URBAN BLACK MALE HIGH SCHOOL SCHOLAR PREFERENCE FOR FEMALE BODY SHAPE ACROSS THE LIFE SPAN, PIETERMARITZBURG, KWAZULU-NATAL.

by

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DECLARATION OF ORIGINALITY

I, Primrose Gcinani Manyathi, hereby declare that:

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(ii) This dissertation has not been submitted for any degree or examination at any other university.

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ABSTRACT

Study objectives: (i) To determine urban black male high school scholar preference for female body shape across the life span, namely for their mother, sister, girlfriend and future wife; (ii) reasons for these choices; and (iii) Body Mass Index (BMI) that represents these preferences.

Design: A cross-sectional, descriptive study.

Methods: Two high schools, one in central Pietermaritzburg (School A) and one in a township just outside Pietermaritzburg (School B) with predominantly black male adolescents in grade 10 to 12 were conveniently sampled after meetings between the primary researcher and headmasters from prospective schools were held to determine their willingness for their scholars to participate in the study. Only scholars whose parents signed informed consent were eligible for participation. After scholars signed assent, a self-administered questionnaire consisting of five close-ended and five open-ended questions that was developed based on a BMI-based body size guide with a novel pictorial method to assess weight-related concepts by Harris, Bradlyn, Coffman, Gunel and Cottrell (2007) was administered.

Results: The study findings indicated that urban black male high school scholars preferred a female body shape with a normal BMI for their sister, citing health reasons for their choice. The preferred body shape for the girlfriend and future wife ranged from a normal weight to an overweight shape with sex appeal being cited as the predominant reason for this choice. When it came to the preferred shape for the mother, it was evident that scholars from School A preferred their mothers to have a normal BMI because as it symbolised health while scholars from School B preferred their mothers to be obese as they thought that was a healthy shape.

Conclusions: The study findings showed that the stage of the female life span did play a role in what this sample of urban black adolescent scholars perceived to be an ideal body shape. As the prevalence of overweight and obesity is especially high among urban black South African women and the causes of obesity are complex and interrelated, the results of the current study require further investigation, not only amongst black South African adolescents, but black men across all the stages of the life span in order to determine the role they play in influencing female body shape.

There is a currently a paucity of published data on what black South African men of different age groups perceive to be the ideal female shape.

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CHAPTER 1: INTRODUCTION OF THE PROBLEM AND ITS SETTING

1.1 Introduction and importance of study

Globally, over 1.9 billion adults are overweight. Of these, over 600 million are obese [World Health Organisation (WHO) 2015]. A high prevalence of obesity was previously mainly observed in developed countries. However, there is a rapid increase in the prevalence of this chronic disease (WHO 2004) and it is not only considered to be a global epidemic, but one that is emerging in developing countries (Swinburn, Sacks, Hall, McPherson, Finegood, Moodie & Gortmaker 2011). Globally, women are more likely to be obese than men, while in Africa, women have nearly double the prevalence of obesity than men (WHO 2013). Changes in dietary and activity patterns are occurring rapidly due to urbanisation and the resultant nutrition transition, which has in turn, led to an increase in the prevalence of obesity and non-communicable diseases (NCDs) in middle-income and transitional countries (Finucane, Stevens, Cowan, Danaei, Lin, Paciorek, Singh, Gutierrez, Lu, Bahalim, Farzadfar, Riley & Ezzati 2011; WHO 2008; Popkin & Gordon-Larsen 2004) such as South Africa (Turok 2001).

The 1998 South African Demographic and Health Survey (SADHS) documented that urban black women had the highest prevalence of overweight/obesity across all population and gender groups with 26.7% being overweight and 31.8% being obese. Central obesity was documented in 43.4% of the study sample (Puoane, Steyn, Bradshaw, Laubscher, Fourie, Lambert & Mbananga 2002). The subsequent 2003 SADHS [Department of Health (DoH) 2007] confirmed that urban black women had the highest mean body mass index (BMI) across all population and gender groups, with 27.7% being overweight, 38.5% being obese and central obesity being present among 39.1%. The subsequent South African National Health and Nutrition Examination Survey (SANHANES-1) reported that South African women had a prevalence of overweight and obesity that was significantly higher than that of men, and that the prevalence of obesity was also significantly higher in women. In addition, it also became evident that there has been a substantial increase in the prevalence of obesity amongst black South African women, as the SANHANES-1 data showed that 24.9% of black women are overweight while the prevalence of obesity has

increased to 39.9% (Shisana, Labadarios, Rehle, Simbayi, Zuma, Dhansay, Reddy, Parker, Hoosain, Naidoo, Hongoro, Mchiza, Steyn, Dwane, Makoae, Maluleke, Ramlagan, Zungu, Evans, Jacobs, Faber, & SANHANES-1 Team 2013). In addition, Case and Menendez (2009) highlighted the fact that the prevalence of obesity among black South African women is five times higher than that of their male counterparts.

Wand and Ramjee (2013) conducted a study in KwaZulu-Natal. This study was done to determine the prevalence of obesity among women who enrolled in HIV prevention trials. The majority (70%) of the 5,495 women who participated were overweight or obese. Further findings were that about 50% of the obese women were over the age of 35 years. Older age and lack of education were found to be significant predictors of obesity ($p<0.001$).

Obesity is associated with many health risks that include hypertension, impaired glucose tolerance, diabetes mellitus, an atherogenic lipid profile and ischaemic heart disease (WHO 2015; van der Merwe & Pepper 2006), while central obesity is a known risk factor for the development of metabolic syndrome and is also linked to the development of coronary heart disease and type 2 diabetes (Lysen & Israel 2012; Swinburn *et al.* 2011; WHO 2011). Sliwa, Wilkinson, Hansen, Ntyintyane, Tibazarwa, Becker & Stewart (2008) and Faber and Kruger (2005), confirmed that obesity predisposes to hypertension, stroke, glucose intolerance and diabetes mellitus in black South Africans. It is estimated that 7% of all South African deaths in 2000, were related to an overweight or obese state (Joubert, Norman, Bradshaw, Goedecke, Steyn, Puoane & the South African Comparative Risk Assessment Collaborating Group 2007).

According to Foley, Levine, Askew, Puleo, Whiteley, Batch, Heil, Dix, Lett, Lanpher, Miller, Emmons and Benett (2012), despite the increased risk of obesity and associated NCDs among black women, they experience less pressure from men to be thin and accept a larger body shape and size as a beauty ideal. Fernald (2009) states that it is of great concern to health professionals in developing countries that a higher body weight may be a symbol of increased social status, thereby contributing to social desirability. The latter was illustrated by Case and Menendez (2009) who found that in a group of South African urban Xhosa women, those with higher incomes were more likely to be obese.

In addition, there is some evidence that black South African women may find themselves in the process of acculturation to Western norms. Stern, Pugh, Gaskill and Hazuda (1982) explain that developed (Western) societies are less sceptical about social values that promote thinness. According to Gitau, Micklsfield, Pettifor and Norris (2014a), countries undergoing Westernisation display an intermediate level of body dissatisfaction compared to the low levels of non-Western countries. As South Africa is now considered to be a middle-income country that is undergoing economic and nutrition transition at a rapid rate, it is still largely influenced by traditional customs and beliefs, despite increased levels of Westernisation.

Local qualitative research conducted by Puoane, Matwa, Bradley and Hughes (2006) among young urban Xhosa women, found that despite the fact that some of them were weight conscious, it was not the norm amongst all members of the study sample. Earlier research conducted by Mvo, Dick and Steyn (1999) among urban black women, found that although they expressed a desire to lose some excess weight, they did not experience social pressure to do so. An investigation targeting black South African female students that hail from both urban and rural areas, found that those residing in urban areas were more likely to be restrained eaters, to have attempted weight loss, to strive towards weight loss and fear weight gain than their rural counterparts (Senekal, Steyn, Mashego & Nel 2001). It is therefore possible that urban black women recognize the inherent societal values of both a larger body shape/size (Kumanyika & Charleston 1992), while at the same time identifying with the values of a smaller body shape, despite the fact that in South Africa, weight loss and thinness is often associated with HIV/AIDS (Matoti-Mvalo & Puoane 2011; Puoane *et al.* 2006; Kruger, Puoane, Senekal & van der Merwe 2005).

In a South African context, the prevalence of overweight and obesity are not only influenced by diet and a lack of physical activity (Kruger *et al*. 2005). Factors such as ethnicity; cultural factors; preference for a particular body shape; age; level of education; area of residence and ideal body weight perceptions and beliefs regarding body weight are all suggested to have an impact on the incidence and prevalence of obesity (Puoane, Tsolekile & Steyn 2010; Kruger *et al.* 2005; Puoane *et al.* 2002).

In terms of area of residence and its impact on the prevalence of obesity, urbanisation is associated with the increased prevalence of obesity as it is associated

with the adoption of an urban (Western) lifestyle which is characterised by a high intake of refined foods and decreased levels of physical activity (Puoane *et al.* 2002). Urban black women still associate overweight and obesity with happiness and wealth; while thinness is associated with HIV/AIDS, tuberculosis and poverty, regardless of the fact that urbanisation exposes urban black women to the media where thinness is the preferred body image (Puoane *et al.* 2010; Puoane *et al*. 2002).

Puoane, Fourie, Shapiro, Rosling and Tshaka (2005) suggest that urban black women are more tolerant of being overweight and obese as an overweight body shape is the most preferred body shape by women, irrespective of the association of obesity with NCDs. A qualitative study regarding perceptions associated with body shape among urban African girls aged 10 to 18 years in Cape Town, found that even though overweight and obesity is associated with an increased risk of NCDs, it is still associated with wealth and happiness and is socially acceptable. This study also found that the majority of the participants associate thinness with illness and diseases like HIV/AIDS and tuberculosis (Puoane *et al*. 2010). Furthermore, in South Africa, Puoane *et al.* (2002) found that ethnicity is one of the primary reasons for obesity among adult women. Contrary to the above, Cachelin, Rebeck, Chung and Pelayo (2002), in the USA (United States of America), found that ethnicity, independent of age; education and body weight does not influence the preference for female and male shapes. In addition, it was also found that ethnicity does not predispose to an acceptance of obesity (Cachelin *et al.* 2002).

In 1996, a study conducted in the USA, to determine black and white male adolescents' perceptions of the ideal female body size found that Black adolescent males preferred a significantly heavier ideal female body size, when compared to that of their white counterparts (Thompson, Sargent & Kemper 1996). The study also found that black adolescent males were 1.9 times more likely to choose a larger ideal female size (in terms of hip/buttocks) than white adolescent males and were 1.7 times more likely to choose a larger female thigh size than white adolescent males (Thompson *et al.* 1996). These findings demonstrated a greater approval and social acceptance of a larger body size for black females by black adolescent males.

However, Mousa, Al-Domi, Mashal and Jibril (2010) explain that with increasing Westernisation, adolescents are exposed to more social and potentially cultural

pressure to meet the societal ideal body shape. It is therefore not surprising that when it comes to the influence of culture on the prevalence of overweight and obesity in South Africa, Gitau *et al.* (2014a) found that urban South African male and female black African adolescents appear to be accepting and are willing to implement Western customs to fit into the pressure of the Western culture. Male and female adolescents shared comparable opinions on which body shapes were normal and obese. Normal body shapes were viewed as best, happiest and respectable, whereas obese body shapes were viewed as worst and unhappiest and the underweight body shapes were viewed as weakest in terms of self-esteem. However, evidence of traditional influences on African male and female adolescents regarding concern for opinions regarding female body size or shape was also found (Gitau *et al.* 2014a).

Numerous studies have been conducted to explore adult male's preferences for a female body shape internationally, but not among local adult males or adolescent males (Swami, Frederick, Aavik, Alcalay, Allik, Anderson, Andrianto, Arora, Brannstrom, Cunningham, Daniel, Doroszewicz, Forbes, Furnham, Greven, Halberstadt, Hao, Haubner, Hwang, Inman, Jaafar, Johansson, Jung, Keser, Kretzschmar, Lachenicht, Li, Locke, Lonnqvist, Lopez, loutzenhhiser, Maisel, McCabe, McCreary, Mckibbin, Mussap, Neto, Nowell, Alampay, Pillai, Pokrajac-Bulian, Proyer, Quintelier, Ricciardelli, Rozmus-Wrzesinska, Ruch, Russo, Schutz, Shackrlford, Shashidharan, Simonetti, Sinniah, Swami, Vandermassen, van Duyndlaeger, Verkasalo, Voracek, Yee, Zhang & Zivcic-Becirevic 2010; Furnham & Nordling 1998; Furnham, Tan & Mcmanus 1997; Thompson *et al.* 1996; Singh & Young 1995; Rosen, Brown, Braden, Dorsett, Franklin, Garlington, Kent, Lewis & Petty 1993).

Apart from the study conducted by Gitau *et al.* (2014a), it would seem that In South Africa, there are no published studies investigating the preference of black adolescent males for a preferred female body shape across the life span. In addition, Puoane *et al*. (2010) reported that principles and ideas about ideal body image have its origins in adolescence. This justifies a need for a study of this nature, as it is not known if urban black adolescent male preference for a particular body shape is in line with the high prevalence of female overweight/obesity, as reported for urban black

South African women by numerous population-based studies such as the most recent SANHANES-1 study (Shisana *et al.* 2013) and the SADHS 2003 (DoH 2007).

The Black race group represents the largest proportion of all races residing in KwaZulu-Natal and the UMgungundlovu district, Pietermaritzburg (Lehlola 2004). Hence, it was viewed as prudent for the study to be conducted among urban Black male high school adolescents residing in Pietermaritzburg, as adolescents present the future mature male population (Puoane *et al*. 2010). It is therefore possible that adult male preferences for a particular female body shape has its origins in adolescence.

The aim of this study was to determine urban black male adolescent high school scholar preference for a particular female body shape across the lifespan amongst participants attending two high schools in Pietermaritzburg.

1.2 Statement of the problem

To determine urban black male high school scholar preference for female body shape across the life span, as well as the reasons for these preferences, Pietermaritzburg, KwaZulu-Natal.

1.3 Type of study

A cross-sectional, descriptive study was conducted.

1.4 Objectives, problems/sub-problems

The study objectives were to determine the following among urban Black male high school scholars:

(i) To determine urban black male high school scholar preference for female body shape across the life span, namely for their mother, sister, girlfriend and future wife;

(ii) Reasons for the preferred body shape; and

(ii) The BMI that represents these body shape preferences.

1.5 Null hypothesis

There will not be a single preferred body shape for study participants' mothers, sisters, girlfriends and future wives.

1.6 Study Parameters

1.6.1 Inclusion criteria:

- Urban black male high school scholars
- Scholars from urban high schools in Pietermaritzburg
- Grades 10 to 12 (16 years and older)

1.6.2 Exclusion criteria

- Scholars from high schools outside Pietermaritzburg
- Scholars from primary schools
- Scholars of white, mixed-ancestry, Asian and Indian race groups

1.7 Assumptions

- It was assumed that study participants were truthful while completing the survey questionnaire.

1.8 Definition of terms

1.8.1 Overweight and obesity

Overweight and obesity are an extreme build-up of fat in the human body that may harm health (WHO 2015). The body mass index (BMI) is used to categorise overweight and obesity. According to WHO (2015) an individual with a BMI of more than or equal to 25 kg/m^2 is overweight, while an individual with a BMI equal to or more than 30 kg/m^2 is obese.

1.8.2 Culture

Culture can be defined as shared genuine ethics of diverse patterns of societal behaviour; it is traditionally passed on or inherited (Olson 2011).

1.8.3 Body shape preference

For the purpose of this study, body shape preference refers to the preferred female body shape of the study participants.

1.8.4 Women across the lifespan

In this study this term is used to denote women of different ages ranging from scholars, adolescents, young adults as well as middle-aged and mature women that could be described as the study participant's sister, girlfriend, future wife and mother.

1.8.5. Female body size

For the purpose of this study, female body size refers to the corresponding BMI of the females depicted in the pictorial BMI-based body size guide used for the development of the study questionnaire.

1.9 Abbreviations

- AIDS – Acquired Immune Deficiency Syndrome
- BMI – Body Mass Index
- DoH- Department of Health
- HIV – Human Immunodeficiency Virus
- NCDs – Non communicable diseases of lifestyle
- SA – South Africa
- SADHS – South African Demographic Health Survey
- SANHANES-1 – South African National Health and Nutrition Examination Survey
- USA – United States of America
- WHO – World Health Organisation

1.10 Structure of dissertation

The structure of this dissertation is presented according to the following format:

- Chapter 1: Introduction of the problem and its setting
- Chapter 2: Review of related literature
- Chapter 3: Methodology
- Chapter 4: Results
- Chapter 5: Discussion
- Chapter 6: Conclusion
- References

1.11 Summary

The prevalence of overweight and obesity is rapidly increasing among South African children, adolescents and adult women in particular. This raises questions as to what are the factors that could contribute to the increase in prevalence of this chronic disease as there is a paucity of published data regarding factors that contribute to this public health problem. Some of the research that has been conducted to date shows that obesity is influenced by age, socio-economic factors, ethnicity, diet, physical activity, perceptions of ideal body weight, preference for ideal body size and culture. However, these factors have not been documented within a South African context. When it comes to race, there is a lack of evidence supporting its influence on the prevalence of overweight and obesity. On the other hand, when it comes to culture; a number of studies suggest that culture does influence male preferences of female body shape and size one way or another. Locally, there are no published studies documenting the influence of male preference for female body size across the life span. In addition, as obesity has its origins in childhood, it would be of interest to investigate the preference for female body shape across the lifespan when it comes to adolescent males.

CHAPTER 2: REVIEW OF RELATED LITERATURE

2.1 Introduction

The prevalence of overweight and obesity is rapidly increasing predominantly among female South African scholars, adolescents and women (Wand & Ramjee 2013; Shisana et al. 2013; DOH 2007; Puoane *et al.* 2002). To illustrate the above, the BMI trends of adolescents and adults generated by population based studies conducted in South Africa will be reviewed.

Table 2.1 presents the BMI trends related to obesity (BMI ≥ 30 kg/m^2) among adolescents and adults in South African are presented as documented by SANHANES-1, SADHS (2003) and SADHS (1998) (Shisana *et al.* 2013; DoH 2007); Puoane *et al*. 2002).

Table 2.1: Female BMI trends for various South African population based studies.

Study name	Reference	BMI percentages of individuals with a BMI ≥ 30 kg/m^2			
		Adolescents 15 to 24 years old		Adults 25 to 64 years old	
		Females	Males	Females	Males
SANHANES-1	Shisana *et al.* (2013)	27.0%	6.0%	64.9%	47.0%
SADHS (2003)	DoH (2007)	8.0%	2.0%	27.0%	9.0%
SADHS (1998)	Puoane *et al.* (2002)	6.0%	0.4%	30.0%	9.0%

The trend that can be observed from Table 2.1, is the significant increase in the prevalence of obesity among female adolescent and adult females in particular over

the past few decades. It is also evident that there has been an increase in the prevalence of overweight and obesity among adolescents and men. However, the increase is not as apparent as that among adult females. In terms of specific race groups, SANHANES-1 showed that there was a substantial increase in the prevalence of obesity among Black South African women as 24.9% of Black women are overweight while the prevalence of obesity has increased to 39.9% (Shisana *et al.* 2013). To add to the above statistics, the SADHS conducted in 1998, it was documented that of the adult women classified as being obese, 37% were urban Black women, while 25% were rural African women (Puoane *et al.* 2002). Moreover, in the SAHDS conducted in 2003, it was found that of the adult women classified as being obese, 34% were urban Black women while 21% were rural Black women (DOH 2007). It is therefore evident that the prevalence of overweight/obesity is greater amongst urban than rural Black women.

Overweight and obesity increases the risk of NCDs like heart disease and stroke; diabetes; cancers affecting the endometrium, breast and colon, as well as osteoarthritis (WHO 2015; Lysen & Israel 2012; Swinburn *et al.* 2011; van der Merwe & Pepper 2006). This is of public health concern as the above mentioned diseases carry a high morbidity and mortality rate (WHO 2015; Swami *et al.* 2010). In addition, the obesity epidemic can only be curbed by conducting research on the multifactorial nature of this disease in order to develop and implement preventative strategies (Gitau *et al.* 2014a; Puoane *et al.* 2010; Puoane *et al.* 2002). Although there are local studies that have investigated the impact of obesity on human health and its contributing factors (Gitau *et al.* 2014a; Puoane *et al.* 2010, Puoane *et al.* 2006, Puoane *et al.* 2005, Kruger *et al.* 2005; Puoane *et al*. 2002, Mvo *et al.* 1999), there remains a paucity of data on the factors that contribute to its prevalence.

Some of the factors that have been associated with overweight and obesity include gender, age, culture, perception of what is regarded as an ideal body weight**,** exposure to the Western culture through media, level of education, socio-economic status, religion and individual preference for a certain body weight. Foley *et al.* (2012), add that Black women experience less pressure from men to be thin and accept a larger body shape and size as a beauty ideal. However, there seems to be a paucity of local published studies that have investigated the relationship between male preference for a particular female body size across the lifespan and its

influence on the prevalence of obesity among urban Black South African women. Hence, this literature review will review existing literature on factors associated with the prevalence of overweight and obesity among South African women in particular.

2.2 Culture, race, socio-economic status and exposure to Western media

Male preference for the perceived ideal female body size and shape is predominantly associated with race and culture (Gitau *et al.* 2014a; Rguibi & Belahsen 2006; Thompson *et al.* 1996; Rosen *et al.* 1993). Various studies regarding body size preference for women have shown that men of different racial subgroups have different attitudes towards ideal female body size preferences (Gitau *et al.* 2014a; Rguibi & Belahsen 2006; Thompson *et al.* 1996; Rosen *et al.* 1993). For decades it has been suggested that white men prefer thinner women than black men internationally and vice versa (Gitau *et al.* 2014a; Rguibi & Belahsen 2006; Thompson *et al*. 1996; Rosen *et al.* 1993). This is believed to be intermediated by sociocultural factors such as socio-economic status, exposure to media, and level of education (Gitau *et al.* 2014a; Rguibi & Belahsen 2006; Thompson *et al.* 1996; Rosen *et al*. 1993).

Swami *et al.* (2010) found that individuals of a low socio-economic status in Malaysia and South Africa but not in Austria, preferred heavier bodies than individuals from a high socio-economic status. The study further found that body weight ideals were predicted by age, BMI and exposure to Western media. By contrast in South Africa, a higher prevalence of obesity has recently been observed among the urban African population of a relatively higher socio-economic status and a relatively higher exposure to the Western media, diet and culture (Shisana *et al.* 2013; Case & Menendez 2009). Case and Menendez (2009) suggest that women of a higher socio-economic status are more likely to be obese than men of the same socio-economic status. Though a higher percentage of urban African females have attempted to lose weight, South African black women are suggested to be more tolerant of overweight and obesity because they receive less pressure from men to lose weight. This could explain the high prevalence of overweight and obesity

among urban African women in particular (Miller et al. 2012; Case & Menendez 2009).

2.3 Attitude towards overweight and obesity of black women

Faber and Kruger (2005) conducted a study to determine dietary intake, perceptions regarding body weight and attitudes toward weight control of rural women aged 25 to 55 years in South Africa. It was reported that the majority of women who participated in the study were not concerned about their body weight and the majority of overweight and obese women did not want to lose weight. Moreover, only 9% of the participants in the same study acknowledged that obesity is caused by eating too much. Another study conducted to explore body weight and body image among urban black female community health workers, found that most women who participated in the study, preferred an overweight shape as it is associated with dignity, respect, confidence, beauty and wealth (Puoane *et al.* 2005). In addition, according to the participants, the apparent causes of obesity are eating the wrong food, not eating breakfast, worries about debts, husbands/partners and teenage children (Puoane *et al.* 2005).

Similar views about obesity among women were observed among Moroccan Sahroaui women who were 15 years or older. Before discussing these women's views, it must be stated that Morocco is one of the African countries facing Western acculturation (Rguibi & Belahsen 2005). Rguibi and Belahsen (2005) suggest that the majority of the Moroccan Sahraoui women who participated in their study had a very low desire to lose weight regardless of their level of education. Women who were dissatisfied with their body weight tried to gain weight rather than to lose the weight, as a larger body size was most preferred. Factors believed to influence the ideal body weight/size were mothers, men and traditional clothing (Rguibi & Belahsen 2005).

When it comes to body image perceptions of younger women, Gitau, Micklesfiled, Pettifor & Norris (2014b) found that urban Black South African female adolescents (aged 13, 15 and 17 years old) residing in Johannesburg, had a greater tendency to control what they consume compared to their white peers and that Black girls were significantly ($p<0.05$) more susceptible to suffering from an eating disorder than their white peers even though the prevalence of overweight/obesity was higher among

white girls. In addition, Gitau *et al.* (2014b) found that white girls showed a greater desire to be thin than the Black girls. Gitau *et al.* (2014b) suggested that Black girls watch what they eat due to the exposure to the Western norms of thinness. Another study conducted among South African urban Black adolescents by Puoane *et al.* (2010), found that the majority of South African urban Black girls aged between 10 and 18 years who were studied in Cape Town associate fatness with happiness and wealth. In addition, fatness was perceived as being socially acceptable (makes one look respectable) and was preferable even though it was also associated with the difficulty of finding clothing sizes and diseases like diabetes and hypertension (Puoane *et al*. 2010). Of the girls who participated, 75% associated thinness with being sick from HIV/AIDS and TB. However, being thin was associated with a reduced susceptibility to developing chronic NCDs by the black urban girls (Puoane *et al*. 2010).

The above findings echo the fact that in some African societies, thinness is associated with illness such as HIV/AIDS and TB, poverty, infertility and physical weakness, while obesity is associated with wealth, fertility and good health (Gitau *et al.* 2014a; Puoane *et al*. 2010; Rguibi & Belahsen 2006; Thompson *et al.* 1996; Singh & Young 1995; Rosen *et al.* 1993). In Western cultures on the other hand, obesity is associated with sluggishness, overindulgence and a lack of self-control. Some studies show that black African men prefer women of a larger body size than white men (Gitau *et al.* 2014b; Rguibi & Belahsen 2006; Thompson *et al.* 1996; Rosen *let al.* 1993). Though black South African adolescents appear to be adopting the Western culture. However, proof of traditional influence in boys' perception of female silhouettes still exists (Gitau *et al.* 2014b).

2.4 Religion and its influence on preference for female body size

It is suggested that religion shapes eating habits, health behaviour and sometimes health beliefs (Kruger *et al.* 2005). Moreover, although predominantly qualitative research techniques have been used, it was found that religious practices and beliefs have an impact on perceived ideal body weight and lifestyle. For example, men and women of the Arabic Muslim society in Morocco, idealise obese women. In this society, obesity is perceived as a sign of fertility. In addition, a woman's ideal body size is believed to be dependent on the women's role in the family and society at a

given time and the belief is held that Allah determines their body size (Batznitzky 2011).

When it comes to socio-economic status, Batznitzky (2011) found that lower to middle class Moroccans believe that being too fat is superior to being too thin. Other factors that may contribute to female Muslim Moroccans being overweight and obese include the women's roles in religious ceremonies. For example, for the Ramadan ritual of hospitality, women are expected to prepare large amounts of food which are consumed in the evening (Batznitzky 2011).

2.5 Exposure to Western norms and its influence on the preference for female body size

Female physical attractiveness in Western societies has been a topic of interest for decades (Cornelissen, Tovee & Bateson 2009; Fisher & Voracek 2006; Weeden & Sabini 2005; Rand & Wright 2000). Some researchers suggest that waist to hip ratio (body fat distribution), BMI and curvaceousness influence female attractiveness and hence can be used as predictors of physical attractiveness (Fisher & Voracek 2006; Singh & Young 1995). However, there has been a lot of debate around this concept. Cornelissen *et al.* (2009) suggest that total body fat in particular, is the main determinant of female physical attractiveness. However, BMI and waist to hip ratio (WHR) are said to be correlated, with both being dependent on subcutaneous fat deposition (Cornelissen *et al*. 2009). Females with a low WHR and BMI are viewed as being attractive and young by males in general. It has also been suggested that young males prefer such females to be their romantic partners on a long and short term basis. On the other hand, females with a high WHR and BMI are rated as unattractive; old and less desirable for engaging in both long and short term romantic relationships (Cornelissen *et al*. 2009; Fisher & Voracek 2006; Singh & Young 1995).

The above mentioned studies predominantly made use of female body silhouettes for data collection purposes. In addition, they are not necessarily applicable to how African societies define female physical attractiveness. However, there is a paucity of data collected among African communities. In addition, many African countries, including South Africa, are undergoing political, economic and cultural transition (Westernisation) resulting in the majority of these countries seemingly embracing Westernisation in particular (Gitau *et al.* 2014a; Batnizky 2011; Rguibi & Belahsen

2006). For example, South African adolescents seem to be embracing the Western culture in terms of eating attitudes and body image, however traditional influence still exists (Gitau *et al.* 2014a).

When it comes to exposure to the media and the ideal body image among women, as perceived by men, a paucity of South African research exists. Sypeck, Gray & Ahrens (2004) examined the print media's depiction of the ideal of feminine beauty as presented to American women for the years 1959 to 1999. Trends were studied by analysing cover models appearing on the four most common American fashion magazines. From this analysis a noticeable decrease in body size of cover models during the years 1980 and 1990 was noticed. A drastic increase in the frequency with which the magazines showed the entire bodies of models from 1960 to 1990 were noted as well (Sypeck, Gray & Ahrens 2004). This has posed great pressure for an ideal thin female body size among American women. On the other hand Polivy and Herman (2004) suggest that blaming the media for spreading the message that women must be thin is overly unsophisticated because women voluntarily expose themselves to media depicting thin bodies of female models. Lastly, Frederick, Fessier and Haselton (2005) propose that women overestimate the degree of thinness that is most attractive to men, but then again these researchers are of the opinion that the influence of mass media regarding the above, is pivotal when it comes to the preference for a thin female body size among women and men who are exposed to it.

2.6 Conclusion

National population based studies bear testimony to the fact that the prevalence of overweight and obesity among female South African women are on the increase. However, all the causes of this multifactorial public health problem has not been well researched. From limited national and international data it would seem that culture, attitude towards overweight and obesity, religion and exposure to Western norms and mass media all play a role when it comes to shaping male preference for a particular female body shape across the female lifespan. However, it is evident that there is a paucity of published data investigating this concept from a South African perspective. In the next chapter the research methodology used in this study will be discussed.

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter will discuss the study design, study population and sample selection, study methods that were used, measuring instrument, data collection, pilot study, study variables including data capturing and statistical analysis, data quality control and ethical considerations.

3.2 Study design

The study design employed was a cross-sectional, descriptive study. A cross-sectional, descriptive study is an observational type of study where researchers do not intervene in any way (give treatment or withhold information) (Petrie, Bulman and Osborn 2002). This study design requires no following up of a group of individuals and it is therefore cost effective and relatively quick to conduct. On the other hand, this type of study cannot distinguish between cause and effect or the system of occasions. It is therefore ineffective when the consequence is uncommon. This study design is able to define the prevalence in a population and surveys the relationship between, contact and consequence (Petrie *et al* 2002).

A similar study design was also used in the studies that were cited in the literature review (Chapter 2) by authors that conducted similar international studies (Gitau *et al.* 2014; Cornelissen *et al*. 2009; Fisher & Voracek 2006; Rguibi & Belahsen 2006; Singh & Young 1995).

3.3 Study population and sample selection

3.3.1 Study population

The study population consisted of urban black male adolescents enrolled for study in grade 10 to 12 public high schools, Pietermaritzburg. This age group of the study population was selected as Puoane *et al*. (2010) reported that principles and ideas about ideal body image have its origins in adolescence.

3.3.2 Sample selection

Two high schools with black male adolescents in grade 10 to 12 and located in central Pietermaritzburg were conveniently sampled due to time and costs constraints. In addition, these schools were surveyd as meetings between the researcher and headmasters from these schools were positive in terms of their willingness to participate in this study. Hence, after permission was obtained from the headmasters and school board of two conveniently sampled schools located in central Pietermartzburg, informed consent was obtained from parents/legal guardians of the scholars by means of a letter in a sealed envelope that scholars returned to school after completion. Only scholars who returned the informed consent letter and gave assent subsequently participated in the study.

3.4 Study methods and materials

3.4.1 Measuring instruments

A self-administered questionnaire consisting of five close-ended and five open-ended questions were developed after adapting certain concepts of an original questionnaire developed by Harris, Bradlyn, Coffman, Gunel and Cottrell (2007). The questionnaire contained 10 line drawings of female bodies without the

corresponding BMI's. Questionnaire was discussed with a statistician before piloting took place. Self-administered questionnaires were also used in similar studies conducted by Gitau *et al.* (2014a); Puoane *et al*. (2010); Cornelissen *et al.* (2009); Fisher and Voracek (2006); Rguibi and Belahsen (2006) and Singh and Young (1995).

3.4.2 Data collection

The questionnaire was self-administered in English (the medium of instruction) to study participants in their class room at a time convenient to the two respective schools. The primary researcher and two trained fieldworkers who were undergrad Dietetic students. Field workers were present for the duration of data collection to assist participants with any questions they might have had. It took participants 10 to 15 minutes to complete the questionnaire as the respective open-ended questions where participants had to describe the reason for their choice of a specific line drawing took up the majority of time in which to complete the questionnaire.

3.5 Pilot study

A pilot study was conducted on 10 participants (7% of the final study sample) who met the inclusion criteria of those who participated in the main study. These participants were sampled from a school that did not form part of the two schools used in the main study. In order to participate, written consent from parents/legal guardians had to be obtained followed by assent from the study participants (as was the case with the main study). On completion of the pilot study no changes were made to the research instrument as questions were easy to interpret and no ambiguity was detected.

3.6 Variables included in the study, data capturing and statistical analysis

The variables included in the study is depicted in Table 3.1. A statistician was consulted in the analysis of the data by means of International Business Machines Statistical Package for Social Sciences (IBM SPSS) version 21.

Table 3.1: Data analysis

Study objective	Related variable	Statistical analysis
1. To determine urban black male high	Responses to close-ended	Frequency

school scholar preference for body shape across the life span, namely for their mother, sister, girlfriend and future wife.	questions regarding preferred female body shape.	distributions
2. To determine the reason why urban black male high school scholars preferred a particular body shape for their mother, sister, girlfriend and future wife.	Responses to open-ended questions regarding preferred female body shape.	Conversion of open-ended questionnaires to categorical data by means of open coding, followed by calculation of frequency distributions
3. To determine which BMI category corresponds with the preferred body shape of urban black male high school scholars chosen for their mother, sister, girlfriend and future wife.	Comparison of preferred female body shape to the BMI categories reported by Harris et al. (2007) in the original research instrument developed by them.	Frequency distributions

3.7 Data quality control

3.7.1 Reliability of data

Reliability relates to whether a particular technique, applied repeatedly to the same object, would yield similar results every time. However, it does not ensure accuracy or validity (Babbie & Mouton 2008; Katzenellenbogen & Joubert 2007). According to Walonick (2011), a reliable instrument produces consistent results over time. A pilot study was conducted to ensure that data was collected in the current study was reliable. Other measures employed to enhance reliability was that open-ended questions were coded to aid conversion into categorical variables by the primary researcher, followed by expert input by the study supervisors. Due to the fact that the research instrument was self-administered, neither the researcher nor the field workers were able to influence participant responses. Double data entry was conducted to eliminate any errors that could have resulted due to human error.

3.7.2 Validity of data

Validity refers to the extent to which research conclusions are sound, as well as the level to which documented data adequately reflects the actual meaning of the concept under investigation (Babbie & Mouton; van der Riet & Durrheim 2008; Katzenellebogen & Joubert 2007). Construct, content, and face validity of the

research instrument was ensured by adaption of a validated research instrument for data collection purposes.

Walonick (2011) defines validity as the “accuracy and truthfulness” of a measurement. For the purpose of the study the assumption was made that study participants will be truthful when completing the self-administered research instrument. According to Patel, Doku and Tennakoon (2003), one of the most important factors that can influence the validity of the data collection process, is the level of motivation of the participant. Hence the degree of interest that the research topic has for the study participant is a significant motivating factor. Gaging from the response to the open-ended questions, participants were interested in the research topic.

To ensure that open-ended questions were assigned to the correct variables, the study supervisors were actively involved in this process by being available to provide expert input to the primary researcher for the duration of this process.

3.8 Ethical consideration

After permission was obtained from the headmasters and school board of the two conveniently sampled schools in central Pietermaritzburg, study participants who met the study inclusion criteria were given informed consent forms in sealed envelopes for completion by their parents or legal guardians. Once the informed consent forms were returned to school, participants had to sign assent before participation in the study was possible. To ensure anonymity, participants did not have to indicate their name on the research questionnaire and were subsequently assigned a code for data capturing purposes.

This study was approved by the Humanities and Social Science Research Ethics committee (HSSREC) of the University of KwaZulu-Natal to ensure that ethical standards were met (HSS/0134/013D).

Data collected for this study will be stored at Dietetics and Human Nutrition, University of KwaZulu-Natal in a locked facility for a period of five years while electronic versions of the data sets will only be accessible to the primary researcher and research supervisors.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter will discuss the sample characteristics as well as the results in relation to the objectives of the study reported in Chapter 1.

4.2 Sample characteristics

A total of 145 urban black male high school scholars participated in the study. Nearly a third i.e. 60.7% (n=88) of the study sample were from School A (suburb) and 39.3% (n=57) of the scholars were from School B (township).

With regards to level of study, 0.7% (n=1) of the scholars were in grade 10, 42.1% (n=61) were in grade 11, while 57.2% (n=83) were in grade 12.

Scholars had a mean age of 18.06 ±1.83 years with the youngest scholar surveyed being 16 years old and the oldest 25. It was noted that scholars from School B were between the ages of 17 and 25 years, while those from School A were between 16 and 19 years of age. However, it is not uncommon for scholars from a township school to be older.

4.3 Results in relation to the objectives of the study

Of the 145 scholars that participated in the study, 6% (n=9) did not state reasons why they prefer a particular body shape for their mothers, while 5.5% (n=8) of the scholars did not state reasons why they preferred a particular body shape for their sister. Only one (0.7%) scholar did not state a reason for the body shape preferred for their girlfriend, while 4% (n=6) did not state reasons why they would prefer their future wives to resemble a certain body shape.

4.3.1 Preferences for female body shape of the mother

In Table 4.1 below, the responses for all participants to body shape preference for the mother are presented in percentages. Responses from both schools have been presented separately to facilitate the comparison of observed trends. Reasons for these choices will be represented in Table 4.2.

Table 4.1: Body shape preference for the mother (N=142)

School	Variable	Frequency	Percentage (%)
School A (n=87)	A	1	1.1
	B	14	16.1
	C	30	34.1
	D	20	22.7
	E	16	18.2
	F	1	1.1
	G	3	3.4
	H	1	1.1
	J	1	1.1
School B (n=55)	A	40	7.0
	B	5	8.8
	C	7	12.3
	D	4	7.0
	E	21	36.8
	F	3	5.3
	G	3	5.3
	H	2	3.5
	I	1	1.8
	J	4	7.0

From Table 4.1 it can be observed that 34.1% (n= 30) of scholars from School A chose shape C, followed by 22.7% (n=20) and 18.2% (n=16) of scholars who chose body shapes D and E respectively. Only one scholar (1.1%, n=1) from School A did not answer this question. Hence the data was treated as missing. When it came to School B, the majority (36.8%; n= 21) of scholars chose body shape E. Only 12.3% (n=7) of scholars from School B chose body shape C. Moreover, it can be observed that body shapes H and I were chosen by only 3.5% (n=2) and 1.8% (n=1) respectively. Only 3.5% (n=2) of the scholars from School B did not answer this question. Hence the data was treated as missing.

Reasons for the preferred female body shape of the mother were converted into categorical variables to facilitate the calculation of percentages. Table 4.2 provides an overview of the different categories stated. This table will only be presented for the reason for choice of a particular body shape for the mother. To avoid repetition, these categories will only be referred to when it comes to a preferred body shape for sister, girlfriend and future wife.

Table 4.2: Reasons for the preferred body shape for the mother (N=136)

School	Reasons	Frequency	Percentage (%)
School A (n=85)	Health/fitness	37	42
	Proud	0	0.0
	Don’t want others to perve*	2	2.3
	Love any shape don’t care	4	4.5
	Sexy	3	3.4
	Health& self-confident/self- image	4	4.5
	Self -image/self-confident	1	1.1
	Current body shape	5	5.7
	Does not like skinny women	1	1.1
	Age appropriate	3	3.4
	Dictated by future husband	5	5.7
	Mature	4	4.5
	Does not like fat women	2	2.3
	Not skinny & not fat/ average build	13	14.8
	Accepted by society	10	1.1

School B (n=51)	Health/fitness	15	26.3
	Proud	0	0.0
	Don't want others to perve	1	1.8
	Love any shape don't care	2	3.5
	Sexy	9	15.8
	Health& self-confident/self- image	1	1.8
	Current body shape	3	5.3
	Does not like skinny women	1	1.8
	Dictated by future husband	4	7.0
	Mature	1	1.8
	Does not like fat women	9	15.8
	Not skinny & not fat	5	8.8

*looking at somebody lustfully

Table 4.1 above, shows that the most common reason given for the choice of a particular body shape for the mother amongst scholars from School A was health/fitness (42%; n=37). The least common reasons cited were self-image, dislike of skinny women and acceptance by society at 1.1% (n=1) respectively. When it came to School B, the most common reason cited at 26.3% (n=15) was health/fitness, the same reason given by scholars from School A. This was followed by a dislike of fat women at 15.8% (n=9). The least common reasons given were that they "don't want others to perve", health and self-confidence, dislike of skinny women and dislike of fat women at 1.8% (n=1) respectively.

4.3.2 Preferences for female body shape of the sister

In Table 4.3 below, the responses for all participants regarding body shape preference for the sister are presented. Responses from both schools have been presented separately to facilitate the comparison of observed trends. Reasons for the choice of a particular body shape will be discussed in the text.

Table 4.3: Body shape preference for the sister (N=142)

School	Variable	Frequency	Percentage (%)
School A (n=87)	A	8	9.1
	B	46	52.3
	C	28	31.8
	D	3	3.4
	E	2	2.3

School B (n=55)	A B C D E G H J	10 13 20 4 4 1 1 2	17.5 22.8 35.1 7.0 7.0 1.8 1.8 3.5

Table 4.3 above shows that the most preferred body shapes for the sister amongst scholars from School A were body shapes B and C at 52.3% (n=46) and 31.8% (n=28) respectively. The least preferred body shapes were shapes D and E at 3.4% (n=3.0) and 2.3% (n=2.0) respectively. Body shapes B and C were also the most preferred amongst scholars from School B at 22.8% (n=13) and 35.1% (n=20) respectively. The least preferred body shapes were shapes G and H both at 1.8% (n=1).

When it came to the reasons for the preferred body shapes for the sister among scholars from School A, the most common reason was health/fitness at 35.2% (n=31). Other common reasons were “sexy/sex appeal” and the “average build” at 14.8% (n=13) and 12.5% (n=15) respectively. The most common reason for preferred body shapes of the sister amongst scholars from School B was “health/fitness” at 29.8% (n=17). Other common reasons were “sex appeal” and “does not like fat women” at 22.8% (n=13) and 15.8% (n=9) respectively.

4.3.3 Preferences for female body shape of the girlfriend

In Table 4.4 below, the responses for all participants to female body shape preference for the girlfriend are presented. Responses from both schools have been presented separately to facilitate the comparison of observed trends. Reasons for the choice of a particular body shape will be discussed in the text.

Table 4.4: Body shape preference for the girlfriend (N=145)

School	Variable	Frequency	Percentage (%)
School A (n=88)	A B C D E J	7 56 21 1 2 1	8.0 63.6 23.9 1.1 2.3 1.1

School B (n=57)	A	6	10.5
	B	19	33.3
	C	13	22.8
	D	4	7.0
	E	9	15.8
	G	2	3.5
	H	1	1.8
	I	1	1.8
	J	2	3.5

From Table 4.4 it is evident that the most preferred body shape for the girlfriend for all participants were shapes B and C at 51.7% (n=75) and 23.4% (n=34) respectively. A higher percentage of scholars from School B (15.8%) preferred body shape E, whereas only 2.3% (n=2) of the scholars from School A preferred this shape. None of the scholars from School A preferred shapes G, H and I while 3.5% (n=2) and 1.8% (n=1) of the scholars from School B preferred body shapes G and H respectively.

When it came to the reasons for the preferred body shapes for the girlfriend, the most common reason all participants cited was sex appeal (41.4%; n=60). Other common reasons were “does not like fat women” and “health/fitness” at 15.2% (n=22) and 13.8% (n=20) respectively. Amongst School A participants the next most common reason was health/fitness at 19.3% (n=17) while for School B, the same reason was only cited by 5.3% (n=3) of participants. Amongst scholars from School B, the next most prevalent reason was “does not like fat women” at 26.3% (n=15), whereas only 8.0% (n=7) of School A participants gave the same reason.

4.3.4 Preferences for female body shape for the future wife

In Table 4.5 below the responses for all participants regarding preferred body shape for the future wife are presented. Responses from both schools have been presented separately to facilitate the comparison of observed trends. Reasons for the choice of a particular body shape will be discussed in the text.

Table 4.5: Body shape preference for the future wife (N=143)

School	Variable	Frequency	Percentage (%)

School A (n=87)	A B C D E J	2 43 28 7 6 1	2.3 48.9 31.8 8.0 6.8 1.1
School B (N=56)	A B C D E F G H I	4 13 13 7 12 1 2 1 3	7.0 22.8 22.8 12.3 21.1 1.8 3.5 1.8 5.3

Table 4.5 above shows the most preferred body shapes for the future wife amongst all participants are body shapes B and C. Amongst scholars from School A, body shape B was preferred by almost half of the scholars at 48.9% (n=43), while shape C was preferred by 31.8% (n=28). Shape E was preferred by only 6.8% (n=6) of the scholars from School A, whereas scholars from School B preferred shape E (21.1%; n=12). None of the scholars from School A preferred body shapes F, G, H and I for their future wife. When it came to scholars from School B, shapes B and C were preferred by more than a fifth of the scholars at 22.8% (n=13).

When it came to the reasons for the preferred body shape for the future wife, the most common reason cited was sex appeal at 33.8% (n=47). Other common reasons given were “health/fitness” and “average build” at 21.0% (n=29) and 11.5% (n=16) respectively.

4.3.5 BMI category representing the preferred female body shape of the mother, sister, girlfriend and future wife.

Figure 1 below consists of images showing various female body shapes. These images were used in the survey questionnaire. However, the faces and weight classifications were removed so the participants would focus on the shapes and not the facial appearance (see Appendix B). In addition, the faces of the body shapes were removed in order to avoid any association with a particular race group.

Figure 1 has been included for the purpose of the study to assist in determining the BMI category of the preferred female body shapes of urban Black male high school scholars for their mother, sister, girlfriend and future wife.

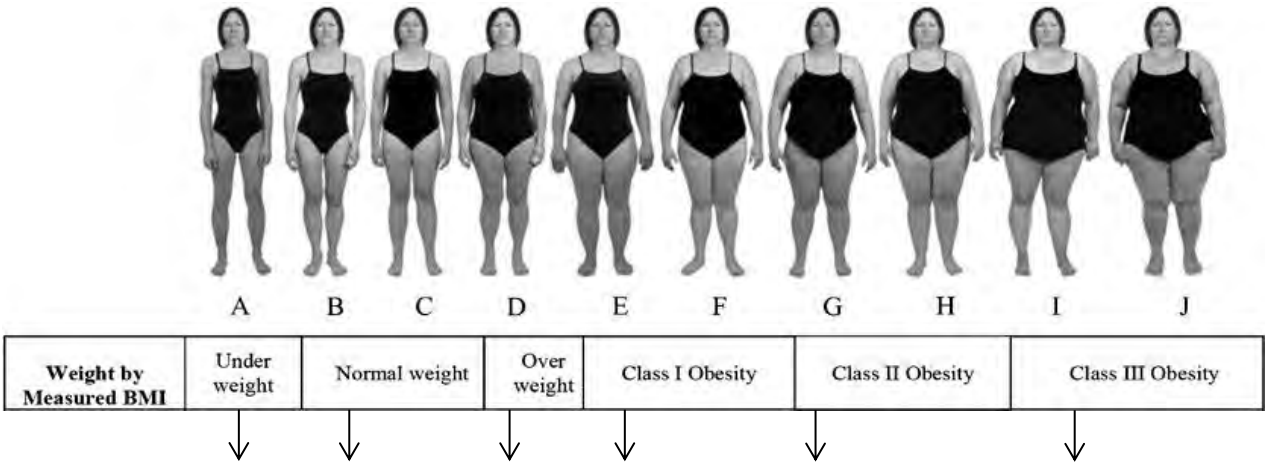


Figure 1: Women's body size guide images and weight classifications based on the indicated BMI (adapted from Harris, Bradlyn, Coffman, Gunel & Cottrell 2007).

From Figure 1 it can be seen body shape A represents females who are underweight with a BMI of less than 18.5 kg/m^2. Female body shapes B and C represent females of a normal weight with BMI's ranging from 18.5 to 24.9 kg/m^2. Female body shape D represents a female who is overweight with a BMI of over 25 kg/m^2, while body shapes E to J all represent obese females with levels of obesity ranging from Class I (E and F), Class II (G and H) and Class III (I and J).

More than a third 34.1% (n=30) of School A participants preferred body shape C for their mother. This shape represents a normal BMI of 18.5-24.9 kg/m^2. However, more than a third (36.8%; n=21) of scholars from School B preferred body shape E (BMI 30-35 kg/m^2) for their mothers. This shape is representative of Class I obesity.

The preferred body shape for the sister ranged between body shapes B and C which is representative of a normal BMI. These shapes were respectively preferred by 41.5% (n=59) and 33.8% (n=48) of the total study sample. A combination of these two body shapes yielded an overall preference of 75.4% (n=107).

With reference to the girlfriend, size B and C were also the preferred shapes with an overall preference 51.7% (n=75) and 23.4% (n=34) respectively. A combination of shapes B and C yielded an overall preference of 75,2% (n=109), a similar trend observed for the sister.

These above trends were also observed for the future wife, where female body shapes B and C were preferred by 38.6% (n=56) of both schools combined and 28.3% (n=41) of the study sample respectively with an overall combined preference of 67.8% of only those who responded (n=97). With regards to the preferred shape for the future wife, 12.4% (n=18) of all the participants preferred body shape E which represents Class I Obesity. Two thirds (66.7; n=12) of the participants (both schools) who preferred the body shape E for their future wife were from School B.

4.4 Conclusion

When it came to the body shape preferred by urban black adolescent males for females across the lifespan, the observed trends between School A and B were respectively shape C and E for the mother, and a combination of shape B and C for the sister, girlfriend and future wife. However, 66.7% of participants who preferred body shape E for their future wife were from School B. From a BMI perspective, shapes B and C were both indicative of a normal BMI while shape E represented Class I obesity. Despite the small study sample from School B, it would seem that participants from this school were more likely to select body shape E as the ideal shape for their mother, girlfriend and future wife.

The predominant reason for choosing a particular body shape for the mother, sister, girlfriend and future wife were health and fitness for the mother and sister and sex appeal for the girlfriend and future wife.

CHAPTER 5: DISCUSSION

5.1 Introduction

In this chapter results presented in chapter 4 will be discussed in relation to the objectives for this study and literature reviewed in chapter 2 will be referred to so it can be realised whether the hypothesis set in chapter 1 of this study will be accepted or not.

5.2 The preferred body shape for the mother, sister, girlfriend and future wife

Due to the cross-sectional nature of the study, it must be borne in mind that the trends in preferred body shapes and most prevalent reasons for choosing a particular body shape are not necessarily related. This implies that the most common shapes and the most common accompanying reasons reported in chapter 4 are not dependent, meaning that even though body shapes B and C were the most common choices made accompanied due to health as the most prevalent reason, it does not necessarily imply that every participant who chose body shape C because they thought it was healthy. It merely implies that in the majority of cases when a participant chose a particular body shape, the reason was that it was a symbol of e.g. health.

When it came to the most preferred female body shape for the mother, the majority of School A participants preferred a body shape with a lower BMI (shape C) when compared to School B where participants preferred body shape E for their mothers. Although the study samples from both schools consisted or urban Black male adolescents and are located in an urban area, School A is located in one of the suburbs of Pietermaritzburg, while School B is located in a Pietermaritzburg township. It can therefore be assumed that participants from School A, are of a higher socio-economic status than those from School B. In addition, School A had scholars of various race groups and therefore cultures, while all the scholars that attend School B were Black. It is however of interest that in the local study conducted by Gitau *et al*. (2014a), the school that Black male and White adolescents attended, was not related to any of the study outcomes regarding their perception of female body silhouettes. However, according to literature, South Africa adolescents seem to be embracing the Western culture in terms of eating attitudes and body image,

despite the fact that traditional influence still exists (Gitau *et al.* 2014a). Furthermore, Swami *et al.* (2010) found that individuals of a low socio-economic status in Malaysia and South Africa, but not in Austria, preferred heavier bodies than individuals from a high socio-economic status. In addition, Swami *et al.* (2010) found that body weight ideals were predicted by age, BMI and exposure to Western media. It is therefore possible that the difference in body shape trends preferred by School B participants, could have been influenced by a stronger embracement of traditional, non-Westernised trends in body shape norms. The latter is similar to that reported by Foley *et al.* (2012) who stated that Black women in general have a lower level of preoccupation with weight control, are less likely to perceive themselves as overweight, have so-called "obesity-tolerant" attitudes, experience less pressure from men to be thin and accept a larger body shape and size as a beauty ideal.

When it came to the most preferred female body shape for the sister, body shapes B and C were the most popular choices. These shapes were also preferred for the girlfriend and future wife. Hence it was evident that the majority of participants preferred a female body shape of a normal BMI. This finding is supported by the literature as Gitau *et al.* (2014a) reported that South Africa is undergoing political, economic and acculturation (Westernisation) and that adolescent black African boys seem to be embracing Westernisation. For decades white men have been suggested to prefer thinner women than black men internationally and vice versa (Gitau *et al.* 2014a; Rguibi & Belahsen 2006; Thompson *et al*. 1996; Rosen *et al.* 1993). However, due to Westernisation being embraced by African adolescents, the results reported in Chapter 4 support the embracement of Westernisation by the African adolescents in this study sample.

Exposure to an appearance-centred environment, especially from the opposite gender, plays an important role in the development of the desire for thinness amongst girls (Griffiths, Wolke, Page & Horwood 2006; Krones, Stice, Batres & Orjanda 2005; McCabe & Ricciradelli 2005; Polivy & Herman 2005; Janssen, Craig, Poyce & Pickett 2004). Frederick *et al.* (2005) propose that women overestimate the degree of thinness that is most attractive to men, however it is acknowledged that mass media influences the preference for a thin female body among women and men who are exposed to it. It is therefore possible that exposure to Westernised

media among these urban participants influenced their preference for a thin female body.

A few participants from School B preferred body shape E for their future wife. In addition, this finding is in line with the trend that participants from the same school also had a preference for a mother with a larger body shape when compared to that of participants from School A. Here the statement by Gitau *et al.* (2014a) that even though black African adolescent boys seem to be embracing Westernisation, traditional influence still exists, holds true.

5.3 Reasons for the preferred female shape for the mother, sister, girlfriend and future wife

When it came to the most common reason for the preferred female body shape for the mother among all the participants, a particular shape was chosen as it was thought to epitomise health or represent fitness. This response was of interest, because the majority of School B participants preferred shape E which represents Class I obesity. With that being said, the literature supports this type of response. In some African societies where thinness is associated with illness such as HIV/AIDS and TB, poverty, infertility and physical weakness, while obesity is associated with wealth, fertility and good health (Gitau *et al,* 2014a; Puoane *et al*. 2010; Rguibi & Belahsen 2006; Thompson *et al.* 1996; Singh & Young 1995; Rosen *et al.* 1993). Faber and Kruger (2005) conducted a study to determine dietary intake, perceptions regarding body weight and attitudes toward weight control of rural women between ages 25 and 55 years in South Africa. In this study Faber and Kruger (2005) found that the majority of women who participated in the study, were not worried about their body weight and most of the overweight and obese women did not want to lose weight. Another study conducted to explore body weight and body image among urban Black female community health workers in South Africa, found that the majority of women who participated, preferred an overweight shape because this shape is associated with dignity, respect, confidence, beauty and wealth (Puoane *et al.* 2005). With that being said, if mature African women are obese and do not view weight loss as a priority, then it is possible that young men exposed to such women could view their body size as a social norm, even though it might not fall within healthy weight parameters.

Reasons accompanying the preference for a particular body shape for the sister, for majority of participants was health/fitness. Again, this could be due to high exposure to media and acculturation (Westernisation). Moreover, it can be postulated that level of education contributes to such reasoning, as the majority of the participants were in grade 11 and 12. In addition, for decades it has been suggested that white men internationally prefer thinner women than black men and vice versa (Gitau *et al.* 2014a; Ruibi & Belahsen 2006; Thompson *et al*. 1996; Rosen *et al.* 1993). This is believed to be intermediated by sociocultural factors such as socio-economic status, exposure to media, and the level of education. Gitau *et al.* (2014a) reported that South Africa is undergoing political, economic and acculturation (Westernisation) and that black African adolescent boys seem to be embracing Westernisation.

When it came to reasons accompanying the preferred female body shape for the girlfriend and future wife, the most common reason given was participants chose shapes B and C because they thought these female body shapes are sexy. Here it must be emphasised that female body shapes B and C represent a normal BMI. It can be said that such reasoning is expected among urban boys due to relatively higher exposure to Westernised media that depict the female ideal of thinness. This interpretation ehoes that of Gitau *et al.* (2014b) who reported that South Africa is undergoing Westernisation which seems to be embraced by African adolescent boys. Moreover, print media such as magazines depict thin women as being beautiful (Sypeck *et al*. 2004). As a result, females with a low waist-to-hip ratio (WHR) and BMI are viewed as being attractive by young men in general. It has also been suggested that young males prefer such females to be their romantic partners on a long and short term basis. On the other hand, females with high WHR and BMI are rated as unattractive; old and less desirable for engaging in both long and short term romantic relationships (Cornelissen *et al*. 2009; Fisher & Voracek 2006; Singh & Young 1995).

5.4 Conclusion

In conclusion, the majority of the findings concur with literature reviewed for this study. Results also concur with the fact that South Africa is indeed is undergoing acculturation. However, even though there is acculturation in South Africa, traditional influence still exists. Based on where the participants attend school and how they

responded, socio-economic status seems to have an influence on the preference for female body shapes of urban black African adolescent males. However, it would seem that although an Obese Class I shape was preferred by some participants as the preferred shape for their mother, girlfriend and future wife, a greater preference was shown for a normal/overweight shape. The latter is contradictory to the rising national prevalence of overweight/obesity among urban Black women.

CHAPTER 6: CONCLUSION

6.1 Introduction

The aim of this study was to determine the urban Black male high school scholar preference for female body shape across the lifespan and the reasons for these preferences. In addition, the BMI category that is associated with this preferred body shape was also determined. The convenience sample consisted of 145 urban Black learners from School A (located in central Pietermaritzburg) and School B (a township school located in Pietermaritzburg). Scholars were only eligible for participation if their parent/legal guardian gave informed consent for their participation. After participant assent was obtained, the participants were asked to complete a self-administered questionnaire consisting of open and close-ended questions. Open-ended questions were converted into categorical variables in order to assess trends in the data set.

6.2 Conclusions of the study

It was evident from survey results that participants preferred a female body shape of a normal BMI for their sister because it was perceived as healthy. Preferred body shapes for the girlfriend and future wife were selected with sex appeal given as a primary reason for this choice. When it came to the preferred body shape for the mother, it was evident that School A participants preferred mothers of a normal BMI because it is healthy. School B participants on the other hand preferred their mothers to have an obese shape as this was also perceived to be healthy. This implies that the stage lifecycle a female belongs to, is related to what an adolescent male perceives as an ideal body shape. The study findings may also explain the high prevalence of overweight and obesity among some urban black South African women. Furthermore, from the results it is evident that traditional influences still exists among urban black African adolescents since the majority of participants from School B preferred a mother with a higher BMI as they perceived it to be healthy.

This means that being obese is also still associated with being healthy among certain members of the study sample. However, exposure to the Western culture and socio-economic status influence the perceived and preferred ideal female body size since the majority of participants who were recruited from School A were from a multiracial school and possibly of a higher socio-economic status due to the location of the school in a more affluent part of central Pietermaritzburg than participants from School B who preferred their mother to have a higher BMI because they thought it is healthy. These results were not unexpected, as some literature state that urban Black South African black women seem to embrace overweight and obesity as they do not receive much pressure to lose weight from men (Puoane *et al.* 2010; Case & Menendez 2009; Rguibi & Belahsen 2005). On the other hand, with the Westernisation and exposure to media in South Africa it can be said that such results were somewhat expected.

The null hypothesis set in the beginning of this study namely that there will not be a single preferred body shape for study participants' mothers, sisters, girlfriends and future wives is therefore accepted based on the study findings.

6.3 Critique of the study

6.3.1 Limitations of the study

The most significant constraint was the question about the preferred body shape and the accompanying reason for the mother as many participants did not answer this question. A possible reason for this phenomenon could be that participants found it disrespectful to criticise the body shape of their mother. Another study constraint was the age difference between the learners from School A and School B. However, as previously stated, it is not uncommon for learners from a township school to be older than that of learners in an urban school.

Despite the exploratory nature of the current study and that it was limited by time and cost constraints, a larger study sample with the inclusion of more schools would have contributed to the reliability of the data. In addition, schools should be sampled so that there is an equal representation of urban schools as well as those located in urban townships.

6.3.2 Recommendations for improvement of the study

If a similar study were to be repeated, the study inclusion and exclusion criteria should not be limited to grade of study but also the age of prospective participants. Instead of using a self-administered questionnaire, missing values or the reason for their omission could be addressed by using interviewer administered questionnaires.

6.4 Recommendations for nutrition practice

Within the South African public health arena, it is recommended that gender and age appropriate public health messages delivered by means of social marketing strategies should be used to communicate messages related to the importance of a healthy weight for women of all ages. In relation to the current study, since Western culture seems to be embraced by South African adolescents, nutrition and health professionals should target this stage of the lifespan regarding the importance of a healthy weight for South African women of all ages.

Interventions such as these, could contribute to the prevention and management of overweight and obesity, especially among urban black South African women by creating an awareness of the NCDs associated with an overweight/obese state.

6.5 Implications for further research

Although the current study was conducted amongst urban black male adolescents, it would be prudent to conduct a similar study not only amongst a larger sample size, but include adolescents from urban, peri-urban and rural schools. To add to the findings of the current study, it is also recommended that a study of a similar nature should be conducted amongst young and mature Black men to determine the influential role they play in influencing the body shape and weight of Black women across all ages of the life span.

REFERENCES

Babbie E, Mouton J (2008). **The Practice of Social Research**. Cape Town: Oxford University Press.

Batznitzky AK (2011). Cultural constructions of "obesity": Understanding body size, social class and gender in Morocco. **Health & Place** 17:345-352.

Cachelin FM, Rebeck RM, Chung GH, Pelayo E (2002). Does ethnicity influence body size preference? A comparison of body image and body size. **Obes Res** 10(3):158-166.

Case A, Menendez A (2009). Sex differences in obesity rates in poor countries: Evidence from South Africa. **Econ and Hum Biol** 7:271-282.

Cornelissen PL, Tovee MJ, Bateson M (2009). Patterns of subcutaneous fat deposition and the relationship between body mass index and waist-to-hip ratio: implications for models of physical attractiveness. **J Theoretical Biol** 256(3):343-350.

Department of Health (2007). **South Africa Demographic and Health Survey 2003**. Preliminary Report. Pretoria: Department of Health. [www.hst.org.za/indicators/SAHS2003.pdf] (accessed 13 June 2016).

Faber M, Kruger HS (2005). Dietary intake, perceptions regarding body weight, and attitudes toward weight control of normal weight, overweight and obese black female in a rural village in South Africa. **Ethn Dis** 15(2):238-245.

Fernald LCH (2009). Perception of body weight: A critical factor in understanding obesity in middle-income countries. **J Wom Health** 18(8):1-3.

Finucane MM, Stevens GA, Cowan MJ, Danaei G, Lin JK, Paciorek CJ, Singh GM, Gutierrez HR, Lu Y, Bahalim AN, Farzadfar F, Riley LM, Ezzati M (2011). National, regional, and global trends in body mass index since 1980: systematic analysis of health examination surveys and epidemiological studies with 960 country-years and 9.1 million participants. **Lancet** 377(9765): 557-567.

Fisher ML, Voracek M (2006). The shape of beauty: determinants of female physical attractiveness. **J Cosmet Dermatol** 5(2):190-194.

Foley P, Levine E, Askew S, Puleo E, Whiteley J, Batch B, Heil D, Dix D, Lett V, Lanpher M, Miller J, Emmons K, Benett G (2012). Weight gain prevention among black women in the rural health centre setting: The Shape Program. **BMC Public Health** 12(305):1471-2458.

Frederick DA, Fessier DMT, Haselton MG (2005). Do representations of male muscularity differ in men's and women's magazines? **Body Image** 2(1)81-86.

Furnham A, Tan T, McManus C (1997). Waist-to-hip ratio and preferences for body shape: A replication and extension. **Personality and Individual Differences** 22(4):539-549.

Furnham A, Nordling R (1998). Cross-cultural differences in preferences for specific male and female body shapes. **Personality and Individual Differences** 25(4):635-648.

Gitau TM, Micklesfield LK, Pettifor JM, Norris SA (2014a). Eating attitudes, body image satisfaction and self-esteem of South African Black and White male adolescents and their perception of female body silhouettes. **J Child and Adolescent Mental Health** 26(3):193-205.

Gitau TM, Micklesfield LK, Pettifor JM, Norris SA (2014b). Ethnic differences in eating attitudes, body image and self-esteem among adolescent females living in urban South Africa. **J Psych** 26(3):468-474.

Griffith LJ, Woke D, Page AS, Horwood JP (2006). Obesity and bullying. Different effects for boys and girls. **Arch Dis Childhood** 91:121-125.

Harris CV, Bradlyn AS, Coffman J, Gunel E, Cottrell L (2007). BMI-based body size guides for women and men: development and validation of a novel pictorial method to assess weight-related concepts. **Int J Obes** 32(2):336-342.

Joubert J, Norman R, Bradshaw D, Goedecke JH, Steyn NP, Puoane T (2007). Estimating the burden of disease attributable to excess body weight in South Africa in 2000. **South Africa Medical Journal** 97(8):683-690.

Janssen I, Caig WM, Boyce WF, Pickett W (2004). Associations between overweight and obesity with bullying behaviors in school-aged children. **Pediatrics** 113:1187-1194.

Katzenellenbogen J, Joubert G (2007). **Epidemiology: A Research Manual for South Africa 2nd ed.** Cape Town: Oxford University Press.

Krones PG, Stice E, Barns C, Orjada K (2005). In vivo social comparison to a thin-ideal peer promotes body dissatisfaction : a randomized experiment. **Int J Eat Disord** 38:134-142.

Kruger HS, Puoane T, Senekal M, van der Merwe M (2005). Obesity in South Africa: challenges for government and health professionals. **Public Health Nutrition** 8(5): 491-500.

Kumanyika SK, Charleston JB (1992). Lose weight and win: A church-based weight loss program for blood pressure control among black women. **Patient Educ Counsel** 19(1):19-32.

Lehlola P (2004). Provincial profile of KwaZulu-Natal. Statistics South Africa Report number 00-91-05 [https://en.wikipedia.org/wiki/Durban] (Accessed16 September 2016).

Lu CY (2009). Observational studies: a review of study designs, challenges and strategies to reduce confounding. **Int J Clin Prac** 63(5): 691-697.

Lysen LK, Israel DA (2012). Nutrition in Weight Management. In **Krause's Food and the Nutrition Care Process 13th ed.** St Louis: Saunders.

Matoti-Mvalo T, Puoane T (2011). Perceptions of body size and its association with HIV/AIDS. **SAJCN** 24(1):40-45.

McCabe MP, RicciardelibLA (2005). A prospective study of pressures from parents, peers, and the media on extreme weight change behaviors among adolescent boys and girls. **Beh Res Therap** 43:653-668.

Mousa TY, Al-Domi HA, Mashal RH, Jibril MA (2010). Eating disturbances among adolescent schoolgirls in Jordan. **Appetite** 54:196-201.

Mvo Z, Dick J, Steyn K (1999). Perceptions of overweight African women about acceptable body size of women and children. **Curatoinis** 22(2): 27-31.

Olson LR (2011). The essentiality of culture in the study of religion and politics. **J Sci Study of Religion** 50(4):639-653.

Patel MX, Doku V, Tennakoon L (2003). Challenges in recruitment of research participants. **Adv Psyc Treatment** 9:229-238.

Petrie A, Bulman JS, Osborn JF (2002). Further statistics in dentistry part 2: research designs 2. **British Dental Journal** 193(8):435-440.

Popkin BM, Gordon–Larsen P (2004). The nutrition transition: worldwide obesity dynamics and their determinants. **Int J Obes** 28:2-9.

Polivy J, Herman CP (2004). Mental health and eating behaviors: a bidirectional relation. **Can J Pub Health** 96:S49-S53.

Polivy J, Herman CP (2004). Sociocultural idealization of thin female body shapes:

an introduction to the special issue on body image and eating disorders. **J Soc Clin Psych** 23(1):1.

Puoane T, Steyn K, Bradshaw D, Laubscher R, Fourie J, Lambert V, Mbananga N (2002). Obesity in South Africa: The South African Demographic and Health Survey**.** **Obes Res** 10:1038-1048.

Puoane T, Tsolekile L, Steyn N (2010). Perceptions about body image and sizes among black African girls living in Cape Town. **Ethn Dis** 20: 29-34.

Puoane T, Fourie JM, Shapiro M, Rosling L, Tshaka NC (2005). 'Big is beautiful'- an exploration with urban black community health workers in a South African township. **SAJCN** 18(1): 6-15.

Puoane T, Matwa P, Bradley H, Hughes G (2006). Socio-cultural factors influencing food consumption patterns in the Black African population in an urban township in South Africa. **Hum Ecology Special Issue** 14: 89-93.

Rand CSW, Wright BA (2000). Continuity and change in the evaluation of ideal and acceptable body sizes across a wide age span. **Int J Eat Dis** 28: 90-100.

Rosen EF, Brown A, Braden J (1993). African-American males prefer a larger female body silhouette than do whites. **Bull Psychonomic Soc** 31(6): 599-601.

Rguibi M, Belahsen R (2006). Body size preferences and socio-cultural influence on attitudes towards obesity among Morocan Sahroui women. **Body Image** 3 395-400.

Senekal M, Steyn NP, Mashego TB, Nel JH (2001). Evaluation of body shape, eating disorders and weight management related parameters in black female students of rural and urban origins. **SAJ Psychology** 31(1):45-53.

Shisana O, Labadarios D, Rehle T, Simbayi L, Zuma K, Dhansay A, Reddy P, Parker W, Hoosain E, Naidoo P, Hongoro C, Mchiza Z, Steyn NP, Dwane N, Makoae M, Maluleke T, Ramlagan S, Zungu N, Evans MG, Jacobs L, Faber M, & SANHANES-1

Team (2013). **South African National Health and Nutrition Examination Survey (SANHANES-1).** Cape Town: HSRC Press.

Singh D, Young RK (1995). Body weight, waist-to-hip ratio, breasts and hips: role in judgements of female attractiveness and desirability for relationships. **Ethology and Sociobiol** 16:483-507.

Sliwa PK, Wilkinson D, Hansen C, Ntyintyane L, Tibazarwa K, Becker A, Stewart S (2008. Spectrum of heart disease and risk factors in a black urban population in South Africa (The Heart of Soweto Study): a cohort study. **Lancet** 371(9616)915-922.

Stern MP, Pugh JA, Gaskill SP, Hazuda HP (1982). Knowledge, attitudes and behaviour related to obesity and dieting in Mexican Americans and Anglos: the San Antonio heart study. **Am J Epidemiol** 115(6): 917-928.

Swami V, Frederick DA, Aavik T, Alcalay L, Allik J, Anderson D, Andrianto S, Arora A, Brannstrom A, Cunningham J, Danel D, Doroszewicz K, Forbes GB, Furnham A, Greven CU, Halberstadt J, Hao S, Haubner T, Hwang CS, Inman M, Jaafar JL, Johansson J, Jung J, Keser A, Kretzschmar U, Lachenicht L, Li NP, Locke K, Lonnqvist JE, Lopez C, Loutzenhiser L, Maisel NC, McCabe MP, McCreary DR, McKibbin WF, Mussap A, Neto F, Nowell C, Alampay LP, Pillai SK, Pokrajac-Bulian A, Proyer RT, Quintelier K, Ricciardelli LA, Rozmus-Wrzesinska M, Ruch W, Russo T, Schutz A, Shackelford TK, Shashidharan S, Simonetti F, Sinniah D, Swami M, Vandermassen G, van Duynslaeger M, Verkasalo M, Voracek M, Yee CK, Zhang X, Zivcic-Becirevic I (2010). The attractive female body dissatisfaction in 26 countries across 10 world regions: Results of the international body project. **Personality and Soc Psych Bull** 36(3):309-325.

Swinburn BA, Sacks G, Hall KD, McPherson K, Finegood DT, Moodie ML, Gortmaker SL (2011). The global obesity pandemic: shaped by global drivers and local environments. **Lancet** 378(9793): 804-814.

Sypeck MF, Gray JJ, Ahrens AH (2004). No longer just a pretty face: fashion

magazines' depictions of ideal female beauty from 1959 to 1999. **Int J Eat Disord** 36(3):342-347.

Tanleff-Dunn S; Gokee JL (2002). Interpersonal influence on body image development. In: Cash T and Pruzinsky T (eds.). **Body Images: A Handbook of Theory, Research, and Clinical Practice.** New York: Guilford Press.

Turok I (2001). Persistent polarization post-apartheid? Progress towards urban integration in Cape Town. **Urban Studies** 38(13): 2349-2377.

Thompson SH, Sargent RG, Kemper KA (1996). Black and white adolescent males' perceptions of ideal body size. **Sex Roles** 34(5): 391-406.

van der Merwe MT, Pepper MS (2006). Obesity in South Africa. **Obes Rev** 7:315-322.

van der Riet M, Durrheim K (2008). **Research in Practice: Applied Methods for the Social Sciences.** Cape Town: University of Cape Town.

Wand H, Ramjee G (2013). High prevalence of obesity among women who enrolled in HIV prevention trials in KwaZulu-Natal, South Africa: healthy diet and life style messages should be integrated in HIV prevention programs. **BioMed Central** 13: 159.

Walonick DS (2011). **Survival Statistics**. Bloomington: Statpac Inc.

Weeden J, Sabini J (2005). Physical attractiveness and health in Western societies: a review**. Psych Bull** 131(5):635-653.

World Health Organization (2011). **Growth reference data for 5 – 19 years.** http://www.who.int/growthref/growthref_who_bull/en, (Accessed 9 May 2016).

World Health Organization (2015). **Obesity and overweight.** http://www.who.int/mediacentre/factsheets/fs311/en/. (Accessed 10 June 2016).

World Health Organization (2013). **Global action plan for the prevention and control of non-communicable diseases 2013-2020**. http://apps.who.int/iris/handle/10665/94384, (Accessed 10 October 2016).

World Health Organization (2004). Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies. **Lancet** 363(363):157.

World Health Organization (2003). **The world health report 2003-shaping the future.** http://www.who.int/whr/2003/en/, (Accessed 10 October 2016).

World Health Organization (2008). **World Health Statistics 2008.** http://www.who.int/whosis/whostat/2008/en/, (Accessed 16 October 2016).

APPENDIX A: LETTER REQUESTING CONSENT FROM SCHOOL PRINCIPAL

Dear Sir/Madam

RE: REQUEST FOR CONSENT TO CONDUCT RESEARCH IN YOUR SCHOOL

I am studying toward my Masters in Dietetics at Dietetics and Human Nutrition, University of KwaZulu-Natal, Pietermaritzburg campus. The topic of my research is "Urban Black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

I hereby request permission to use your school to conduct my study. In order to collect data for my study, male learners from grade 10 to 12 would be required to answer a questionnaire consisting of seven questions that is estimated to take a maximum of ten minutes to complete. Should you grant me consent to onduct my study in your school, I will formally request consent from the learner's parents/guardians and assent from the learners themselves.

The information obtained from your learners will be treated as anonymous, strictly confidential and on a voluntary basis. You may withdraw the participation of your school at any stage of the study. Withdrawal from the study will not result in any negative consequences to your school.

If you have any questions or concerns regarding the study, please feel free to contact my study supervisors Dr Suna Kassier on (033) 260-5431 or Professor Frederick Veldman on (033) 260-5597.

Yours Sincerely
Primrose Gcinani Manyathi
MSc Dietetics student
Dietetics & Human Nutrition
gmanaythi@gmail.com

INFORMED CONSENT FROM THE PRINCIPAL:

I hereby confirm that I have been informed by Primrose Gcinani Manyathi, a Masters' student in Dietetics from the University of KwaZulu-Natal, Pietermaritzburg about the nature of her study entitled "Urban Black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

I have also received, read and understood the written information in the letter requesting permission to use my school in this study.

- I understand that I may contact Dr Suna Kassier (033-260 5430, kassiers@ukzn.ac.za) or Professor Frederick Veldman (033-260 5453, Veldmanf@ukzn.ac.za) who is supervising this study at any time if I have questions regarding the research.
- I understand that my school's involvement in the study is on a strictly anonymous, confidential and voluntary basis.
- I understand that I may withdraw my school's participation from the study at any time should I choose to do so.
- I understand that my school's participation in the study will not will not have any negative or undesirable consequences.

I hereby consent to participate.

Name: ---------- Signature: ----------

School Name: ---------- Date: ----------

PARENT / LEGAL GUARDIAN OF LEARNER

Dear Sir/Madam,

REQUEST ING PERMISSION FOR YOUR CHILD TO PARTICIPATE IN A STUDY

I am a Master in Dietetics student from Dietetics and Human Nutrition at the University of KwaZulu-Natal, Pietermaritzburg. My research topic is entitled: "Urban Black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

I am hereby requesting your permission for your child to participate in my study. This information will be collected on an anonymous, strictly confidential and voluntary basis. Your child will be required to answer a questionnaire consisting of seven questions that is estimated to take a maximum of ten minutes to complete. Your child may withdraw from participating in the study at any stage, should they wish to do so. Withdrawal will not result in any negative or undesirable consequences.

If you have any questions regarding my research, please feel free to contact Dr Suna Kassier (033-260-5431, kassiers@ukzn.ac.za) or Professor Fredrick Veldman (033-260 5597, Veldmanf@ukzn.ac.za) who are supervisors of this study.

I would be most appreciative if you could sign the attached form and return it to your child's school as soon as possible.

Yours Sincerely,

Primrose Gcinani Manyathi
MSc Dietetics student
Dietetics & Human Nutrition
gmanaythi@gmail.com

INFORMED CONSENT FROM THE LEARNER'S PARENT / LEGAL GUARDIAN:

I hereby confirm that I have been informed by Primrose Gcinani Manyathi, a Masters' student in Dietetics from the University of KwaZulu-Natal, Pietermaritzburg about the nature of her study entitled "Urban Black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

I have also received, read and understood the written information requesting my consent for my child to participate in the study.

- I understand that I may contact Dr Suna Kassier (033-260 5430, kassiers@ukzn.ac.za) or Professor Frederick Veldman (033-260 5453, Veldmanf@ukzn.ac.za) who is supervising this study at any time if I have questions regarding the research.
- I understand that my child's involvement in the study is on a strictly anonymous, confidential and voluntary basis.
- I understand that my child may withdraw from participating in the study at any time should they wish to do so.
- I understand that my child's participation in the study will not will not have any negative or undesirable consequences.

I hereby consent for my child to participate in the study. ☐

Name: ---------- Signature: ----------

Child's Name: ---------- Child's Class: ----------

School Name: ---------- Date: ----------

I do not consent for my child to participate in this study. ☐

GRADE 10, 11 & 12 LEARNERS

Dear Scholar,

REQUESTING ASSENT TO PARTICIPATE IN A STUDY

I am a Master in Dietetics student from Dietetics and Human Nutrition at the University of KwaZulu-Natal, Pietermaritzburg. My research topic is entitled: "Urban Black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

I am hereby requesting your assent to participate in my study. This information will be collected on an anonymous, strictly confidential and voluntary basis. You will be required to answer a questionnaire consisting of seven questions that is estimated to take a maximum of ten minutes to complete. You may withdraw from participating in the study at any stage, should you wish to do so. Withdrawal will not result in any negative or undesirable consequences.

If you have any questions regarding my research, please feel free to contact Dr Suna Kassier (033-260-5431, kassiers@ukzn.ac.za) or Professor Fredrick Veldman (033-260 5597, Veldmanf@ukzn.ac.za) who are supervisors of this study. I would be most appreciative if you could sign the attached form prior to agreeing to participate in my study.

Yours Sincerely,

Primrose Gcinani Manyathi
MSc Dietetics student
Dietetics & Human Nutrition
gmanaythi@gmail.com

INFORMED ASSENT FROM THE LEARNER:

I hereby confirm that I have been informed by Primrose Gcinani Manyathi, a Masters' student in Dietetics from the University of KwaZulu-Natal, Pietermaritzburg about the nature of her study entitled "Urban Black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

I have also received, read and understood the written information requesting my assent for participating in the study.

- I understand that I may contact Dr Suna Kassier (033-260 5430, kassiers@ukzn.ac.za) or Professor Frederick Veldman (033-260 5453, Veldmanf@ukzn.ac.za) who is supervising this study at any time if I have questions regarding the research.
- I understand that my participation in the study is on a strictly anonymous, confidential and voluntary basis.
- I understand that I may withdraw from participating in the study at any time should I wish to do so.
- I understand that my participation in the study will not will not have any negative or undesirable consequences.

I hereby agree to participate in this study.

Name: ---------- Signature: ----------

School Name: ---------- Date: ----------

APPENDIX B: QUESTIONNAIRE USED TO COLLECT DATA

"Urban black male high school scholar preference for female body shape across the life span, Pietermaritzburg, KwaZulu-Natal".

Dear Scholar

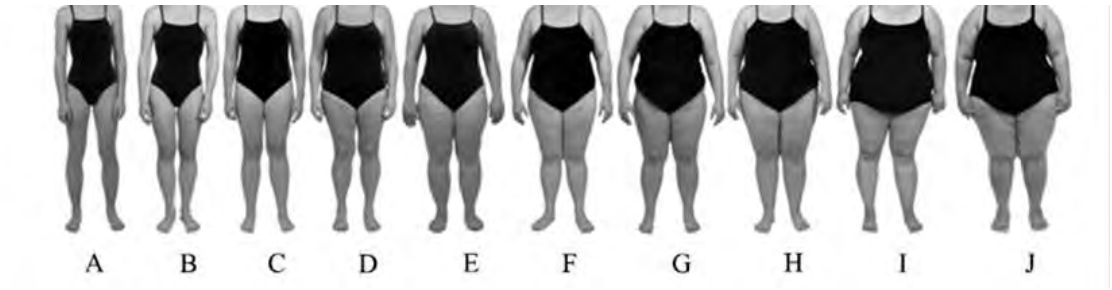
Thank you for taking the time to complete this questionnaire which will only take approximately 10 minutes of your time and will make a valuable contribution to investigating the pressures that South African women of all ages experience in terms of what men to look like. Please note that all the information in this questionnaire is anonymous and it will not be possible to trace the answers back to scholars who participated in the study. Where relevant, please tick the box with the number corresponding with your answer.

1. Please state your current age in years: ----------
2. Please indicate your current level of schooling:

Level of study	
Grade 10	1
Grade 11	2
Grade 12	3

PLEASE NOTE THERE ARE NO WRONG OR RIGHT ANSWERS. KINDLY BE AS TRUTHFULL AS POSSIBLE IN YOUR RESPONSE TO EACH QUESTION

Study the following images showing various female body shapes and answer the questions that follow:



Adapted from Harris, Bradlyn, Coffman, Gunel & Cottrell (2007)

4.1 Which shape would you like your mother to be? Briefly explain why.

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4.2 if you do have a sister/ sisters, which shape would you like her/them to be when they become teenagers? Briefly explain why.

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4.3 Which shape would you like your girlfriend to be? (Even if you do not currently have one) Briefly explain why.

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4.4 Which shape would you like your future wife to be? (Even if you are not thinking about having a future wife). Briefly explain why.

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