefs and values that underlie the phenomena (De Vos et al., 2002: 6-11).

The qualitative researcher is therefore concerned with understanding (*verstehen*) rather than controlled measurement, and the subjective explanation of reality from the perspective of an insider as opposed to the outsider perspective that is predominant in the quantitative paradigm. As such, a qualitative study is concerned with nonstatistical methods and small samples often purposively selected (Mc Roy, 1995: 41-50).

Therefore Creswell, (1998: 18-25) defines qualitative research as an inquiry process of understanding based on distinct methodological traditions of inquiry that explore a social or human problem. The researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants and conducts the study in a natural setting.

Triangulation was used in this study. By this method, Erlandson et al., (1993 p.115) writes, "the researcher seeks out several different types of sources that can provide insights about the same events or relationships". Neuman (2000 p. 124-125) casts further light on the concept of triangulation as follows: "surveyors and

sailors measure distances between objects by making observations from multiple positions. By observing something from different angles or viewpoints, they get a fix on its true location". This process, called triangulation is used by both quantitative and qualitative social researchers (De Vos et al., 2002: 6-11).

There are several types of triangulation, namely, triangulation of theory, observers and methods. Triangulation of method is what was applied in this study. Triangulation of methods means mixing qualitative and quantitative styles of research and data. Most researchers develop expertise in one style, but the two methods or styles have different, complementary strengths. Since there is only partial overlap, a study using both is fuller or more comprehensive (De Vos, 2002).

Population and sampling

The target population was adolescent females at the University of Limpopo (South Africa).

The participants were selected among first year female students at the University of Limpopo, Turfloop Campus. A sample of 75 students was selected, 25 students were selected from each of the following schools: Law, Social Sciences and Management Sciences. The sample was drawn by using a convenience sampling method. McBurney (1994: 8) defines this method as a nonrandom sampling procedure chosen for practical reasons, such as selecting respondents who are readily available to participate in study. Therefore, the respondents were selected on the basis of their availability to take part in the study and the availability of information required for the purpose of the study. Gender and level of study were the first criterion used for selecting potential participants. After having excluded all males, the number of participants required volunteered based on their availability during the time when the study was carried out which was on the 18th and 25th of September 2004. Consequently a final sample of 75 subjects was selected in order to accomplish the aims of the study. Participants for the focus group discussion also volunteered on the same day. The group was of females who were willing to participate in the focus group discussion. The age of participants ranged from 17 to 19 and the average age was 16 years. The participants were all black Africans.

Data collection

(a) The Rosenberg Self-Esteem Measure (RSEM) (Randal, 1973; Rosenberg, 1986) was used to assess the self-concept of the participants. The measure was used because self-esteem is an evaluative factor of self-concept. It is a pencil and paper measure, which is completed by participants. It is a scale or questionnaire consisting of ten items, with both positive and negative statements about an individual's worth. An example of the items in the RSEM is: "I feel that I'm a person of worth, at least on an equal plane with others."

With the Rosenberg Self Esteem Measure, the responses has four response options ranging from "strongly agree" to "strongly disagree". The scoring for some items needed to be reversed so that in each case the scores had gone from less to more self-esteem (Strongly disagree = 4, Strongly agree = 1). Items, which were reverse scored, were indicated with an asterisk. The overall alpha coefficient score was 0.87 for this global self-esteem scale (Nho, 1999). For the present study, the reliability index for the alpha coefficient is 0.85.

(b) Body Mass Index (BMI) calculates the body fat according to the relationship of height and weight (Berger, 2000). Body Mass Index is calculated by dividing the body weight in kilograms by the square of height in metres. The BMI is used for calculating the body fat according to the height of the participant. A BMI of less than 20kg was considered as underweight and a BMI of greater than 25kg was considered as overweight. A BMI that is between the two was considered average weight (Senekal, 1988: 1-5)..

(c) The researchers used a Topic Guide for the focus group interview, to get the participants' views on the relationship between weight and self-concept. The questions asked were:

- How do you feel about your body mass?
- What social limitations or restrictions are female adolescents faced with as a result of their body mass?
- What are your feelings regarding the way that media emphasizes weight loss?
- How do you feel about the way society emphasizes weight loss?
- Do you have any negative or

positive attitude regarding your body mass?

- If yes, why?
- Do you think there is a relationship between body mass and self-concept?

Procedure

(a) The Quantitative Aspect

One of the researchers went to lecturers of different first year courses in different schools. She explained to the lecturers the aims of the study and asked for their permission for her to come and speak to the students and when she can do it. The different lecturers gave her times to come to their classes where she sat in. The lecturers finished their lectures earlier than usual, introduced her to the students and asked them to stay while the researcher explained the study to them. She met with all the participants, obtained their permission and explained to them what the study was all about and the purpose of the study. The researcher organized a meeting on one agreed date with them to meet with them at the hall at the D-Block on the agreed date. The purpose of the meeting was meant for the researcher to measure the body weight of the participants (using a digital weighing instrument) and administer the questionnaire. Before the administration of the questionnaires, the participants were informed about the purpose of the research and were allowed to ask questions regarding the study. The participants were assured of confidentiality and anonymity both before and after the data collection in order to make them feel comfortable. The researcher then started administering the questionnaire by explaining the instructions for completion to the participants.

The participants filled in the questionnaires themselves. It took them about 30 minutes to complete the questionnaires and they were handed in to the researcher after everyone had finished filling in. Again the researcher assured the participants of confidentiality and anonymity after they had finished. The researcher thanked all the participants for their participation and gave them her telephone numbers for them to call if need be.

(b) The Qualitative Aspect

A focus group discussion was used to obtain detailed information about the topic. It was done to explore the

participants' feelings, attitudes about their body mass and self-concept. In this research a focus group discussion consisting of nine participants stratified by age, main area of study was conducted. Participants were selected from a pool of first year female students in the School of Law, Social Sciences and Economic and Management Sciences. The group was made up of the females who were willing to participate in the focus group discussion. The focus group session took place in a classroom setting.

The discussion lasted approximately one and a half hour. The group was led by one of the authors and was conducted in English. English is also the language of instruction in the university. A Topic Guide was used to lead the session. A tape recorder was used to record the group discussion, after participants' consent. At the same time a research assistant was appointed to take notes on the discussions. This was done to ensure that the transcripts would be as complete as possible.

Statistical methods used to analyse the quantitative data

The responses on the RSEM were coded as follows: 1- Strongly Agree, 2- Agree, 3- Disagree, 4- Strongly Disagree. Items 5, 8, 9 and 10 were reverse coded. The Statistical Package for Social Sciences (SPSS) (2002) (Version 11) was used in analyzing the quantitative data, with the use of the Analysis of Variance (ANOVA) and the Pearson's Product Moment Correlation as methods of choice. ANOVA was used to compare the scores of participants who were underweight, of average weight, and overweight (three groups) on self-concept).

The Qualitative Data

The data analysis was conducted according to the principles of thematic analysis and it yielded different thematic categories and subcategories. Qualitatively the data was analysed using open coding (Barrit, 1986; Neuman, 1994), the task of the researcher is to try to go to the heart of the matter by looking for themes that lie concealed in the unexamined events of everyday life to find meaningful, shared themes in different people's description of common experiences.

Open coding involved a line-by-line analysis of the transcripts to: (i) label phenomena, (ii) identify concepts, and

(iii) group the concepts into categories. The transcripts were read and categories were reviewed several times in order to ensure that concepts pertaining to the same phenomena were placed in the appropriate category. The ranges of views expressed within each code were summarized into overview grids or tables. A method of thematic analysis proposed by Creswell (1998: 18-25) was then employed. The initial thematic codes arose from the focus group topic guide. Subsequent codes emerged from close reading of the transcripts. Draft analyses of each coded major topic, based on the overview grids and original coded material, were discussed in detail together with a research assistant.

Ethical Considerations

Written permission was obtained from the participants. All data gathered were treated confidentially and anonymously. Signed consent was required from the respondents. The researcher communicated the aim of the study to the participants. The participants were also informed about the steps that would be taken to keep the responses anonymous, about any risks or discomfort, benefits, the researchers' names and the possibility of receiving a summary of results. The researcher informed the participants about their freedom to opt out of the study at any stage. The researchers strived at all times during the investigation to maintain integrity.

Results

Results from the quantitative study: The criteria used to differentiate weight are as follows: BMI of less than 20kg is regarded as underweight, greater than 25kg is regarded as overweight and a BMI between 20kg and 25kg is regarded as of average weight.

Table 2 shows that the total mean score for the three groups is 23.21, with a standard deviation of 4.486.

One-way ANOVA test was considered in order to test whether there are differences in female adolescents' self-concept as a result of their different levels of body mass. Table 3 shows a statistically significant difference between the means of the three body mass groups in relation to their scores on self-concept ($F(2, 74) = 117.934, p < 0.05$).

A Pearson correlation analysis was done

Table 1: Frequency table for Body Mass Index

	Frequency in kg	Percent
Underweight	14	18.7
Average weight	43	57.3
Over weight	18	24.0
Total	75	100.0

The majority (76%) of the participants were either underweight or average, while 24% of the participants were overweight.

to find out whether the relationship is negative or positive.

The results of Pearson correlation as in table 4, also show a significant relationship between body mass and self-concepts of the respondents ($r = -0.399$, $p < 0.01$). This finding indicates that there is a relationship between body mass and self-concept and that participants who are overweight have a low self-esteem. That is, as body mass increases, the self-esteem decreases, and vice versa.

Results from Qualitative Study:

Participants were asked to comment on

how they feel about their body mass. The qualitative study identified the following themes regarding participants' feelings about their body mass: weight satisfaction, limitations experienced because of being overweight, role of the media, and the relationship between body mass and self-concept.

Weight satisfaction or dissatisfaction

There were participants who reported to be positive about their weight and those who were not positive. Those who were positive reported being happy with their weight and felt that it is part of their African heritage to be "chubby".

However they reported that they avoid gaining weight by being cautious about what they eat. The following are some of the comments made:

"I am happy with my body mass, have no problem with it". (Said by an average weight participant).

"I am happy about my body mass even if people sometimes make negative or bad comments about my body mass. I do not have a problem with my being chubby, it is my African heritage and I am proud". (Said by an overweight participant).

"I am currently satisfied with my body mass, but I am very cautious about how much and what I eat to avoid gaining weight because it will be traumatic to me. It would be traumatic because I am short and being fat it would just make me look ugly, forget about getting a cute boyfriend". (Said by an average weight participant).

There were those who reported negative feelings about their body. One participant reported *"I am not satisfied with my current body mass and would give or do anything to change it".* (Said by an overweight participant).

Another one said:

"I am not happy about my body mass, I would give anything to make it go down"

Table 2: Mean Scores and Standard Deviation for the Body Mass Index.

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper bound
Underweight	14	18.25	0.994	0.266	17.68	18.82
Average weight	43	22.13	1.567	0.239	21.65	22.61
Over weight	18	29.65	3.697	0.871	27.81	31.49
Total	75	23.21	4.486	0.518	22.18	24.24

Table 3: Analysis of Variance comparing the self-concepts of participants with Body Mass Index of underweight, average weight and overweight.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1140.865	2	570.432	117.934	0.000
Within Groups	348.254	72	4.837		
Total	1489.119	74			

Table 4: Correlation between Body Mass and Self-concept.

	RSEM	BMI
RSEM Pearson Correlation	1	-0.399**
Sig. (2-tailed)	.	0.000
N	75	75
BMI Pearson Correlation	-0.399**	1
Sig. (2-tailed)	0.000	.
N	75	75

** . Correlation is significant at the 0.01 level.

(Said by an overweight participant).

Limitations experienced because of overweight

Different opinions were expressed regarding whether or not participants felt restricted about their body mass. Some participants reported to have experienced limitations because of their body mass. These participants felt that because of their body mass they could not participate in some school activities such as sports. One overweight participant who felt restricted because of her body mass said: *“I have been restricted in certain areas as the result of my weight. I still remember when I was in high school; I could not get to take part in certain sporting activities because of my body mass. I always liked aerobics but could not make part of the school team because of my weight”*.

There are limitations when it comes to sports and career choices participants make, as one overweight participant said, *“like me I was always left out of sports teams at school because it was believed that fat people could not do well in sports. I spend most of my school years trying to prove myself, which has all been in vain. I remember when I passed Matric, I applied for a job as airhostess I was never accepted even if I had most of the qualities they wanted”*.

Furthermore the issue of fashion clothes was expressed. Some overweight participants mentioned that because of their body mass, they are unable to wear the clothes they would like to wear.

For example, one participant commented *“The social limitations adolescents are faced with as the result of their body mass are basically in terms of fashion clothes and popular designer labels which are made for the thinner. Such clothes look very good on thin than overweight people. If you are overweight and try wearing these clothes people will make*

fun of you or criticize you, which make one feel bad about themselves”.

The issues of being discriminated against also were expressed. Some overweight participants felt that they were discriminated at school by schoolmates because of their body mass; this resulted in them not having friends they would want.

One overweight participant expressed her frustration by saying, *“I have not experienced any limitations as the results of my body mass, but I have seen some females who do experience problems in terms of the friends they want and having the friends they would like to have at school”*.

Another said: *“I have not really had limitations, except the one time when I broke up with my boyfriend because he had once told me that I should eat less and start exercising because I felt I was gaining weight”*.

Still another commented about dating partners, popularity on campus and the kind of friends one wants to have. One commented saying, *“If you are overweight everyone ignores you and no one wants to be your friend”*.

Media’s emphasis

The media, in all its forms, serve as a very important source of information for the youth. The majority of participants reported not to be pleased by the way media emphasizes weight loss. They reported that the way media emphasizes on weight loss has affected how people look and feel about themselves. One overweight participant expressed her frustration by saying:

“I hate the media’s emphasis on weight loss because we cannot all be the same. Some people are born thin and others fat. This emphasis is what makes people believe to be that fat is unacceptable

and ugly”.

However one underweight participant felt that the emphasis on weight loss is not a bad thing. She mentioned:

“It serves as a good reminder to us that being overweight is not nice and it is unacceptable. Also if you are overweight it sort of gives you hope that there are something you can try to help you reduce your body mass”.

Society’s role

The common attitude held by participants about the role of society was that, society’s emphasis on weight loss has increased and it is worse than that of the media. Participants reported that this emphasis has negative impact on teenagers. Some participants were disappointed about this emphasis because they believe that African women have a fuller figure. One average weight participant commented:

“For me it has been sort of a shock, which overwhelmed me because black African society appreciated larger women with a fuller figure”.

Attitudes

Different opinions were expressed regarding the attitudes participant have about their weight. Some participants indicated that they have negative attitudes about their body weight because they are not happy about how they look. One overweight participant reported

“ Yes I do have an attitude and it is a negative one because every body ‘disses’ me because I am fat, you can tell by the way people look at you”.

However there were those who did not have an attitude about their body mass. Those who were positive about their body mass reported not to let all the fuss about being thin get to change who they really are.

Relationship between body mass and self-concept

The majority of participants were of the opinion that there is a strong belief in there being a relationship between body mass and self-concept. It was mentioned that if a person looks thinner, she would feel better about herself because they can wear whatever they want and people will compliment them. One overweight participant raised this and strongly believed that:

“If I was thinner around my waist I would

definitely see myself differently (positive) my self-esteem would be better.

The following are some of the general comments made by all the participants: *"I think there is a relationship to some extent because how you look will affect how you feel about your self at some point"*.

"I believe that there is a relationship between the two. I have seen it with myself, if I gain weight it doesn't matter how much weight, it would affect how I see myself and my self confidence."

Discussion

In this study, it was found that there are differences in female adolescents' self-concepts as a result of their body mass. As self-esteem decreases, body mass increases. Almost all overweight participants expressed not being happy and satisfied about their body mass (how they look) and they were willing to do anything to reduce their body mass. Overweight ("fat") adolescents have a negative self-esteem and they see themselves as unattractive (Kubersky, 1996: 54). Average weight participants reported being happy with their body mass and having no problems with it. However, they are very cautious about what they eat to avoid gaining weight. This is in line with what Kubersky (1996 p.83) stated that being thin is so regarded as "thee" "ideal weight" that female adolescents end up being obsessed by having to loose weight. This obsession for weight-loss may influence them negatively and reduce their self-worth.

Participants reported feeling restricted in certain areas of their lives because of their body mass. This is in line with Koopman and Adams (1994) who stated that overweight and fat teenage girls are usually lonely, lack self-confidence, are not very sociable and not assertive. This includes popularity i.e. they are not popular as compared to their slim peers and as dating partners. This could be one of the major predisposing factors to the adolescents' preoccupation with weight, which may impact on their self-concept. Their fears are stereotypes about fat people and living a lonely life with no friends and being accepted by no one.

Many overweight participants stated that their being overweight resulted in them being left out of sport teams at school because it is believed that fat people cannot do well in sports. Some

overweight participants spend most of their years trying to prove themselves, however it was often in vain. Participants also reported feeling limited in terms of fashion clothes and popular designer labels. They believe that these clothes are made for the thinner than overweight people are. This agrees with what Paxton, Wertheim, Gibbons, Szumkler, Hillier, and Petrovich (1991) that the fashion or designer label clothes that are popular and appeal to the majority of adolescents are designed mainly for thin or slim individuals. Being thin is idealized as being fashionable and it is equated with beauty, acceptance and popularity. Thus, people criticize and make fun of overweight people who wear these clothes, which makes them feel bad about themselves. This can be frustrating for these females because they cannot have the friends they want and dating partners and this leaves them feeling lonely, ignored and unattractive. This is supported by studies carried out by Levine, Smolak and Hayden (1994) among 385 girls in the USA. They found family and peers to be the strongest influences on bulimic symptomatology among young adult woman. Perceived pressure to be thin from family, friends and dating partners were related to bulimic symptoms.

This study also showed that the media influence how the youth see themselves. It seems the way media emphasizes weight loss has affected how these adolescents feel about themselves. This emphasis is what makes people believe that fat is unacceptable and ugly. This agrees with what Fouts and Burgraff (1999) stated in their learning theory, that young adolescents spend almost 25% of their awake time watching TV. Therefore, television does have the potential to create and reinforce particular social values, stereotypes and behaviours as well as changes the young viewer's perception of reality. This is the ideal female body attractiveness stereotype presented in television, advertising and programming. However, average weight participants generally did not view the emphasis as a bad thing; in fact they see it as a good reminder to them that being overweight is definitely unacceptable. Nessar's (1997) also view the media as presenting images of thinness through role models or images that imply social desirability. By so doing they increase the chances of identification. Women are found to use media images as a reference

source in evaluating their own body image and their sense of acceptance or approval.

In this study, it was found that those who are overweight have negative attitudes about their body mass and as a result, they are not happy about how they look. This attitude it seems has a lot to do with people making negative comments about how they look and the way other people look at them. Average weight participants expressed positive attitudes about their body mass. In line with this was Mitchell et al. (1986) who stated that peers also seem to exert some pressure on adolescent girls to adopt extreme weight loss behaviours.

It was found that both overweight and average weight participants have a common attitude about society's emphasis on weight loss. Generally, the common feeling expressed was that of disappointment and shock, especially for overweight participants. This is overwhelming for them because they believe that the black African society had appreciated larger women with a fuller figure. It seems being chubby was seen as part of one's African heritage. The biological view (Egger & Swinburn, 1997: 477-480) also said that certain population groups (like, in this case, black African females) have the disposition to have a fuller figure than their white counterparts. Thus, some of the participants in this study referred to it as being part of the African heritage.

The disappointment and frustration expressed by these females are in line with Berger (2000), who stating that initially, the western culture was the one which emphasized thinness as the ideal weight, but now it seems to be a multicultural phenomenon.

Conclusion

From this study, one concludes that there is a relationship between body mass and self-concept, and that overweight participants tend to have low self-esteem. This low self-esteem was perceived to be aggravated by a number of factors like the attitude of the media and the society. Participants with overweight also indicated that they limited in certain areas of their lives (e.g., sports) as a result of their body mass. They expressed mixed feelings of frustration when it comes to such areas of life. Thus, the results obtained from the black South African

adolescent females who participated in this study did not differ from those reported in other studies about their western counterparts.

Limitations of study

It is important to understand the interpretation of the results of the study in the light of its limitations. This sample was homogenous in terms of gender (female only), schooling and race. Because of this, generalisability of the findings of this study to other populations is limited.

Recommendations

- Female adolescents need to be encouraged to accept themselves as they are, and to be critical in their use of media images as a reference source for evaluating their own body image and their sense of selves.
- Support groups and psychotherapy should be made available and attainable for overweight adolescents.
- Life skills programmes for the youth should include strategies on how to develop and maintain a positive self-concept.
- There is a need for more South African research in this specific field.

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