PERCEPTIONS ABOUT ADOLESCENT BODY IMAGE AND EATING BEHAVIOUR

Dr Kim Laxton

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Supervisor: Associate Professor Bernard Janse van Rensburg

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DECLARATION

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_____day of _____2017

DEDICATION

This is the first of, hopefully, many research endeavours I undertake.

I would like to dedicate this particular project to my dear mom who, during the development of my work, suffered a severe motor vehicle accident. During her rehabilitation she taught me two important lessons:

…Whatever takes you down, it doesn't matter the extent of damage, never give up. Stand up! Learn to walk, then run… and finally lift your arms over the finish line…

…Hard work always reaps a positive outcome…

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Professor Janse van Rensburg, my supervisor, who has inspired the researcher inside me, always guiding and encouraging, teaching and striving to add invaluable work to the academic world.

My dad, who never ever gives up on me, a quiet voice of encouragement and enthusiasm.

My husband who has embraced the role of mentor and friend…this would not have been possible without your presence.

ABSTRACT

Introduction. Eating disorders are an important group of mental illnesses in Psychiatry. The aetiology is multifactorial, developing from distorted beliefs around body image and shape, with resultant abnormal eating behaviours. This study explores the views and perceptions of a group of university students regarding their peers' body image and shape and eating behaviours, which they experienced (at the time) during their senior high school years. The majority of these students attended high schools in Johannesburg.

Method. This was an explorative, qualitative study using qualitative methods. A sample of 153 participants was voluntarily recruited from students in the Faculty of Health Sciences at the University of the Witwatersrand. A manually distributed anonymous questionnaire was used, with questions about their high school peers' personality traits, early and late childhood experiences, eating behaviour, and the last three years of high school environment. Questions in each section were deconstructed and categorised into subthemes. Subthemes were further deconstructed into replicated ideas. These subthemes and ideas were presented in hierarchical tables. Findings in this study were compared with the literature.

Results. The most commonly described subtheme of participants' perceptions of high school peers' *personality traits* was "poor self-confidence". The most replicated subthemes of views on peers' *childhood experiences* were "personal conflict with members of the family", "a disruptive home environment" and "mother's attitude". In terms of peers' *eating behaviour,* a subtheme on "body shapes" included "fat", "skinny" and "fit" and "muscular" bodies. In terms of the *high school environment*, the subtheme

of “bullying and peer discrimination” was regarded as important, while “the impact of media” was regarded as extremely important. Fifty percent of participants viewed body image to be important for social status. There were mixed views on whether specific programmes should be introduced to identify pupils at risk.

Conclusion. Although bullying and peer pressure have been described as contributing factors in the development of eating behaviour problems in high school learners, as perceived by a group of university students, the most prominent potential contributing factor considered was the media, specifically social media. This finding could contribute to further research looking at the role of social media, not only its relationship in the potential development of a Psychiatric Illness, but possibly, too, its role in the educational and rehabilitation process.

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CHAPTER 1. INTRODUCTION

1.1 Literature Review

(1) Diagnostic criteria

Eating disorders, including the two major categories of anorexia nervosa and bulimia nervosa, form an important group of mental illnesses in Psychiatry locally and worldwide, but most prominently in Westernized and urbanized societies.[1]

Kaplan and Sadock define eating disorders as a *"profound disturbance of body image with a relentless pursuit of thinness".*[1] Duvvuri and Kaye defined anorexia nervosa as *"restricted eating behaviour and a relentless pursuit of thinness"*, which most commonly presents in females during adolescence.[2] The revised text edition of the Diagnostic and Statistical Manual published by the American Psychiatric Association (DSM IV-TR), defines anorexia nervosa (AN) as a *"refusal to maintain body weight at or above a minimally normal weight for age and height".*[3] This refers to weight loss leading to maintenance of body weight less than 85% of that expected, or failure to achieve expected weight gain during the period of growth, leading to body weight less than 85% of that expected. The criteria also include an intense fear of gaining weight or being fat, even though underweight. It is a disturbance in the way in which one's body weight or shape is experienced, or of undue influence of body shape on self-evaluation, or of denial of the seriousness of the current low body weight. In addition, the criterion of amenorrhoea in post-menarcheal females (absence of at least 3 consecutive cycles) is also included.[3]

The DSM-5, published in May 2013, defines anorexia nervosa as characterized by a *"distortion of body image and excessive dieting that leads to severe weight loss with a pathological fear of becoming fat"*.[4] The changes from DSM IV-TR to DSM-5 are minor but important:

- Criterion A focuses on behaviours and no longer includes *"refusal' to take in calories"*; and
- Criterion D (requiring amenorrhoea, or the absence of at least three menstrual cycles) has been omitted, as AN also occurs in male subjects.[4]

The primary goal with these revisions was to capture more people experiencing eating disorder symptoms and to accurately make the diagnosis. This should in turn be followed by an accurate and individualized treatment plan. *"The wording of the criterion is changed for clarification, and guidance regarding how to judge whether an individual is at or below a significantly low weight is provided in the text."*[4]

Criticism of these criteria was expressed in a report in 2011 by Fairburn and Cooper focusing on the development of the DSM 5 and the clinical reality of this group of disorders.[5] They stated that the DSM IV-TR classification of eating disorders was a *"poor reflection of clinical reality"* and that because of an overlap of clinical pictures of, for example, anorexia nervosa and bulimia nervosa, the majority of patients were diagnosed as having an Eating Disorder Not Otherwise Specified.[5] Fairburn and Cooper also noted at the time, that the *"DSM-5 may also only partially succeed in correcting this shortcoming and stated that only once this has been achieved, will the definition of specific eating disorders be rooted in clinical reality and be of value to clinicians"*.[5]

(2) **Associated factors**

The importance of identifying adolescents with eating disorders was highlighted in an article in Currentpsychiatry.com: *"Are undiagnosed eating disorders keeping our patients sick?"*[6] The authors, Cloak and Powers, describe most eating disorders involving adolescent girls or young women with pronounced body image dissatisfaction.[6]The need to intervene has been identified as crucial, as there could often also be medical and psychiatric comorbidities that complicate the eating disorder picture.[6]

In this regard, Szabo and Allwood also, in 2004, reviewed eating disorders in the South African context.[7] From a study of three secondary schools in urban Johannesburg, they described an increasing number of sufferers within the black community. They stated that Western culture has a *"powerful impact on the development of such conditions"*.[7] Another observation was that *"physical appearance and self-worth* [as] *seemingly synonymous"*.[7] They referred to a British study conducted in 11 to 16-year old females, which found that 18.6% of the population had incorrect attitudes and concerns regarding weight gain and shape, and thus were at increased risk of developing an eating disorder.[7] Szabo and Allwood as well as the McKnight Investigators, as a point of departure, concluded that the population most at risk of developing such eating disorders are adolescent females, especially those in Westernized society, where emphasis is placed on physical appearance.[8, 9]

A 10-year review (1987-1996) by Szabo and Gabriel of hospitalized patients at Tara Psychiatric Hospital in Johannesburg highlighted specific demographics and social features of inpatients with an eating disorder.[8] Results included: 98% were female, 98% were white with the mean age on admission of 20.66 years, while the mean age of onset of the disorder was 17.45 years and that the vast majority of the patients were in higher social classes (professional occupations, managerial/technical occupation and skilled occupations). This concurred with Kaplan and Sadock, who also described eating disorders as being more prevalent in females rather than males, and the start of the disorder most commonly occurred during the adolescent years.[1] The McKnight Longitudinal Risk Factor Study, conducted in 2003, focused on adolescent females and stated that *"full and partial remission of eating disorders affect as many as 10% of adolescent girls and pose a considerable threat to their health and happiness*".[9] They also noted that the mortality rate for Anorexia Nervosa as well as Bulimia Nervosa and Eating Disorder Not Otherwise Specified (NOS) is significantly elevated, while age at assessment is a significant predictor of mortality in patients with Bulimia Nervosa and Eating Disorder NOS.[9] Ongoing work within the field of eating disorders, specifically anorexia nervosa, suggests the population group most at risk for the development of an eating disorder is adolescent females and has focused predominantly on the theme of physical appearance.

In 2014 Visser et al. published a study on the eating attitudes and weight-loss behaviour of adolescent girls in Grades 8 to 10 attending a 'traditional' Jewish high school in Johannesburg.[10] Their aim was to determine the prevalence of abnormal eating

attitudes and weight-loss behaviour in this population. Teachers' awareness and attitudes towards a school programme to address abnormal eating behaviours was also addressed. They found that: 20% of learners achieved scores in the limit suggestive of an eating disorder; 33% considered themselves to be overweight; 64% were trying to lose weight; 19.1% had tried to engage in an extreme form of losing weight in the past year; and almost all the teachers recognised a need to address eating attitudes.[10] Within their conclusions and suggestions there was found to be a need for qualitative research to determine the extent of undetected abnormal eating behaviours, possibly unrecognised by teachers.[10]

(3) **Gender**

Although previous work has described adolescent females being at greatest risk for developing an eating disorder, specifically anorexia nervosa, Mitchison et al., reported on the changing demographic profile of eating disorder behaviours and referred to the belief that *"the perception that eating disorders occur predominantly in young white upper class women can be challenged"*.[11] They intended to examine temporal differences to the demographic correlates of eating disorders over a 10-year period.[11] They described: below median annual household income was associated with increased prevalence rates from 1998 to 2008 in binge-eating, extreme dieting and purging and that male gender was associated with increased prevalence rates in purging.[11] Although this work intended to challenge the replicated findings that the female gender was most at risk for the development of an eating disorder, it did complement the work of McKnight Investigators, Szabo and Allwood, Fairburn and Cooper describing females as the gender still most at risk.

(4) **Media**

One of the associated hypotheses about the development of problematic eating behaviour is that media, specifically social media, play an important role in the aetiology of abnormal eating behaviours and cognitive distortions of body weight and shape.[12, 13, 14]

As one reviews the available literature describing this particular potential aetiological factor there seems to be a scarcity of clinical information and formal studies conducted on this issue within the medical and psychiatric fields. However, there are several websites on the internet that are both identifying this concern and raising it in a lay-public setting or being specifically created to increase awareness of the importance of this subject. The National Centre for Eating Disorders in the United Kingdom addressed this issue. Jaden described the media as being a visual medium that *"seeks to inform, persuade, entertain and change us . . . to make ideas and values desirable".*[15] She noted that: *"the argument about whether the media shapes society, or merely reflects current or nascent trends, is constantly under debate . . . so there have been many debates about the influence of the media and social behaviour."*[15] She describes a *"battle of the morality of food and eating*": *"We accuse the media, by glorifying the culture of thinness, of causing an epidemic of eating distress, especially among young women. The media denies culpability, or at least responsibility for doing anything about it."* [15] What is important in this article is the recognition of a paradox. The portrayal by

the media that thinness is desirable, yet at the same time, advertising increasingly promotes varieties and types of foods that are calorie rich and potentially unhealthy:

- *"There is no doubt that the ideal body size, as reflected in the style icons promoted in the media, is getting thinner . . . The gap between actual body sizes and the cultural ideal is getting wider, giving rise to anxiety . . . There is a lot of dieting going on as a result, because dieting is viewed as the solution to problem of 'excess weight'"*[15]
- The media reaches a great number of women: *"50% of whom (between the ages of 11 and 15 years) read fashion- and beauty-related magazines . . . Girls thus find themselves in a subculture of dieting, reflecting messages not only from the media but also from parents, peers, members of the opposite sex as well."*[15]

A term thin idealisation, or more explicitly *"thin-ideal internalization"*, which refers to the *"acceptance and adherence to sociocultural beauty standards of thinness"*, was described by Suisman et al. in 2012.[16] According to them, three primary factors were implicated: (1) media (television, advertisements and magazines); (2) parental focus on weight and/or dieting and peers (particularly discussions focused on weight); and (3) peer discrimination or weight-based teasing. The authors called this the *"Tripartite Model"*, where the thin ideal and social comparison (evaluating and comparing oneself to others and to prominent figures in the media), are reinforced.[16] As a result, there may be the development of body dissatisfaction and disordered eating, and the potential onset of an eating disorder. However, they also said that: *"genetic factors . . . predict*

which girls/women internalize the shared beauty ideals and which are relatively immune to the environmental effects."[16]

The media and its role in the development of eating disorders has been highlighted in some recent articles. For example, Gowers and Shore are quoted: *"a majority of pre-adolescent and adolescent girls were unhappy about their weight, and that these negative attitudes were strongly related to the frequency of reading fashion magazines."*[17] Derenne and Beresin recommended that *"children's exposure to the media should be limited to the promotion of healthy eating and moderate physical activity, and should encourage participation in activities that increase mastery and self-esteem".*[18] This particular article reported how history has shown that the standard of female beauty has often been *"unrealistic and difficult to attain"*.[18] They noted that, due to the relative independence and lack of control of the internet, there has been the development of the concept of "*thinspiration*" and of internet sites such as "*pro-ana (pro-anorexia)".*[18] They also describe how *"media is a formidable opponent, precisely because advertising firms have the financial resources to produce clever advertisements that convince consumers to buy their products".*[18]

Elements – Behavioural Health is another website highlighting the notion of the media's role, and noting the social media trend "*thinspiration"*.[19] It highlights the importance of social media allowing any person to *"share"* photographs/ideas/personal values with anyone they wish to: *"In addition, some photos link to website content that offers dieting and exercise tips . . . 'thinspiration' trend has become worrisome enough that Pinterest*

has started posting a warning regarding eating disorders".[19] The website also alludes to the large number (80%) of all teenagers estimated to use social media websites. There is however little data available to confirm social media to be an associated contributor to abnormal perceptions of body weight and shape and potential causal factors of abnormal eating behaviours amongst adolescents.[19] In 2014 The Journal of Eating Disorders published the work done by Pepin and Endresz: *"If it's on Facebook, it must be true!"* Body image and social media.[20] They recognise social media increasing in popularity and in their literature review discussed the disturbing reality *"that young girls using Facebook had significantly more image concerns than non-users."*[20]

A website, Eating Disorder Hope, aimed specifically at the lay-public, in January 2016, emphasized the potentially damage effects of social media on young people, describing an increasing risk of developing an eating disorder in a subset of potentially at-risk adolescents.[14] *"Social media has evolved into one of the greatest communication sources of our time . . . it is important to consider how this can potentially impact an adolescent susceptible to an eating disorder . . . Reading of dieting or frequently being exposed to images that may provoke body image concerns can potentially be provoking among adolescents, particularly those who are predisposed to developing an eating disorder."*[14]

(5) **Medical complications**

In 2011 Herpertz-Dahlman et al. reported that anorexia nervosa, in particular, had the highest morbidity and mortality rates *"amongst the highest of any mental disorders and associated with significant functional impairment"*.[21] The longstanding malnutrition

during adolescence and young adulthood was associated with hormonal and neuropeptide dysfunctions that may have had the potential of producing *"biological scars"* that maintain and possibly accelerate the disorder posing the individual at a greater risk for the development of another chronic mental disorder in adulthood.[21] Szabo and Derman elaborated on the unexpected sudden death of a patient with diagnosed anorexia nervosa admitted at Tara Psychiatric Hospital.[22] These reports highlighted the potential fatal outcome in anorexia nervosa and that the morbidity associated with the illness is significant.[22] It is not only important to treat these patients effectively both in the acute setting and in the long-term, but equally important to identify risk and aetiological factors that place adolescent females at risk for developing an eating disorder.

Mehler and Brown highlighted the *"high prevalence of concomitant medical complications"* associated with eating disorders.[23] They focused predominantly on anorexia nervosa as being associated with many medical comorbidities as part of the eating disorder, with some of these complications having long-lasting effect.[23] A systemic review in the International Journal of Eating Disorders discussed the potential physical effects of eating disorders. The investigators focused on the gastrointestinal system. *"GI complications can occur throughout the GI tract in patients with AN . . . Evidence suggests that most GI complications resolve with refeeding and cessation of ED symptoms".*[24]

(6) **Genetic, pre-and perinatal, developmental factors**

Drawing from various bodies of work on the subject of eating disorders important conclusions described are that they are extremely diverse in aetiology and clinical presentation, from being rooted in genetics to the environment to which the person is exposed. The epigenetic association with the development of an eating disorder, such as anorexia nervosa, is an important concept in Psychiatry. The origin of these disorders is described in terms of a complex multifactorial model.[17] Genetics and other prenatal factors play an important role in an individual's personality and cognitive *"style"*.[17] For example, personality traits of importance are obsessionality, perfectionism, and deficits in social cognition and inflexibility, which play an important role in dieting behaviour.[17] The Tara (Specialized Psychiatric) Hospital in Johannesburg uses a screening questionnaire for all new admissions to the Eating Disorder Unit. A section of the questionnaire asks patients specifically about their unique personality traits (APPENDIX C). A twin study in the United States focusing on the genetic and environmental influences on restrained eating behaviour found compelling evidence for a genetic contribution to restrained eating, and described unique environmental experiences and events, specific to the individual, as being important contributors.[25] In terms of genetics, chromosome 1p34, as well as chromosome 13 (Gene HTR2A), were specifically implicated in eating disorders.[25] Although this is one study describing the genetic contribution to the development of an eating disorder it does not implicate a direct cause-and-effect relationship.

A Danish study in the European Eating Disorders Review in 2015 described an interesting association between anxiety disorders and the subsequent development of

anorexia nervosa.[26] The authors' initial literature find a highly prevalent comorbidity between anxiety disorders (as a group of Psychiatric illness) and anorexia nervosa.[26] Results collated from the Danish registry found a high risk for the development of anorexia nervosa in those with an anxiety disorder, particular obsessive-compulsive disorder, but *"especially male anxiety patients"*.[26] Their conclusion was that anxiety disorders pose an aetiological risk for the subsequent development of anorexia nervosa possibly forming a part of the *"development trajectory of anorexia nervosa*", but the two disorders could possibly *"share aetiological mechanisms"*.[26]

Considering pre-natal and perinatal factors that may influence the probability of developing an eating disorder, Favaro et al implicated a below-average height to be associated with a more prevalent diagnosis of an eating disorder.[27] Persons with a diagnosed eating disorder were, on average, statistically significantly shorter than control subjects.[27] Short stature was assumed to be as a result of pre- and postnatal factors such as malnutrition and endocrinological alterations. They also reported: *"short stature could have an effect on body image and weight, and short children were possibly more at risk for discrimination and stigmatization"*.[27]

It is suggested from this study, and others, that early childhood experiences may play a critical role in the eventual development of an eating disorder.[9, 16, 21] The McKnight investigators concluded that thin body preoccupation and social pressure are important risk factors for the development of eating disorders in adolescents.[9] Self-criticism was highlighted as *the "mediating role in patients with binge-eating disorder who were exposed to childhood maltreatment, depressive symptoms and body dissatisfaction"*.[9]

They also made mention that during the prior 13 years, there has been an emergence of other important risk factors for the development of eating disorders, including childhood abuse (both physical and sexual), bullying and discrimination (particularly ethnically-based).[9]

(7) **Multi-factorial aetiology**

Gowers and Shore highlighted the multifactorial aetiological nature of problems associated with body weight and shape:

- **Biological** - genetics and the physical, hormonal and psychosocial demands of puberty;[17]
- **Family factors** - attitudes and beliefs within families and the transmission of these values onto children, parental and sibling eating disorders, parental (especially maternal) eating habits/beliefs and practices;[17]
- **Adverse experiences** - sexual abuse and bullying;[17]
- **Sociocultural** - higher social classes, which place a greater importance on physical appearance and report greater body dissatisfaction and bodily distortion; media influences promoting the idea *"slim women are more attractive"*; aspirations to be *''high-achievers and successful''*; and peer bullying and teasing about weight.[17]

A 2015 qualitative research review, using an *"integrative biopsychosocial approach"*, in The Journal of Child Psychology and Psychiatry synthesized what has been questioned and concluded from past studies as a potential aetiology of eating disorders.[28] Sociocultural idealization of thinness (portrayed in media), pressure to be thin and thin-ideal internalization as well as certain personality traits could be labelled as *"risk status*

for eating disorders and/or disordered eating symptoms".[28] However in the authors' conclusion it was described that *"multiple biopsychosocial influences are implicated in eating disorders and/or disordered symptoms"*.[28] The emphasis was that psychological and environmental factors *"interact with and influence the expression of genetic risk to cause eating pathology"*.[28] This mirrored the conclusions of already described literature.

(8) **Early detection**

From the reviewed literature the aetiological basis for the development of an eating disorder, in particular anorexia nervosa, is complex and multifactorial. The most consistent evidence is that eating disorders are most commonly seen in adolescent females in Westernized groups, most often with an upper socioeconomic bias.[7, 8, 9] The role of genetic influences has also been highlighted, as well as the role of pre- and postnatal experiences, both in physical development and personality traits, while the psychological-sociocultural influences are as important, if not more important, in the development of such disorders.[17]

Because of its high morbidity and mortality rate, risk factors for the development of an eating disorder should therefore ideally be identified early. Micula-Gondek and Lackamp described eating *disorders "remaining undiagnosed until late in the disease, proving to be life-threatening in certain individuals"*.[29] Identifying eating disorders early would therefore be important to prevent chronic health consequences and reduce overall

mortality. They alluded to the following areas to explore when screening for the development of problematic eating behaviour:

- Body image is determined by self-esteem and correlates with body weight and shape. Although the person might have a normal body weight, behaviours such as frequency of weighing themselves, satisfaction with their body shape and fear of gaining weight, might be important questions to ask people who could go on to suffer an eating disorder.[29]
- Compensatory behaviours (e.g. restricting food intake, laxative use and /or excessive exercising) can be prominent features in people with an eating disorder and should be asked about in an interview.[29]
- Eating behaviours (e.g. *"eating very small meals, leaving food over, and mixing foods on the plate, cutting food into very small portions, drinking much water in between meals"*) may be signs that the person is suffering from an eating disorder, or might be at risk for developing one.[29]
- Asking specifically about the diet of potential patients is important (specifically amount, constituents, skipping meals, restricting calorie intake).[29]

Puhl et al., in an attempt to describe potential dieters who will develop an eating disorder, highlighted distinctive features in dieters that should be looked for specifically, such as: *"clearly disturbed eating habits"* (such as eating in secret); preoccupation with food, eating, shape and/or weight; fear of losing control over eating; and wanting to have a completely empty stomach.[30]

The authors highlighted the need to address potential factors within high schools that might influence adolescent eating behaviours and body image and shape misconceptions.[30] They elaborated on policy setting to *"specifically address eating disorders and stigma attached to weight"*, and identified these concerns as *"public health issues among the general public and relevant health professionals"*.[30] They alluded to an internet survey that was conducted amongst adults in the USA, as well as professional organisations specifically dealing with eating disorder issues, which results supported the following conclusions:

- strategies needed to improve the school-based health curriculum to include content aimed at preventing eating disorders;[30]
- training for educators and health care providers on the prevention and early detection of eating disorders;[30] and
- implementing school-based anti-bullying policies (specifically targeted at people being bullied regarding their weight).[30]

Dunstan and colleagues, in 2014, described little difference in body image disturbances in co-educational versus single-sex schools and proposed that an intervention termed *"Happy Being Me"* be instituted in schools to *"improve body satisfaction, internalisation of the media's portrayal of body image, self-esteem, amongst others"*.[31]

Considering the preceding literature, in particular that of Szabo et al. and Phul et al., in conceptualising this study, it was therefore intended to undertake a qualitative description of the perceptions of young adolescents in a South African context, specifically those in their last three years of high school that might have displayed

abnormal eating behaviours, consistent of patients that have been diagnosed with an eating disorder.[7, 8, 30] Based on the relevant themes that emerged describing the complex aetiology of eating disorders, a structure was constructed for the development of a questionnaire.

The study was set out to describe those learners who apparently had abnormal perceptions of body weight and shape, as observed by their peers. While the study was not intended to identify adolescents with anorexia nervosa per se, another intention of the study was to identify perceptions about possible causes for this behaviour and describe patterns understood and described by participants to be part of the contributing factors to the observed behaviour and cognitive distortions of self. It also became apparent that the perceptions of/about men should also be included in the study.

Because Cloak and Powers also identified teasing and criticism experienced by young women (and men) as being an important topic amongst young people when screening for an eating disorder, these themes have also been included in the study.[6]

Referring mainly to Phul et al, the questionnaire used in this study has been designed to capture what students experienced in high school and to shed light on perceptions of the potential aetiologies of abnormal eating behaviours and misperceptions of body weight and shape.[30] They also planned to take cognisance of the role that the media, in particular social media, is playing as a risk factor for the development of abnormal

eating behaviours, as it still seems to portray an idealised thinness - and the pursuit thereof, and thus can result in misconceptions of body shape and image.[30]

Therefore this study intended to qualitatively describe the experience of high school students, both male and female, from both co-educational and single-gender schools predominantly in the Johannesburg region, as they observed their fellow learners who displayed abnormal perceptions of weight and shape, as well as the potential contributing factors to these cognitive and behavioural distortions. It also set out to describe the role of an emerging concern, that of social media, and its role in abnormal perceptions of body weight and shape in high school learners.

1.1 Aim of the Study

The purpose of this study is to explore and describe the views and perceptions of adolescent body image and shape, and eating behaviour of an identified group of university students regarding their peers' body image and shape and eating behaviours, which they experienced (at the time) during their senior high school years. The majority of these students attended high schools in Johannesburg.

1.2 Objectives

The study has the following objectives:

- To conduct a structured questionnaire in a group of volunteering undergraduate students in the WITS Faculty of Health Science; and
- To compare these described views, perceptions and experiences with the available literature.

Considering the literature background above, the questionnaire to be used was developed to include the following qualitative topics, termed themes:

1. Personality traits;
2. Early and late childhood experiences;
3. Eating behaviours of learners; and
4. The last 3 years of the high school environment.

Responses to questions in the questionnaire were utilized to address the following:

(1) Are body shape and weight particularly important concerns amongst adolescent females (and males) in schools?

(2) To what extent does social media's emphasis on being thin and the "thin female model", as portrayed by advertising and social media, influence adolescent females and males?

(3) Are there particular personality types or traits in high school girls (and boys) that are more likely to develop an eating disorder (in particular anorexia nervosa)?

(4) Is there a need to intervene at a high school level to educate and identify adolescent females and males who may be at risk of developing an eating disorder, in particular anorexia nervosa?

CHAPTER 2. METHODS

This study is an explorative, qualitative investigation using qualitative methods to describe the views, perceptions and experiences of a group of student participants.

2.1 Study sample

A purposeful sample of voluntary participants, 18-years and older, was recruited from students in the Faculty of Health Sciences at the University of the Witwatersrand, in their first three years of study. An exclusion criterion for the study was any student, or a first degree family relative of a student, who actually had been diagnosed with an eating disorder.

An estimated number of 500 students in those years of study were approached by the investigator, through contact with the respective year co-ordinators. These co-ordinators

for the different degrees were contacted using e-mail addresses provided by the heads of departments, namely for the Bachelor of Medicine and Surgery Degree (MBBCh)/Graduate Entry Medical Programme (GEMP), Bachelor of Dentistry, Bachelor of Occupational Therapy, Bachelor of Physiotherapy, Bachelor of Pharmacy and Bachelor of Nursing programmes.

Information about the study was forwarded to each head of department, requesting to meet the respective year co-ordinators and to meet the students at pre-arranged times during the week. This included the study protocol, ethics clearance, the questionnaire to be distributed and a request to arrange a time to meet the students.

2.2 **Data collection**

A manually distributed questionnaire to be completed anonymously was used to collect information on these students' views, perceptions and experiences of their peer group members' approach to body image and shape during the last three years of high school. After explaining the modus operandi with respective year co-ordinators, the questionnaire was manually distributed to each student per degree group for voluntary completion. This was done during working hours, and with the permission of both the year co-ordinators and lecturer whose class was approached for the contact with students. A total number of 153 questionnaires were collected.

2.3 **Questionnaire** (APPENDIX A)

The questionnaire included quantitative data on demographic variables of participants, as well as open-ended qualitative questions. The admission questionnaire used at the

Tara Hospital Eating Disorders Unit helped facilitate the design of this study's questionnaire, specifically regarding "Personality Traits". (APPENDIX C) The following types of questions were included:

- **Demographic variables** - Quantitative data included in the questionnaires, such as demographic variables, was described using descriptive statistical methods.
- **Open-ended questions** – Included questions on four topics:
  (1) *Personality traits* of fellow learners at their schools who were known to possibly have experienced problems with eating behaviours (e.g. perfectionism and rigidity); **(Questions 1 and 2)**
  (2) *Early and late childhood experiences* of learners who may have displayed or experienced problems regarding body image including, for example, "thin idealisation" or rigid dieting behaviours; parenting and relationships with adults in the family environment; relationships with siblings and their ages; possible exposure to forms of abuse, e.g. emotional, such as teasing about weight or physical appearance; family views and habits regarding eating, e.g. eating rituals and focus on food; **(Questions 3 to 6)**
  (3) *Eating behaviour* of learners at school (e.g. dieting); **(Questions 7 to 15)**
  (4) *High school environment* including: bullying and/or peer pressure regarding weight and shape stress experienced by individuals at the schools; pressure to perform academically or on the sports field; adjusting to pubertal hormonal changes; rating the extent that social networking, such as Facebook, and visual media ('fashion' and 'celebrity' focused) have influenced the way in

which fellow learners described themselves and their eating behaviour. **(Questions 16 to 26)**

2.4 Field notes

Once all the completed questionnaires had been collected, they were sorted based on the quantity and quality of answered questions. There were three groups of questionnaires: the most descriptive questionnaires were labelled with numbers (1-89); letters (A-XX) for questionnaires that did not provide as much information; and Roman numerals (i-xiv) for incomplete questionnaires.

Each answer was read and quotes were highlighted and extracted from the text. From these quotes, subthemes emerged and the most relevant and descriptive quotes were flagged and used within the results, specifically with the purpose of describing the subtheme. Within these subthemes ideas emerged based on replicated quotes. A hierarchy of subthemes and ideas was formed and tabled.

2.5 Data analysis

2.5.1 Quantitative data was described using descriptive statistical methods and is shown in the form of bar graphs created on Microsoft Excel 2013.

2.5.2 Qualitative data – The qualitative component entailed an inductive enquiry, a process which can be described as a journey from comprehending, to synthesizing, to theorizing and finally to re-contextualizing. Each question was deconstructed and categorised into subthemes (coding). Within these subthemes ideas that replicated

were described. When subthemes repeated themselves, data became saturated. The question, thus, was reconstructed and conclusions were drawn.

Coding is the creation of certain categories pertaining to certain segments of text and is aimed at expressing data and phenomena in the form of concepts. Open-ended coding may be done line-by-line, by sentence or by paragraph, or by coding the text in its entirety. Units of meaning classify expression (single words, or short sequences of words) in order to attach annotations and "concepts" (codes/themes) to them.

When analysing qualitative data from the questionnaire the first step in the coding process was to identify persistent words, ideas, images and concepts from the data. These provisional themes were then organized in categories/subthemes. Analysing the data involved judging these categories/subthemes for internal homogeneity ("Does this information within this category belong there?"; "Does the category make sense in answering the questions regarding aetiology of eating disorders?") External homogeneity refers to the relationship between categories and the differences between the categories will be clear. Essentially all the answers to all the questions were deconstructed, subthemes and ideas saturated the data obtained, and the data was then remodelled or reconstructed with specific conclusions having been drawn. Subthemes and ideas were listed in a hierarchical order, from most described to least described.

The final themes, subthemes and ideas were then compared with hypotheses, results and conclusions in the literature. Once this was completed, new themes emerged that

linked subthemes and ideas, initial theories were challenged and new conclusions were drawn.

2.6 Trustworthiness

In order to ensure trustworthiness and the rigor of this enquiry, Guba's strategies were considered:

- *Credibility* (seeking to ensure that study measures or tests are valid; asking the question "how congruent are the findings with reality?");
- *Transferability* (the extent to which findings of one study can be applied to other situations);
- *Dependability* (employing techniques to show that, if the work were to be repeated, in the same context, with the same methods and with the same participants, similar results would be obtained); and
- *Conformability* (steps taken to help ensure as far as possible that the work's findings are as a result of the experiences of the ideas of the informants, rather than the characteristics of the researcher).

2.7 Triangulation

To ensure validity a second and third person were asked to read the answers and draw their own subthemes and conclusions. This assisted with comparing subthemes and ensuring validity and trustworthiness of the methodology used. Strict emphasis was placed on keeping the chain of evidence and ensuring that data-specific conclusions were drawn. The process involved numbering each completed survey: numbers (from 1) for the questionnaires with the most useable data; letters (from A) for questionnaires

that had some but not all questions completed; Roman numerals (from i) for questionnaires that had very little usable data, but still formed part of the quantitative and qualitative data captured.

When specific quotes have been used in the results, they are referenced by the number/letter/Roman numeral assigned with the question; e.g. *B Q3*. Through this chain of evidence, it was possible to create a hierarchy of subthemes and ideas which are represented and described in the results chapter.

2.8 Data Visualization

As a means to further describe text data, Data Visualization was used to present the responses to some of the questions. Data Visualization is a graphic tool used to further the qualitative nature of data and make the interpretation of themes, subthemes and ideas simpler. Information from the questionnaires was collated and summarized. This summarized information was then presented in charts and other visualisations (doughnut charts, word clouds, tornado charts, bubble charts and line area charts). Visualisations were selected based on the type and results of questionnaires, i.e. binary responses were presented in pie (or doughnut) charts, while results of questions which employed a Likert scale, were presented in a stacked bar (or tornado) chart. The results of text analysis were presented in word clouds. Cognisance was also given to present charts in a manner that promoted key text messages or results by highlighting it through the use of colour or change in font type and size.

2.9 Ethics

Ethics approval was obtained from the Human Research Ethics Committee - Medical (HREC) of the University of the Witwatersrand (APPENDIX B)

CHAPTER 3. RESULTS

There were 153 questionnaires completed and returned and after initial review included:

- n = 89 - the most descriptive questionnaires (marked 1-89);
- n = 50 - questionnaires with less information (marked A-XX); and
- n = 14 - incomplete questionnaires (marked i-xiv)

The questionnaire included eight quantitative questions on the demographic attributes of participants, which is described in paragraph 3.1. The qualitative data extracted from the 21 individual qualitative questions, is described in paragraph 3.2 in a hierarchical manner.

3.1 Responders' demographic profile

Prior work administered on the subject of eating disorders suggests that the questionnaire be directed toward the adolescent years especially that of females, as this

is the group associated with the highest rate of eating disorders and potentially distorted cognitions and behaviours regarding body weight and shape. The retrospective nature of the study meant that the study sample included those over the age of 18 years, the majority who had completed matric with the past five years. It was decided that males were to be included, as there is little literature describing eating, body weight and shape concerns in the male population. The type of school was important as, once again, girls are most vulnerable to the development of distorted cognitions of body weight and shape, and are at increased risk for the development of an eating disorder.

The following figures represent the study sample:

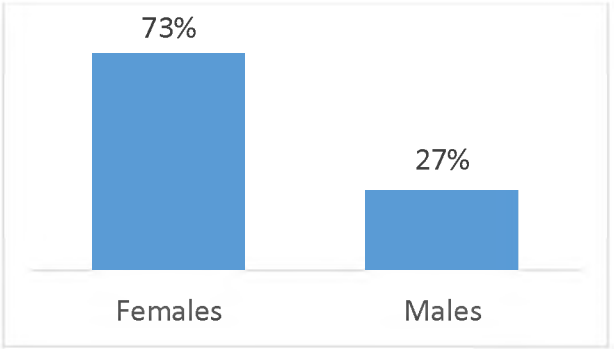

Figure 1. The gender ratio of respondents

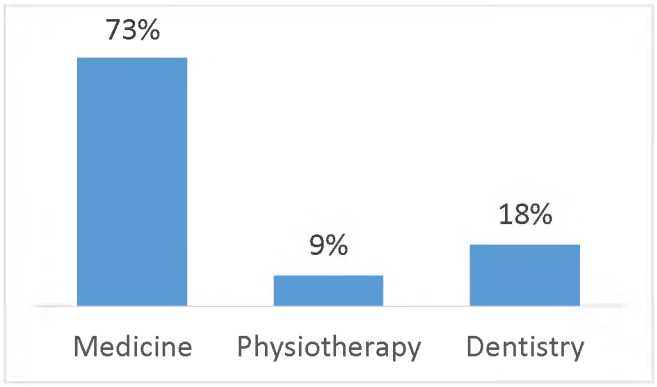

Figure 2. The various fields of study of the respondents

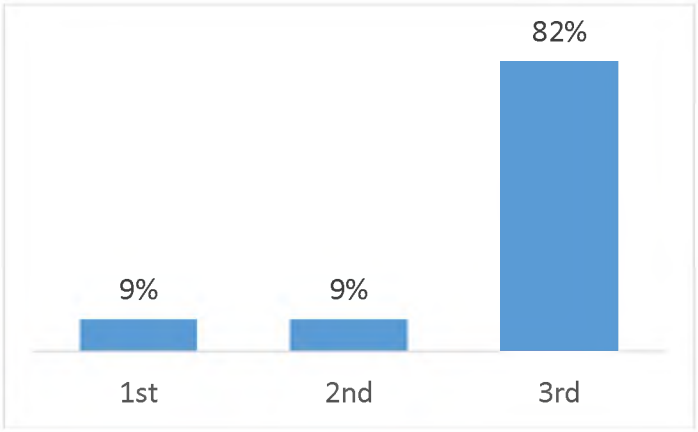

Figure 3. The various years of study of the respondents

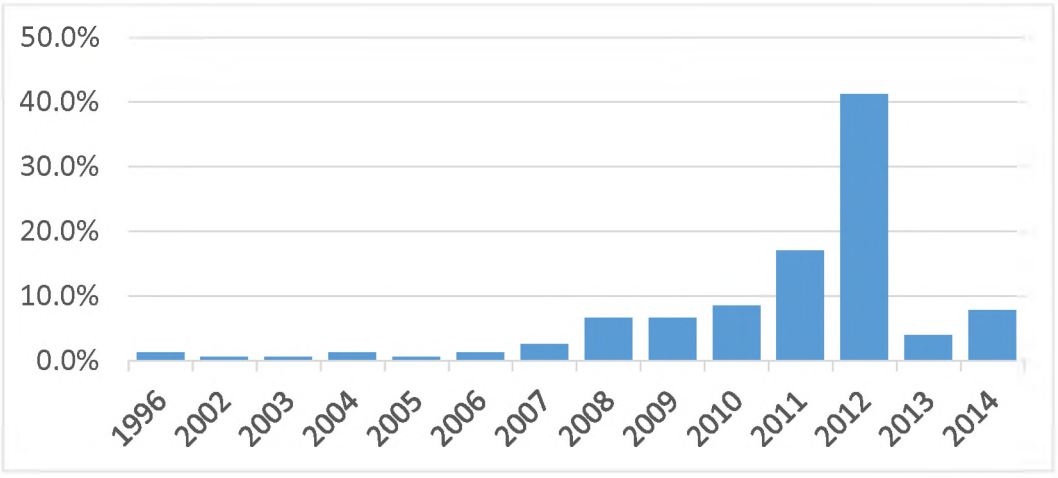

Figure 4. Representation of the years in which respondents matriculated

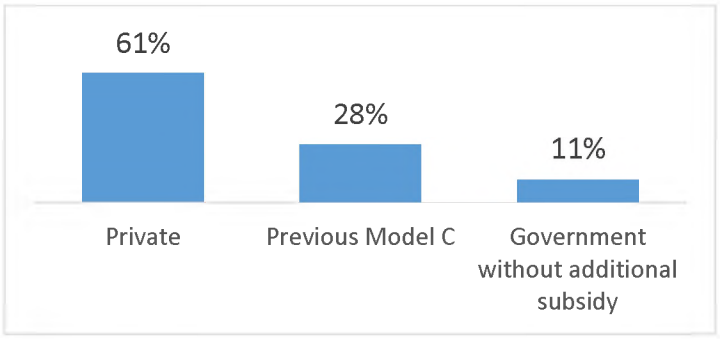

Figure 5. Representation of the types of schools from which the respondents heralded

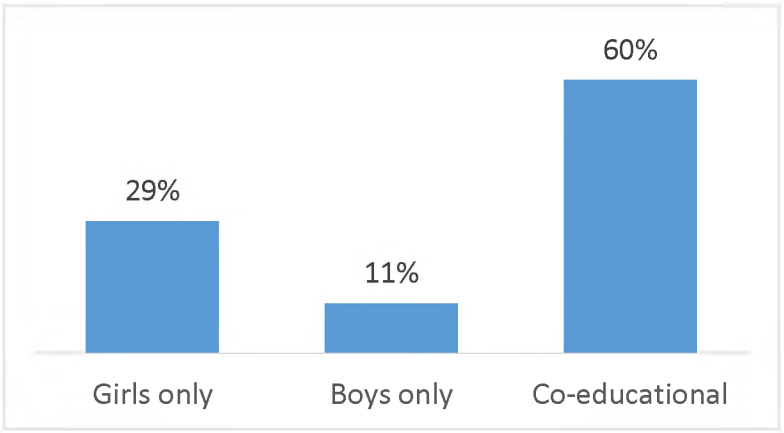

Figure 6. The gender base of the various schools that were attended by respondents

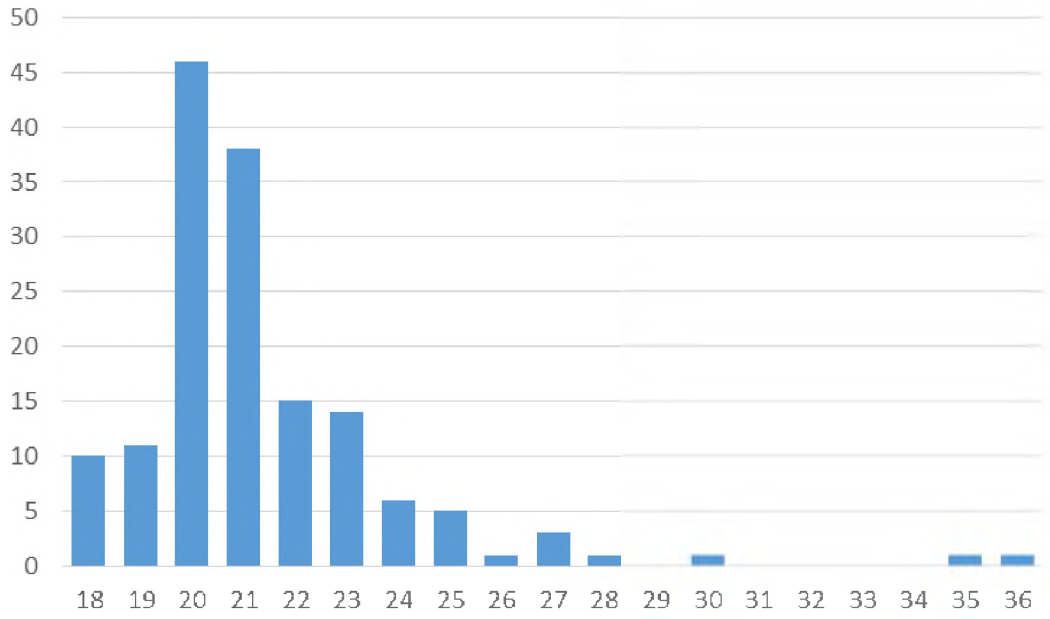

Figure 7. The age distribution of respondents

3.2 Qualitative (open-ended) Questions

The open-ended questions included in the questionnaire were structured in terms of the four topics/themes identified from the preceding literature review:

1. Personality traits
2. Early and late childhood experiences
3. Eating behaviour of learners
4. The last three years of high school environment

Within these topics/themes, subthemes were identified and posed as questions. The data obtained from the respondents highlighted subthemes that are described in a hierarchal manner, i.e. from the most replicated subthemes to the least replicated subthemes. Within these subthemes ideas emerged when data was replicated and saturated.

1. PERSONALITY TRAITS

Table 1. Subthemes on "Personality Traits" identified from questionnaire response

1.1 Poor self-confidence

1.2 Self-doubt

1.3 Introversion

1.4 Dependency and attention-seeking

1.5 Driven, over-competitive and obsession

1.6 Perfectionism

1.7 Narcissism

Personality attributes (Question 1)

*Please describe your and your peers' views and perceptions, during the last three years of high school, of possible **personality attributes** of other students that may have impacted on their body image and shape and on their eating behaviour at the time?*

Participants were asked to identify and describe certain personality attributes of their fellow learners during the last three years of high school that may have impacted on their body image and shape, and on their eating behaviours at the time. The subthemes identified from responses were:

1.1 **Poor self-confidence**

The most replicated subtheme was that of poor self-confidence, also described as low self-esteem:

> *". . . concerned with self-image (low BMI) . . ." (19 Q1)*[1]

[1]Quotes are referenced by the questionnaire number/letter/Roman numeral followed by the number of the question (e.g. A Q1 – Questionnaire A Question 1). All quotes have double inverted commas (") and begin and end with an ellipsis (. . .). If the answer/quotation extended beyond a specific question, all questions were included (e.g. A Q1, Q2 – Questionnaire A Question 1 and Question 2).

An insecure personality trait appeared on many questionnaires completed:

". . . worried about how others would perceive them . . ." (19 Q1)

1.2 **Self-doubt**

Self-doubt was a trait linked with insecurity and these learners were described as self-critical:

". . . insecure, weren't confident in themselves . . ." (Q Q1)

". . . self-esteem issues . . ." (Y Q1)

". . . self-conscious, attention-seeking, abused verbally which made them self-conscious . . ." (39 Q1)

1.3 **Introversion**

This prominent trait of poor self-confidence, linked with poor self-worth, self-doubt and a consequential seeking of approval from others, draws parallel lines with the personality trait of introversion, described by the learners as 'shyness':

". . . Introvert but wants to be popular and liked . . ." (23 Q1)

". . . They mostly were introverts (shy) and felt as though they did not fit in . . ." (8 Q1)

One respondent described it this way:

". . . Introverted and quiet. Not in the popular groups . . ." (H Q1)

1.4 **Dependency and attention-seeking**

In order for them to improve their self-esteem, many questionnaires described a strong seeking of approval from other learners:

". . . dependent personality, need to be noticed, wanting to be cool . . ." (77 Q1)

Thus the subtheme of dependency and attention-seeking appeared strongly within the majority of the questionnaires:

> *". . . Everybody wanted to be cool the last 3 years of high school and be that person who is everybody's friend. Also a perception that the number of friends you have determines how cool you are . . ." (10 Q1)*

1.5 **Driven, over-competitive and obsessive**

Despite the idea that they could be individual subthemes, the respondents most often linked them as a single personality trait:

> *". . . Over competitive school . . . almost a competition to be thinnest . . ." (71 Q1)*
>
> *". . . Very concerned about weight and how they look… Competitive. . ." (BB Q1)*

The word 'obsessive' was often used to describe learners that displayed abnormal eating behaviours with or without abnormal perceptions of their own body shape:

> *". . . Obsessive need to be in control . . ." (71 Q1)*

Linked closely to this also, is an ambitious, driven and possibly obsessive personality, which is discussed under the following subtheme.

1.6 **Perfectionism**

The majority of respondents described perfectionism in a negative manner:

> *". . . perfectionists, people with low self-esteem, they looked up to a lot of celebrities . . ." (73 Q1)*

1.7 **Narcissism**

What is interesting is the negative view of the respondents towards fellow learners who might have displayed abnormal eating behaviours. Words such as *"self-occupation"* and

"arrogance" were most often used to describe these learners. The male respondents, in particular, used these terms mostly:

> *". . . Insecure, needy, controlling, manipulative – mostly girls that starved themselves/vomited . . ." (16 Q1)*
>
> *". . . Personalities such as meanness, excessive confidence, selfish . . ." (47 Q1)*

A few responders described personality traits such as *"jealous"*, *"pessimistic"* and *"aggressive"*, but these were anecdotal responses and were not replicated.

Selecting the best attributes (Question 2)

With regard to possible students in your school who may, at the time, have demonstrated confirmed eating disorder symptoms (e.g. losing a significant amount of weight over a relatively short period, induced vomiting or have employed other weight or eating restricting behaviour), can you comment on their personality traits ***by selecting the best suiting attributes*** *from the following list:*

Introverted or extroverted; impulsive or considered; confrontational or avoidant; autonomous or dependent; rigid or flexible.

The figure below is a visual representation of personality traits selected by respondents when asked to describe the traits of learners who appeared to have abnormal thoughts and perceptions of body image, shape and weight and who might have displayed abnormal eating behaviours. There were five pairs of traits. Within this pair traits were 'opposite' to each other. Respondents were to select one of the two.

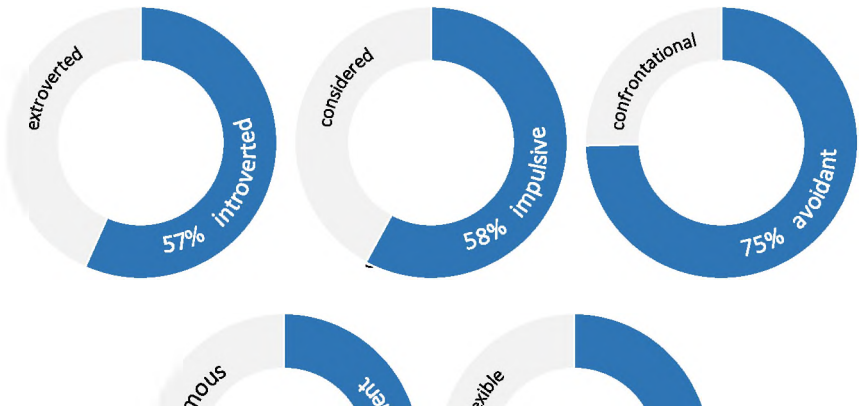

Figure 8. Personality traits in learners who demonstrated abnormal body image and shape perceptions and abnormal eating behaviours as identified by their fellow learners.

2. EARLY AND LATE CHILDHOOD EXPERIENCES

Table 2. Subthemes on "Early and Late Childhood Experiences" identified from questionnaire response

2.1 **Other students' childhood experiences**
- 2.1.1 Personal conflict and a disruptive home environment
- 2.1.2 Interpersonal conflict and parental relationships
  - 2.1.2.1 Mother-daughter relationship
  - 2.1.2.2 Father-daughter relationship
  - 2.1.2.3 Parent-child and sibling relationships
- 2.1.3 Being compared with someone else (in childhood)
- 2.1.4 Sport
- 2.1.5 Childhood bullying
- 2.1.6 Early sexual maturity

2.2 **Parental behaviour**
- 2.2.1 The overly-involved and critical parent
- 2.2.2 The uninvolved/absent parent
- 2.2.3 The strict parent
- 2.2.4 The comparing parent (to)
  - 2.2.4.1 His/her siblings
  - 2.2.4.2 His/her peers
  - 2.2.4.3 Themselves (specifically the mothers')
- 2.2.5 The bragging parent
- 2.2.6 The mother's attitude
  - 2.2.6.1 The maternal pro-dieting behaviour
  - 2.2.6.2 The criticizing/commenting mother
  - 2.2.6.3 The unfulfilled mother
  - 2.2.6.4 The dysfunctional mother

2.1 **Other students' childhood experiences and parenting behavior** (Questions 3 and 4)

Childhood Experiences (Question 3)

*Please describe your and your peers' views and perceptions, during the last three years of high school, of **other students' childhood experiences** that may have impacted on their body image and shape and on their eating behaviour.*

Role of Parenting (Question 4)

*With regard to possible students in your school who may, at the time, have demonstrated confirmed eating disorder symptoms, please describe your and your peer's views of the impact of **parenting behaviour** (e.g. being strict, controlling, demanding, or over involved) on these students' body image and shape and on their eating behaviour at the time.*

Participants' views of their peers in this regard, include:

". . . Children whose families who often called them chubby/fat when they were growing up, were more likely self-conscious about their weight . . ." (B Q3)

The idea that early childhood experiences are an important determinant of high school eating behaviour and abnormal perceptions of body weight and shape, was strongly suggested by the majority of respondents. The idea of an internal self-doubt may have risen from being called "chubby" as a child, which could have led to personal insecurity. But the overall conclusion is that abnormal eating behaviours and perceptions of body weight and shape start in childhood and develop over time. Several important subthemes emerged in terms of this concept:

2.1.1 **Personal conflict and a disruptive home environment**

There was an overwhelming majority of respondents who described this subtheme as being an important etiological factor:

". . . unstable home environment, parents or close relatives involved in arguments, neglecting or completely overbearing and controlling parents . . ." (81 Q3)

". . . The students had lost someone close to them or they had been abused (physically or emotionally) . . ." (8 Q3)

Although this does not answer the question regarding anorexia nervosa and attitudes and behaviours towards losing weight, it does highlight the perception that childhood exposure to abnormal eating behaviours can result in a perpetuation of these behaviours into late adolescence.

2.1.2 **Interpersonal conflict and parental relationships**

This was another subtheme identified as of particular importance for responders. The ideas that emerged within this subtheme were:

2.1.2.1 **Mother-daughter relationship**

". . . In one case the girl's mother was very slim and had slim sisters and she experienced pressure from her mother regarding her weight . . ." (A Q4)

2.1.2.2 **Father-daughter relationship**

". . . bad relationships e.g. father and daughter . . ." (4 Q3)

2.1.2.3 **Parent-child and sibling relationship**

The majority of participants, however, spoke about this triangular relationship and its impact on children displaying abnormal eating behaviours and abnormal perceptions of body weight and shape in late adolescence:

". . . Compare siblings to each other . . . 'Look how great she's looking' . . ." (A Q5)

". . . Comparing siblings according to athletic ability, popularity, grades, appearance and appetite . . ." (17 Q5)

Within these categories the ideas of criticism and comparing were described:

". . . Some may have siblings that were given more attention or grew up in a competitive household . . ." (80 Q3)

". . . Favouritizing other sibling . . ." (17 Q4)

2.1.3 **Being compared with someone else (in childhood)**

The child's experience of being compared with someone else - even children that learnt to compare themselves to their peers - whether it be at school or in the home, featured very strongly:

> *". . . Parents on occasion would make public to others the fact that their children were losing weight or needed to do so . . ." (29 Q5)*

Although sport at school is discussed in detail later, it is important to highlight that children exposed to sports/activities that stressed *"thinness"* and *"beauty"*, could have been influenced later into eating behaviours and body image and shape perceptions.

2.1.4 **Sport**

> *". . . Parents would make their daughter/son participate in various sporting activities in order for them to maintain a slim looking body shape . . ." (X Q5)*

> *". . . Many parents put lots of pressure on their children to do well or even be the best in sporting events. This can affect the child's view on body image and eating behaviour . . ." (52 Q5)*

2.1.5 **Childhood bullying**

This is another subtheme that is described later but was highlighted by many of the respondents. The students that wrote this emphasized this fact as being very important for the development of abnormal perceptions of self, body weight and shape, a poor self-confidence (linked to personality traits most often found in people with eating disorders) and abnormal eating behaviours.

> *". . . Boys and teachers made nasty comments about bigger girls . . ." (BB Q16)*

> *". . . Bigger students were ridiculed . . ." (U Q10)*

2.1.6 **Early sexual maturity**

Only two students described **early sexual maturity** as being a risk factor, in their view, for the development of abnormal eating behaviours, but these quotes were not significant enough to elaborate further.

2.2 **Parenting behaviour** (Questions 5 and 6)

Parenting behaviour and its impact (Question 5)

*Can you provide **examples of parenting behaviour**, at the time, that may have impacted on fellow students' body image and shape and eating behaviour at the time (e.g. at award functions or with regards to participation in sport and at sporting events).*

Role of the mother (Question 6)

*How would fellow students (who you recognized to demonstrate abnormal body image perceptions and eating behaviours) describe their **mother's attitude** toward body image and dieting?*

The literature identifies parenting influence to be important when it comes to shaping the ideas and beliefs and resultant behaviours of young people (children and adolescents) when it comes to body shape and weight.

> *". . . Parents' view of their children plays a vital role in their body image and self-esteem. Children who perceived their parents regarding them as fat/overweight were more image/body conscious than those students whose parents were not so involved . . ." (75 Q4)*

2.2.1 **The overly-involved and critical parent**

> *". . . Overbearing parents who smother their children leading to rebellious behaviour . . ." (83 Q4)*
>
> *". . . Parents were controlling of what their children could or could not eat . . ." (8 Q4)*

2.2.2 **The uninvolved/absent parent**

This quote was given for learners who had been diagnosed with an eating disorder:

". . . This girl and other girls who showed signs of unhealthy eating habits and attitudes for the most part had very uninvolved parents . . ." (II Q4)

". . . Parents who don't engage with their children or are absent physically or emotionally . . ." (83 Q4)

2.2.3 **The strict parent**

These parents were regarded as being aggressive and controlling and outcome-driven. Strictness was also used as a way of describing the aggressive and competitive parent and often seen as very demanding on their children

". . . My peers and I viewed the parenting behaviour towards an individual who had an eating disorder to be quite strict and controlling. This made the individual feel pressurised into doing what the parents expected . . ." (X Q4)

". . . strict and controlling expecting very high standards and being over-bearing . . ." (81 Q4)

2.2.4 **The comparing parent (to)**

2.2.4.1 **His/her siblings**

". . . 'Favouritizing' other siblings . . . judgement and comments on what the child wore or ate . . . and comparing siblings according to athletic ability, grades, appearance and appetite . . ." (17 Q4 and Q5)

". . . Praising the older child (who was much smarter) led to the younger child to seek attention and develop an eating disorder . . ." (SS Q4)

2.2.4.2 **His/her peers**

". . . Competitive behaviour from parents – wanting their child to be better than someone else's child . . ." (R Q5)

". . . Comparing peers to their child . . ." (A Q5)

2.2.4.3 Themselves (specifically the mothers')

". . . Parents who value beautiful children who look as good as themselves (mostly mothers) . . ." (26 Q4)

". . . Parenting behaviour has a huge impact on children's views of body image. My friend's sister was chubby and her mom was thin. Her mom would force my friend's sister to go to the gym and she would not buy certain items of food for the house that had a high fat content . . . The same parent (mentioned above) would say things like 'this is why you look like that.' . . . Her mom kept fit and believed being thin is best for health and to look attractive . . ." (3 Q4, Q5 and Q6)

2.2.5 The bragging parent

". . . They would always push her to be top of her class . . . and would often brag of her 'success' and popularity to the rest of us . . . I think this contributed to her obsession with maintaining a good image . . . Her mother would brag about her achievements and popularity when other students were around. The above mentioned girl also entered a school beauty pageant with us for which she [the pupil] designed a dress and her mum complained that it fitted her too tightly (suggesting she was too big for the dress) . . . This particular student wouldn't demonstrate any kind of response to her mother's remarks but we as fellow students could see that it affected her . . ." (14 Q4, Q5 and Q6)

" . . . Gloating or boasting of son's sports ability and achievement puts pressure on their eating and workout habits . . ." (37 Q5)

Throughout this question of parenting behaviour it was clear that the mother's attitude and behaviour was the more important factor within the parenting subtheme to contribute toward abnormal perceptions of body image and shape and possibly the development of abnormal eating behaviours.

2.2.6 **The mother's attitude**

2.2.6.1 **Maternal pro-dieting behaviour**

This was the most strongly described trait.

". . . Mother diets a lot. She eats very little, exercises very hard and eats bubble-gum to supress appetite . . ." (79 Q6)

". . . Parents, especially mothers that were body conscious often imparted their views onto their children. If the mother decided to drink a new 'slimming tea' the child would adopt that behaviour too . . ." (75 Q6)

2.2.6.2 **The criticizing/commenting mother**

". . . A mother of a friend of mine was very, very beautiful and expected the same of her daughter and who she was friends with. She paid for her daughter to get chemical acid peels and judged her friends' appearances to their faces . . ." (26 Q5)

". . . I had one friend whose mother encouraged her to pursue her eating disorder. When she weighed under 40kg as an 18-year old girl her mother told her that in order to be successful she had to be smart and skinny. She then said that this girl has an A average, at least she was half successful . . ." (vi Q6)

2.2.6.3 **The unfulfilled mother**

". . . Another example of a teen who had an unhealthy body image had a mother who though also overweight herself envied or admired and praised socially accepted norms of aesthetically pleasing figures . . ." (50 Q6)

". . . One mother kept giving snide insults to her healthy daughter, possibly due to the mother's insecurity about herself being overweight . . ." (40 Q6)

2.2.6.4 **The dysfunctional mother**

". . . One girl's mother took drugs, [had an] unstable home life and mother was possibly anorexic herself. The girl developed anorexia and bulimia in Grade 7 . . ." (II Q3)

". . . the other girl had a mom who had many husbands, was a borderline alcoholic and was either very involved with the daughter and then there were periods where she was very uninvolved . . ." (13 Q4)

3. EATING BEHAVIOUR OF STUDENTS/LEARNERS

Table 3. Subthemes on "Eating Behaviours of Students/Learners" identified from questionnaire response

3.1	**Describing body image and shape**
	3.1.1 The 'fat' group
	3.1.2 The 'skinny' group
	3.1.3 The 'fit and muscular' group
3.2	**Bullying, peer pressure and peer discrimination**
	3.2.1 Extreme importance
	3.2.1.1 Girls as particular targets
	3.2.1.2 Most prominent in matric
	3.2.2 No importance
	3.2.3 Indirect form of pressure
	3.2.4 Equated body image and shape with values, morals and self-image
	3.2.5 Desire to recognise discrimination in high schools and be openly opposed to it
3.3	**Social media**
	3.3.1 Visual media
	3.3.2 Written media
	3.3.3 Cyber-bullying
3.4	**The absence of social media**
	3.4.1 Huge difference, improved body image and shape perception
	3.4.2 Very little difference
3.5	**Media encouragement of the 'ideal woman'**
	3.5.1 Tall
	3.5.2 Skinny
	3.5.3 Model-looks
	3.5.4 Trend to change the skinny look
3.6	**Media's encouragement of the 'ideal man'**
	3.6.1 Tall
	3.6.2 Muscular and toned
	3.6.3 Toned
	3.6.4 Metrosexual man

3.1 Describing Body Image and Body Shape (Question 7)

Describing body image and body shape (Question 7)

*How did students in your school describe **body image and shape**? (First words that come to mind).*

This section of the questionnaire focused on what behaviours with regards to eating were being adopted by learners in the final three years of high school that were perceived as *"abnormal"* to their fellow learners. The students were asked to describe how their fellow students defined body shape and image and what types of words or phrases were being used in the context of shape and image. In general, the students defined **body image** as being the subjective perception of one's own shape:

> *". . . the way you saw yourself and how you look, the way you thought others perceived you . . ." (44 Q7)*

Body shape was the objective description given by learners to each other:

> *". . . Body shape would be described in terms of weight and physical traits like breast size, curves, legs . . ." (13 Q7)*

This question revealed a wealth of vocabulary used to describe body shapes. Generally, the words/phrases could be divided into two distinct groups. These were either the *"Fat"* Group or the *"Skinny"* Group (based on the number of times the respondents used these specific words).

3.1.1 The *"Fat"* Group

It is very clear that learners associated *"fatness"* as being wrong, disapproved of and unaccepted:

> *". . . Fat or skinny. No middle ground most of the time. Girls generally feared being fat and disgusted like a 'death sentence' . . ." (71 Q7)*

> *". . . If you were overweight, fat, obese [you were] ugly . . ." (49 Q7)*

3.1.2 **The *"Skinny"* Group**

When students described others in their school as being perceived as *"thin"*, this was viewed as preferable and desirable. Being *"thin"* equated to being *"pretty"* or more *"attractive"* to both sexes:

> *". . . Being thin was seen as more attractive . . ." (16 Q7)*
>
> *". . . Girls were beautiful if they were incredibly thin, regardless of facial features or any other features – the defining factor of beauty was thinness – thin arms, flat stomach, no bum or thighs – the concept of a 'thigh gap' became prominent . . ." (II Q7)*

These two subthemes were the most replicated in the questionnaires, however a subset of students identified a third subtheme to described body image and shape.

3.1.3 **The *"fit and muscular"* group**

Based on the obtained results it was difficult to distinguish if these descriptions applied to just males in the high school, but it seemed to be associated with both sexes.

> *". . . Boys would measure success by body image and body shape – having a muscular, lean fit body . . ." (52 Q7)*
>
> *". . . Boys were meant to be fit and strong with toned bodies. . ." (14 Q7)*

Abnormal eating behaviours at school observed (Questions 8)

*Please describe what you perceived as **"abnormal eating behaviours"** of some students in your school…*

Selecting specific eating behaviours (Question 9)

To be more specific, please mark which eating behaviours might have applied to some students in your school (can mark more than one if necessary): - Eat alone, possibly in secret _

- *Preoccupation with food, eating, shape and weight _*
- *Fear of losing of control over eating _*
- *Attempts to have a completely empty stomach _*

This question has been represented in visual form:

Figure 9. The types of behaviours the respondents had experienced of their peers that may have had abnormal perceptions of their body image/shape/weight

3.2 Bullying, peer pressure and peer discrimination (Question 10)

Role of bullying, peer pressure and peer discrimination (Question 10)

*Please describe your and your peers' views and perceptions, during the last three years of high school, of the impact of **bullying, peer pressure, or peer discrimination** on other students body image and shape and their eating behaviour.*

When describing the importance of bullying, peer pressure and peer discrimination as having a particular influence on body image and shape and possible resultant abnormal eating behaviours, four subthemes emerged.

3.2.1 **Extreme importance**

Bullying had a distinct impact on how learners viewed themselves (specifically their body shape and image):

> *". . . Bullying definitely plays a huge role in how people present yourself . . ." (12 Q10)*
>
> *". . . Bullying plays a pivotal role on body image . . ." (75 Q10)*
>
> *". . . has a massive impact on students' body image and shape and eating behaviours . . ." (52 Q10)*
>
> *". . . One girl was on anti-depressants . . . and only left her room because she had to. She lived in Kenya and left for 2 months because she couldn't deal with the bullying . . ." (26 Q10)*

Within this subtheme two ideas were highlighted.

3.2.1.1 **Girls as particular targets**

> *". . . some overweight girls were bullied - the result was that some of them tried to starve themselves, others ate more, none became underweight . . ." (16 Q10)*
>
> *". . . there was a group of girls in every grade who only accepted 'good-looking' girls in their groups . . ." (3 Q10)*

3.2.1.2 **Most prominent in Matric**

> *". . . Especially in Matric – peer pressure and discrimination amongst girls to look like runway models for matric dance led to a lot of dieting and many times tears during school hours . . ." (32 Q10)*

". . . There was a big need to fit in especially around the time of matric dance . . ." (79 Q10)

3.2.2 No importance

Despite bullying being of no importance at some respondents' high schools, they still highlighted peer discrimination and peer pressure as possibly being contributory factors to the development of abnormal eating behaviours and perceptions of body image and shape:

". . . Belonging to a very small school, we've never really had many issues regarding bullying, peer pressure and discrimination . . ." (T Q10)

". . . Most people were against it and it was not promoted . . ." (73 Q10)

3.2.3 Indirect form of peer pressure

This was described especially amongst the girls in the school, whereby they would overtly or subtly compare themselves to an 'ideal' they might have had, resulting in other learners feeling shamed and pressure.

". . . No overt bullying about weight/shape but discussed in gossip . . ." (71 Q10)

". . . Girls guilted other girls or threw them dirty looks when they ate a lot . . . The 'it' girls were all thin and wore very little . . ." (II Q10)

". . . There was never outright insult on weight or eating habits but the ideal was always praised and emphasised and favoured . . ." (46 Q10)

3.2.4 Equated body image and shape with values, morals and self-image

This subtheme, once again, was described specifically about girls in high school. What was clear from some of the respondents is that the way one looked directly influenced how learners 'judged' one another's internal self and worth:

". . . Peer pressure and bullying played a monumental role in eating habits and body image as it lowered the self-esteem of students who did not conform to the ideal standards thought of by 'popular kids' . . . (I Q10)

". . . There was no value given to kindness, intelligence, skills, only on being thin, pretty . . ." (11 Q10)

3.2.5 **Desire to recognise discrimination in high schools and be openly opposed it**

". . . We did not take bullying lightly and tended to encourage each other regardless of size. There was no emphasis on what you look like, rather who you were . . ." (20 Q10)

". . . Many of mine and my peers' views were to be critical of abnormal eating behaviours [and] in the attempt to correct and dissuade these behaviours. Most students were pressured out of body image obsessions than made to feel self-conscious about it . . ." (44 Q10)

3.3 **Social Media** (Question 11)

Role of social media (Question 11)

*Can you elaborate on you and your peers' views on the impact of **social media** (e.g. TV, magazines, Facebook, Twitter etc.) had, at the time, on other students' body image and shape and on their eating behaviour.*

*Can you elaborate on you and your peers' views on the impact of **social media** (e.g. TV, magazines, Facebook, Twitter etc.) had, at the time, on other students' body image and shape and on their eating behaviour.*

One of the hypotheses that was described was that social media (and media in general) plays an important (if not critical) role in the development of abnormal self-image, body weight and shape concerns, and subsequent maladaptive eating behaviours.

Every single respondent agreed that social media influences young people, and especially adolescent females, by either overtly or by subtly suggesting what they should look like and at least aspire to be. Not one respondent suggested that social media had little to no impact.

3.3.1 **Visual Media**

". . . Celebrities and popular pop culture figures are represented as fit and thin, therefore it influenced some students to follow these figures' eating habits to become like them or have the same body image . . ." (Z Q11)

". . . They felt that unless they looked like or were comparable to the models in magazines or on television, that they were not on par with the 'most beautiful women' around, so they aspired to be like them . . ." (67 Q11)

3.3.2 **Written Media**

". . . Twitter always posted tips on how to stay thin or lose weight which contributed to the idea that we all have to be thin and slender . . ." (14 Q11)

". . . Lots of commenting (on social media e.g. Facebook) about how envious people are of other people's skinniness (as a compliment) . . ." (7 Q11)

3.3.3 **Cyber-Bullying**

Although this subtheme was not replicated to a large extent in the data, it is a very important new form of bullying that has been described in the literature and is gaining increased attention in current schooling:

". . . Once there was an anonymous cyber-bully who viciously targeted a boy who was overweight . . . with clear animosity towards him . . ." (II Q11)

3.4 The Absence of Social Media (Question 12)

If social media was not present in high schools (Question 12)

*From your own experience, briefly describe what you believe your high school environment would have been like in the **absence of social media**.*

When asked how the environment at their school would have been different in the absence of social media, two subthemes emerged.

3.4.1 **Huge difference, improved body image and shape perception**

". . . People would've been more self-confident, stayed true to themselves, embraced their differences to others, no comparing of whose got the perfect body size . . ." (MM Q12)

". . . So much better. There wouldn't be competition regarding looks and thinness . . ." (77 Q12)

". . . If there was no social media, perceptions might not have been so established and students might have been more accepting of all shapes and sizes . . ." (48 Q12)

3.4.2 **Very little difference**

Some respondents believed that, in the absence of social media, there is would still be an entrenched pressure to conform to societal norms and beliefs:

> *". . . No difference as the core body image and eating behaviour drive was from our peers . . ." (PP Q12)*
>
> *". . . Still would have had people with eating disorders due to competition between girls etc. but perhaps there would be less 'bombardment' of media ideals in general . . ." (A Q12)*
>
> *". . . Would have probably still been a similar environment as peer pressure was the main factor involved . . ." (21 Q12)*

Although most respondents described one of the two subthemes, either that social media plays a role, or social media plays no role in abnormal perceptions of body shape and image, a minority of respondents described both subthemes in their answer:

> *". . . Social media glorified the ideal body image that boys should be hunks with packs and muscle, and girls should have thin waists, big breasts and big behinds. That image would further add on to one's issues and self-esteem, and force people to either starve themselves or to over-eat to try to be the ideal wanted individual from Facebook, etc. . . . [In the absence of social media] there would have still [been] some form [of] discrimination against those that were perceived as less favourable physically. But I doubt the impact and pressure would have been as bad as it was . . ." (J Q11 and Q12)*

The respondents were then asked to describe the 'ideal' female body and 'ideal' male body. To answer these two questions the respondents listed specific words or phrases

that they felt the media encourages. These words and phrases were grouped together and subthemes emerged.

Evaluating the relative importance (Question 13)

Based on your experience of fellow students in your high school, can you please evaluate the relative importance of: [1_2_3_4_5] 1 – very little importance; 5 – significant importance

- *Physical appearance*
- *Weight loss*
- *Beauty standards*
- *Cultural views on beauty on body shape*

The following figure represents the respondents' response to the question in a visual form:

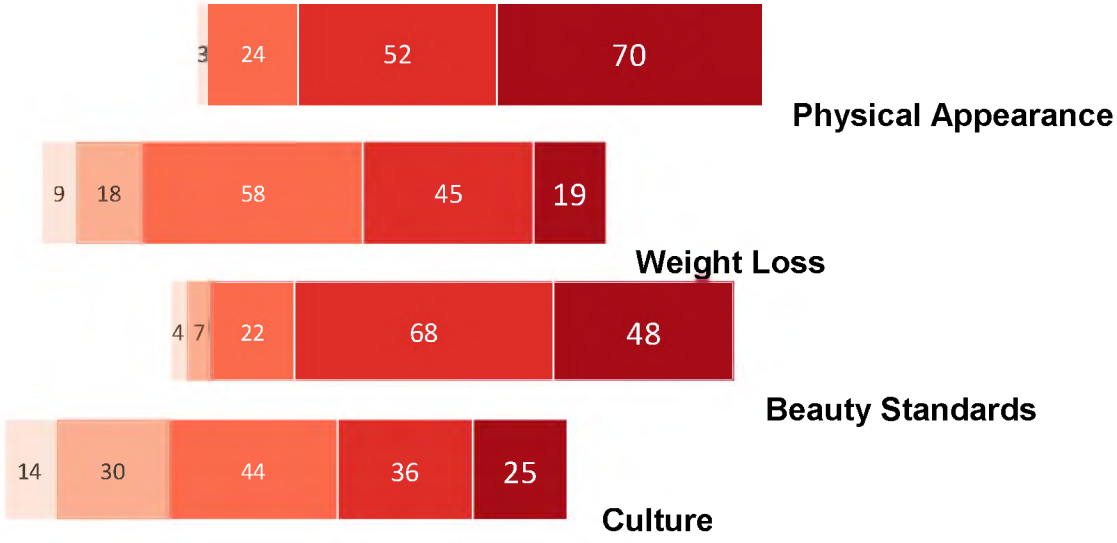

Figure 10. Students' rating of themes at their high schools from 1 (little importance) to 5 (extreme importance)

3.5 Media's encouragement of the 'ideal woman' (Question 14)

Media's 'ideal' woman (Question 14)

*Describe what you believe the media encourages **the 'ideal woman' to look like**?*

All the respondents described the ideal woman to be:

3.5.1 **Tall**

". . . Thin, tall . . . legs . . ." (51 Q14); ". . . Tall . . ." (27 Q14)

3.5.2 **Skinny**

". . . Flat stomach, minimal fat . . ." (VV Q14); ". . . Skinny . . ." (4 Q14)

Other subthemes emerged based on these words and phrases.

3.5.3 **Model-looks**

". . . Victoria-Secret Models . . ." (24 Q14)

3.5.4 **Trend to change the skinny look**

". . . Nowadays the ideal has shifted more to curvy, fit women but it still holds that thinness is considered beautiful . . ." (II Q14)

". . . Currently it's the curvier woman who is more portrayed . . ." (1 Q14)

3.6 Media's encouragement of the 'ideal man' (Question 15)

Media's 'ideal' man (Question 15)

*Describe what you believe the media encourages **the 'ideal man' to look like**?*

The 'ideal man' is more simply described. By far the most prominent features described by the respondents are as follows:

3.6.1 **Tall**

". . . Tall . . . toned body, muscular arms . . ." (39 Q15)

3.6.2 **Muscular and toned**

". . . Masculine, muscle top guys . . ." (61 Q15)

". . . Abs, Abs!! Men encouraged to be toned with increased muscle mass . . ." (1 Q15)

3.6.3 **Tanned**

". . . Tanned and toned with defined check bones . . ." (70 Q15)

". . . Muscular, tanned . . ." (W Q15)

Of particular interest is that some (although relatively few) respondents described a *"new look male"*, and described this as:

3.6.4 **Metrosexual Man**

". . . guys are more concerned about grooming, waxing, styled hair. Groomed facial hair. Stylish dressing . . ." (15 Q15)

". . . Currently, the more you dress like a woman, the better . . ." (2 Q15)

Figure 11. Visualisation of words used by students to describe the body shape of the 'Ideal Woman' (Pink) and the 'Ideal Man' (Blue). The Purple detail is for both genders. The larger the word, the more it was replicated.

4. THE LAST 3 YEARS OF HIGH SCHOOL ENVIRONMENT

Table 4. Subthemes on "Last 3-years of High School Environment" identified from questionnaire response

4.1 **What contributed to abnormal body image and shape perception as well as abnormal eating behaviours?**
- 4.1.1 Peer pressure and peer discrimination
- 4.1.2 Bullying
- 4.1.3 Media and social media influences
- 4.1.4 Sport
  - 4.1.4.1 Lowering learners' self esteem
  - 4.1.4.2 Emulated other learners based on their physical appearance
- 4.1.5 Formal occasions – the matric dance
- 4.1.6 Peer pressure from the opposite sex

4.2 **High school perception of 'normal' or 'acceptable' physical appearance for females and males**
- 4.2.1 Physical appearance in is more important for females in high school

4.3 **Physical appearance as a status symbol**
- 4.3.1 It is a requirement
  - 4.3.1.1 Individuals, more than schools, were responsible
  - 4.3.1.2 School recognised as being responsible
  - 4.3.1.3 Teachers recognised as being responsible
- 4.3.2 It is not a requirement
  - 4.3.2.1 School recognised as being responsible

4.4 **Sport and/or gym and its role in abnormal perceptions of body image and shape**
- 4.4.1 Sporting attire
- 4.4.2 Positive impact
- 4.4.3 Boys
  - 4.4.3.1 Gain muscle mass
  - 4.4.3.2 Gym – emphasis to gain muscle mass
- 4.4.4 Girls
  - 4.4.4.1 Emphasis on ballet – restricting food intake
  - 4.4.4.2 Gym – emphasis to lose weight

4.5 **Implementing specific programmes to recognise and address eating disorders at high schools**
- 4.5.1 Encouraged programmes to be implemented
  - 4.5.1.1 Healthy eating and lifestyle
- 4.5.2 Did not encourage programmes to be implemented
  - 4.5.2.1 Stigmatising an already compromised learner

4.6 **Identifying the most influential factor at high school that impacts on body image and shape perception as well as potentially disturbed eating behaviours**
- 4.6.1 Social media and media in general
- 4.6.2 Peer pressure and social groups

4.6.2.1 Pressure from the same gender
4.6.2.2 Pressure from the opposite gender
4.6.3 Parental pressure
4.6.4 Bullying
4.6.5 Sport

4.1 What contributed to abnormal body image and shape perception as well as abnormal eating behaviours? (Questions 16 and 17)

Contributing to abnormal body image and shape perception (Question 16)

*What in your **high school environment** do you think might have contributed to **abnormal body image and shape perception** of other students?*

Contributing to abnormal eating behaviours (Question 17)

*What in your **high school environment** do you think might have contributed to **abnormal eating behaviours** of other students?*

From the responses to these two questions, the following subthemes emerged, but also continued to overlap.

4.1.1 Peer pressure and peer discrimination

This linked directly with the idea that learners were pressured to fit in. It was exclusively described by the female respondents and highlighted the fact that high schools have 'cliques of girls':

> *". . . Cliques between students. Students tended to group together according to what they shared in common. Most popular were the attributes considered attractive . . ." (34 Q17)*
>
> *". . . Judgement of people based on physical characteristics is NB . . ." (45 Q16)*
>
> *". . . Peer pressure and one's needs to fit in contributed to one's own body image and perception. Different groups of students would judge one another i.e. popular students would make fun of the other students . . ." (14 Q16)*

As discussed previously the following subtheme emerged and was linked to peer pressure and peer discrimination.

4.1.2 **Bullying**

". . . bullying of overweight or 'underweight' (not muscular) students . . ." (52 Q17)

". . . Cruel untrue comments by peers leads to skewed perception of body image . . ." (23 Q16)

4.1.3 **Media and social media influences**

". . . Media definitely had an influence . . ." (66 Q16)

". . . Social media; the plastic girls . . ." (57 Q16)

". . . Looking at media where body types (other than their own) were seen to be/ encouraged to be ideal . . ." (M Q17)

4.1.4 **Sport**

Within this subtheme two ideas emerged

4.1.4.1 **Lowering learners' self esteem**

". . . Insecurity and feeling uncomfortable when told to swim . . ." (67 Q17)

4.1.4.2 **Emulated other learners based on their physical appearance**

". . . Athletes are seen high up, in terms of high school hierarchy. These athletes tend to be thinner and more confident. This perpetuates the idea that you need a 'good' body to be successful at school . . ." (79 Q16)

". . . The way people talk about other people's bodies being favourable makes others want the same bodies . . . (7 Q16)

4.1.5 **Formal occasions – the matric dance**

". . . Our matric dance exposed us to a 'dress world' that mostly catered for a certain body type. Everyone wants to look good for that . . ." (46 Q16)

". . . Pressure to look good in the matric dance dress . . ." (18 Q16)

4.1.6 **Pressure from the opposite sex**

During the latter high school years, learners would have been dating or at least taking an interest in the opposite sex. This was described as placing pressure on learners to focus on body image and shape:

". . . Intimate relationships were and are the problems. Individuals always strive to look good for their partners . . ." (1 Q16)

". . . When boys dated the skinnier girls and the others were considered too big to be beautiful . . ." (10 Q17)

4.2 Perceived "normal" or "acceptable" weight (Questions 18 and 19)

Normal/acceptable weight for girls (Question 18)

*In your high school what was perceived as "normal" or "acceptable" **weight for girls**?*

Normal/acceptable weight for boys (Question 19)

*In your high school what was perceived as "normal" or "acceptable" **weight for boys**?*

The following figure is a visual representation of the respondents' answers to the question:

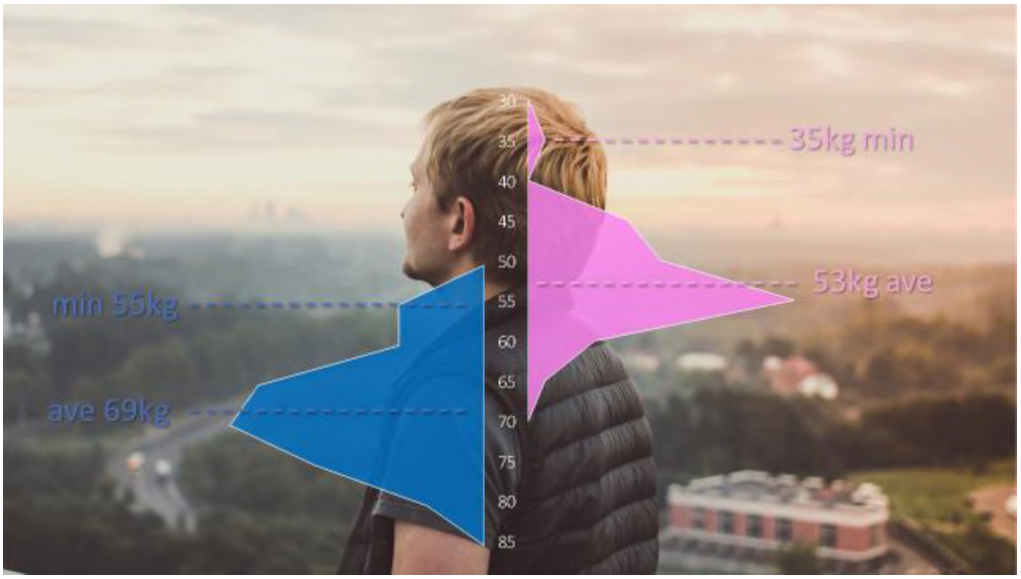

Figure 12. Minimum and average weight (in kg) for males (blue) and females (pink) at high school as described by the respondents.

4.2.1 Physical appearance is more important for females in high school

". . . In high school boys were not really judged for their appearance. It was more the girls . . ." (10 Q21)

". . . No one really noticed a boy's weight unless they were either extremely thin or fat . . ." (8 Q21)

4.3 Physical appearance as a status symbol (Question 22)

Status symbol of physical appearance (Question 22)

*Do you believe your high school environment placed undue emphasis on physical appearance as a **status symbol/requirement for acceptance**? (Asked to select Yes/No and briefly elaborate.)*

There was an equal number of respondents who believed physical appearance is a requirement for acceptance and is a status symbol, and those who did not.

4.3.1 **A requirement**

". . . It was easier to be accepted and make friends if you were not overweight/extremely underweight . . ." (U Q22)

". . . We had the 'plastic group' of boys and girls – who everyone wanted to be. The girls were thin, the guys were muscular gym bunnies . . ." (77 Q22)

4.3.1.1 **Individuals, more than the school, were responsible**

". . . The constant comparison - placed a certain amount of pressure on what is beautiful - acceptable and what isn't . . ." (36 Q22)

4.3.1.2 **School recognised as being responsible**

". . . People judge books by their covers. For leadership positions (i.e. prefect/head) it seems (looking back) that the school placed a large amount of importance on appearance and presentation . . ." (17 Q22)

". . . Unfortunately the prettier, thinner girls were the high achievers and tended to be more popular. These girls held leadership positions and this suggested people should be thin and pretty to do well . . ." (71 Q22)

4.3.1.3 **Teachers recognised as being responsible**

". . . Our teacher once told us good looking people would get jobs more easily and will be accepted into society more easily and this really made an impact on us . . ." (Q Q22)

4.4 Sport and/or gym and its role in abnormal perceptions of body image and shape (Question 23)

Role of sport and gym (Question 23)

*What role do you believe that **sport** (endurance athletics) **and/or gym** played at your high school on **abnormal perceptions of body image and shape**?*

There is not much literature describing sport as an aetiological factor for an eating disorder. However, it has been described in women who have presented with anorexia nervosa, especially comparable dance art forms, such as ballet. This study intended to describe the role that sport and/or gyming plays in abnormal eating behaviours (that include the use of protein supplementation as well as the use of anabolic steroids at a high school level) as well as how learners might describe themselves against alongside fellow learners who are seen to have a 'desired athletic physique' and how this might result in abnormal perceptions of body shape and image in those learners.

From the outset it was clear that body image and shape, in the context of sport and gym, was emphasized more amongst male learners than it was amongst female learners:

> *". . . A MASSIVE ROLE! Many people would go to gym but still restrict many foods/restrict calories. Proper eating, gyming and healthy weight loss was not a priority . . ." (45 Q23)*
>
> *". . . Especially for boys, gyming is important and skinny, weedy boys are judged and discriminated against . . ." (N Q23)*

Subthemes applying to both genders, included:

4.4.1 **Sporting attire**

". . . Were made to wear sports uniform that made some feel uncomfortable with their body, thus they avoided sport . . ." (81 Q23)

". . . Costumes worn at school galas are inappropriate and make those overweight feel uncomfortable . . ." (4 Q23)

4.4.2 **Positive impact**

". . . It encouraged healthier eating habits and promoted exercising regularly . . ." (M Q23)

". . . This was a huge part of girls accepting themselves the way they are . . . reaching your personal goals equalled self-acceptance of what your body can do . . ." (46 Q23)

". . . It improved people's satisfaction with their image . . ." (57 Q 23)

Focusing on each gender specifically, subthemes emerged and within those subthemes ideas were replicated.

4.4.3 **Boys**

4.4.3.1 **Gain muscle mass**

". . . I went to a boys' school, thus many students played rugby and consequently did body-building/gym-ing, so ate to gain muscle mass and strength i.e. high protein and carbohydrate diet. Also, possible use of anabolic steroids. I haven't encountered any student in my school who wanted to lose weight, most wanted to gain weight and muscle mass for rugby, body building and being physically stronger . . ." (37 Q1)

4.4.3.2 Gym – emphasis to gain muscle

". . . In order for a guy to be 'cool' and fit in he had to have some sort of interest in gym and developing muscles . . ." (14 Q23)

". . . Sport and gym had a hugely significant impact. Particularly gym: many of my peers were obsessed with gym and getting fit and having a good body image . . ." (52 Q23)

4.4.4 Girls

4.4.4.1 Emphasis on ballet – restricting food intake

". . . My friend with anorexia, her mother was a ballet teacher and when I was at her house, her mother made us food . . . while she made her own and her mother never commented . . . I know some ballet moms who put their daughters on diets . . ." (15 Q4 and Q5)

4.4.4.2 Gym – emphasis to lose weight

". . . Towards the last three years [high school], boys felt the need to gym for long durations of time in order to obtain a desirable physique, they would even use supplements, whereas girls would sign up for a lot of sports as well to lose weight and to get their bodies toned . . ." (22 Q23)

4.5 Implementing specific programmes to recognize and address eating disorders at high schools (Question 25)

Implementation of specific programmes at high schools (Question 25)

Based on your own experiences in the last three years of your high school, and what you have described thus far, what is your view on the need for ***specific programmes in your school to identify***

individuals with possible eating disorder symptoms?

Students were asked if they believed specific programmes should be implemented to recognise and address issues of abnormal perceptions of body image and shape as well as abnormal eating behaviours. Of the 140 students that responded to the question, 114 said that programmes were necessary, if not vital. 26 students responded "no" to the question.

4.5.1 Encouraged programmes to be implemented

Students elaborated on the type and content of these programmes

4.5.1.1 Healthy eating and lifestyle

". . . Definitely necessary, but more important than identifying those individuals is a programme promoting healthy body image, exercise and positive eating habits to ALL students . . ." (II Q25)

4.5.2 Did not encourage programmes to be implemented

All the respondents who were not in favour of such programmes described this subtheme.

4.5.2.1 Stigmatizing an already compromised learner

". . . No. It highlights the individual too much and makes them seem as if they are a problem. It should be a private counsellor issue as public[icity] also leads to bullying . . ." (58 Q25)

". . . I think that would create more problems. People that have eating disorders generally don't want to attract attention . . ." (15 Q25)

4.6 Identifying the most influential factor at high school that impacts on body image and shape perception as well as potentially disturbed eating behaviours (Question 26)

What is perceived as the most influential factor at high schools (Question 26)

*What do you think was the **most influential factor** at the time that might have led to disturbed views of perceptions of body image and shape in other students, which may have resulted in disturbed eating behaviour?*

The final question in the questionnaire was to describe one factor they felt to be the most influential factor at their respective high schools that contributed to disturbed body shape and image views and possibly played a direct or indirect role in learners displaying abnormal eating behaviours. The point of the questionnaire is not to identify a cause for the development of an eating disorder, but rather describe the factors that students felt had a great impact on their fellow learners, and could have been part of the greater aetiological picture of eating disorders in adolescents.

4.6.1 Social media and media in general (52.9%)

". . . Probably social media perceptions, the fear that a photo/video would be distributed to others who looked down on the individual's body shape/size . . ." (29 Q26)

". . . The media creating an unrealistic 'ideal look' which many people at school aspired to reach . . ." (38 Q26)

". . . Social media and pop culture affected students' upbringing as well as their relationships with their peers and with themselves . . ." (II Q26)

Linked closely to the subtheme of social media and media in general, evolved the subtheme of peer pressure and social groups:

". . . Peer pressure to look a certain way derived from magazines, TV . . ." (82 Q26)

4.6.2 Peer pressure and social groups (41%)

4.6.2.1 Pressure from the same gender

". . . At an all-girls school . . . there was never outright insult on weight or eating habits, but the ideal was always praised and emphasized and favoured . . ." (46 Q10)

4.6.2.2 Pressure from the opposite gender

". . . I had a boyfriend who was really fit and toned (gymed everyday) and that made me feel the need to exercise more in order to be toned and good enough for him . . ." (3 Q3)

4.6.3 Parental pressure (9.4%)

". . . Parents who are strict and demand perfection encourage children to demand perfection of themselves and therefore develop self-esteem issues about body shape and develop eating disorders . . ." (57 Q4)

4.6.4 Bullying (6.5%)

". . . They noted how being called 'fat' or being asked if they are pregnant impacted on one's self-image regarding weight . . ." (87 Q3)

4.6.5 Sport (2.9%)

". . . The emphasis on being successful at sports or needing an athletic build . . ." (NN Q26)

The following figure represents in visual form the respondents' answer to the final question in the questionnaire:

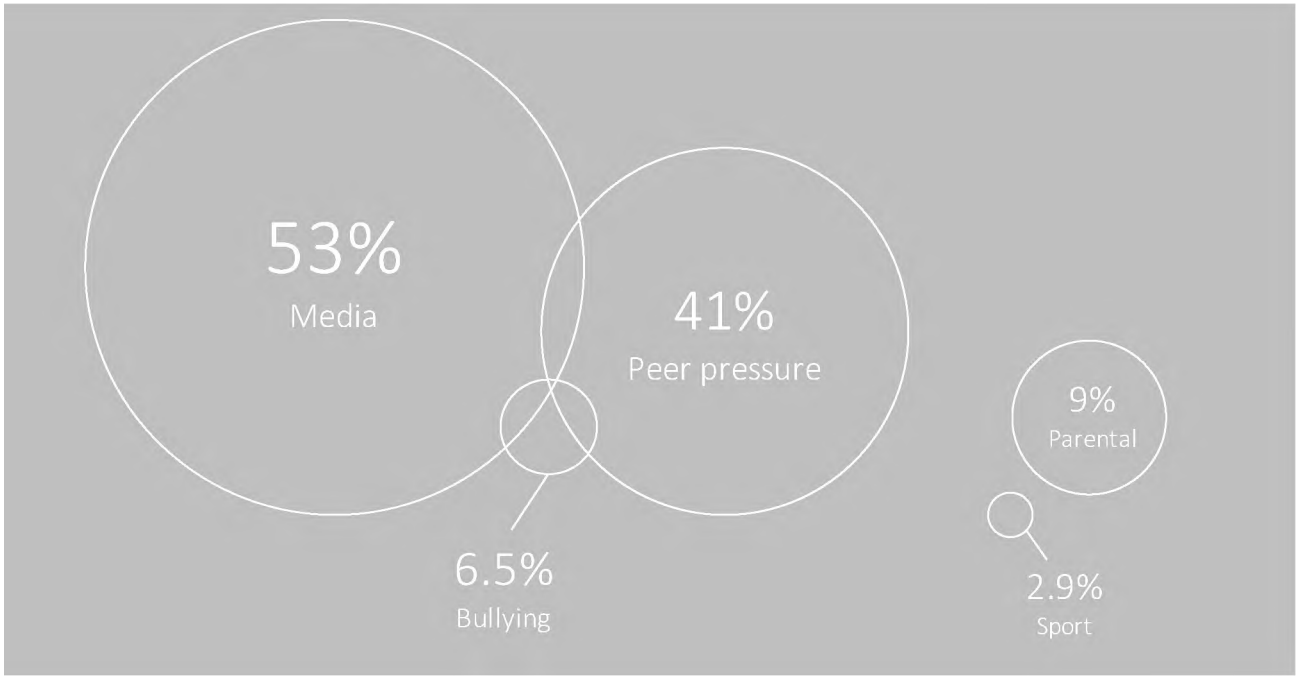

Figure 13. Visualised data illustrating the most influential factors identified by the respondents that contributed to abnormal perceptions of body image and shape and resultant disturbed eating behaviours of their fellow learners.

CHAPTER 4. DISCUSSION

The content from participants' responses on their views on experiences regarding body image and the development of abnormal eating behaviours in their peers - during the last three years of high school, was categorised in terms of the identified four main themes from the literature. The respondents to the questionnaire were a group of Health Sciences students at the University of the Witwatersrand, asked to describe what they had witnessed and experienced at their respective high schools, majority of these high schools being in Johannesburg.

The literature assisted in the development of four main concepts/themes. Within these themes questions were asked in the questionnaire. Qualitative/descriptive responses allowed for subthemes to emerge, when data was sufficiently replicated. Some subthemes were further divided into replicated ideas. The subthemes and ideas were described in a hierarchical manner, based on the frequency they occurred in the data. Data was then re-contextualised and summarised findings are discussed.

The four themes that encompassed these different subthemes were:

1. Personality traits
2. Early and late childhood experiences
3. Eating behaviours
4. The high school environment, specifically the final three years.

Each of these is discussed here individually.

Importantly the content discussed based on the themes, subthemes and ideas is in no way suggesting or describing causality for the development of an eating disorder. This study intends to conceptualise the subjective experience and opinions of a small sample of students at university as they remember their late high school years.

1. PERSONALITY TRAITS

Key personality traits have been identified that might inherently predispose an adolescent, especially female, to the development of distorted body image and shape cognitions, and possibly disturbed eating behaviour and an eating disorder. These traits are obsessionality, perfectionism and deficits in social cognition and inflexibility.[17] The questionnaire used also alluded to personality traits most often seen in the Tara Hospital Adolescent and Eating Disorders Ward (APPENDIX C). Respondents were first asked to describe personality traits and then to choose specific traits they felt were most appropriate for the learners at their high school showing abnormal perceptions of body image and shape as well as abnormal eating behaviours.

Poor self-confidence, self-doubt and introversion were the most prevalent characteristics. Attention-seeking and the obsessively-driven learners were described less prominently, with perfectionism and narcissism being least identified. When asked to choose between opposite traits (as assisted by the Tara Ward questionnaire) the only trait to stand out when compared to its opposite was “avoidant” (75%) rather than “confrontational”. Although the answers to this theme of personality attributes do not parallel those identified most often in adolescents with eating disorders, it could be

explained on the grounds that the learners described were not suffering from an eating disorder but merely displaying features of distorted thinking and behaviour around food and eating.

2. EARLY AND LATE CHILDHOOD EXPERIENCES

This theme has been described repeatedly.[9, 17, 21, 28] As with other psychiatric and psychological illnesses, early childhood experiences have a considerable influence on neurodevelopment and epigenetics.[17, 25] It is seen as no different in eating disorders, with particular reference to anorexia nervosa. Although the learners that the respondents were describing were not suffering from a diagnosed eating disorder, there were replicated subthemes identified in those displaying abnormal image and shape perception and eating behaviours that might have predisposed them to developing such a disorder.

The most common subtheme was that of personal conflict and a disruptive home environment. Within the hierarchy it was identified that conflict within the family (specifically mother and daughter, father and daughter and between siblings) had an impact on these learners. Although parental influence was a subtheme on its own, it was evident that parents, and specifically the mother, play a poignant role in early childhood, and may shape the development of specific cognitions and behaviours. Specific parental behavioural subthemes identified were: the overly-involved and critical parent, but also the uninvolved/absent parent. Although they may appear to be at opposite poles, both subthemes describe parents who are not cognisant of the impact that they are having on their children, be it either too critical or absent.

Strict parents and parents who compared their children were identified as subthemes. However, the 'strictness' and 'comparing' was described regarding the attitude of the parents toward food and dieting. This linked closely with the mother's role in their child's potential development of abnormal perceptions around body shape and image and eating behaviours.

A prominent idea within the subtheme of the mothers' attitude was the maternal pro-dieting behaviour. From a young age their children may have been exposed to specific attitudes and actions of the mother towards food. Whether the mother was criticizing, commenting or comparing their children to themselves or others, and specifically in the case of the unfilled or dysfunctional mother, the child could have potentially been repeatedly made to assess his/her own body shape and what he/she ate. If the child then positively correlated this with their negative own self-image, coupled with specific inherent personality traits, a distorted perception of their own body shape and image and possible resultant abnormal eating behaviours might have evolved.

3. EATING BEHAVIOUR OF STUDENTS/LEARNERS

This theme focused on eating behaviours specifically and body shape and image perceptions as described by the experiences of the respondents at their high schools. Specific eating behaviours have been highlighted to be present in adolescents who have had the traits of, or possibly been diagnosed with, an eating disorder.[5, 10] The behaviours are limited to features present in those with traits of anorexia nervosa. Kaplan and Sadock define anorexia nervosa as a *"relentless pursuit of thinness"* by

restricting eating.[1] The DSM 5 definition of anorexia nervosa includes *"excessive dieting and a pathological fear of gaining weight"*.[4]

As observed by the respondents, learners who displayed abnormal eating behaviours at the high schools, the majority selected the option 'preoccupation with food, eating, shape or weight' (which correlates with the definition of anorexia nervosa by Kaplan and Sadock, as well as the diagnostic criteria for the illness).[1] Other behaviours that could have been selected by the respondents were: 'attempts to have a completely empty stomach' (the second most commonly selected option), 'eating alone or in secret' and 'fear of losing control over eating' (both of which represented the minority of selection). The latter two options might, however, have not been noticed as, by possible explanation, the learners were able to, and possibly chose to, hide these behaviours. This question links with the question that asked the respondents to rate four potentially motivating factors for this observed eating behaviour. These were: (1) Physical appearance (extreme importance predominated); (2) beauty standards (high importance predominated); (3) weight loss; and (4) cultural influences. (The latter two rated low as potential motivators for abnormal eating behaviours).

The study intended to identify the perception of the nature and extent of abnormal eating behaviours in adolescent learners in high schools with the intention to identify and describe the aetiological factors that might play a role in the development of these behaviours. It is important to note that these are subjective opinions and experiences of a sample of university students and does not intend to describe causality.

Physical appearance stands out as being the greatest motivator, but further questioning intended to discuss potentially deeper reasons for this 'obsession' with physical appearance and 'beauty'.

Early and later childhood bullying has been identified as being a very important contributor to these cognitive distortions of body shape and image and possible resultant eating behaviours.[32] The questionnaire focused on bullying as a stand-alone aetiological factor. A prominent subtheme is that bullying plays a significant role. Physical bullying, however, was not the predominant focus, but rather peer pressure and discrimination within the high schools. Of particular focus, identified as ideas, is direct or indirect pressure placed on girls.

The ratio of women to men with a diagnosed eating disorder (anorexia nervosa) is 11:1.[1] Bullying plays a significant role in eating behaviour and perceptions of body shape and image.[32] Adolescent women have been described to be particularly vulnerable to peer pressure and discrimination based on outward appearance, physical shape and weight, paralleling the data obtained in this study.[1, 7, 10, 12] Bullying was also described by some respondents as impacting on self-esteem and equating physical appearance to self-worth. Linking this to the first theme (Personality Traits) poor self-esteem and self-doubt rated highly on personality traits of learners displaying abnormal eating behaviours. However, a majority of respondents said that bullying had no impact. Of the students that described this, most linked the questions to peer pressure, which they felt was not a form of bullying. Some respondents described how their high schools

played an active role in recognizing bullying and being openly opposed to it. However, they did not state if this was against bullying targeted specifically at discrimination based on shape and image and it is hypothesized to be targeting bullying in general.

Another subtheme that has gained prominence is that of the potential impact of media and social media.[12, 13, 14, 18] There is little in medical literature, specifically evidence-based research, linking social media/media to eating disorders per se. However, based on the respondents' answers, media and social media have the highest impact factor and are possibly the main contributing factors to abnormal perceptions of body image and shape and to the development of abnormal eating behaviours to achieve the 'norms' or 'images' set up by visual and written media. Social media allows learners access to fashion trends, celebrity photographs, dieting tips and ongoing bombardment of what people should aspire to 'look like' all day, every day. Not only are learners exposed to what might be termed 'indoctrination', they are also at risk of cyber-bullying. Based on responses this form of bullying, although not currently overt, has been gaining momentum within their high school environment.

In the absence of social media, however, it was evenly split amongst respondents as to whether there would be any difference in body image and shape perceptions and abnormal eating behaviours displayed by their fellow learners. Those that responded 'no', justified their choice by saying that there is always peer pressure to 'look good' and to 'fit in'; social media had only made it more accessible. In this section the respondents were asked to describe the 'ideal' male and female body shape and image. This was

specifically asked after question of media/social media. It was interesting to note that in answering these two questions (one for the ideal woman, one for the ideal man) a number of respondents referred to social/media trends and expectations.

For the 'ideal woman', it was clear that the model-look being *"tall and thin"* was the most described. However, some respondents described a shift in this look from skinny to curvy, with prominent features (*"breasts and buttocks"*). The 'ideal man' is described as *"tall, athletic and tanned"*. It was clear that the muscular physique predominated. This links with the question regarding sport and gym, discussed in the fourth and final theme.

4. THE LAST 3-YEARS OF HIGH SCHOOL ENVIRONMENT

This final section of the questionnaire was an attempt to pool the data obtained from the previous three themes and apply it specifically to the experiences of the respondents during their last three years of high school. Respondents were asked to write the 'expected weights' of both females and males in their high schools. For females the average weight was 53kg with a minimum weight of 35kg. In males the average weight was 69kg with a minimum of 53kg.

The definitions and diagnostic criteria for an eating disorder (anorexia nervosa), speak of body mass Index (BMI), rather than weight alone, and also describe these patients as losing a certain amount of weight over time.[1, 4] Therefore, there is little conclusive data to draw from this question. The question was chosen specifically as respondents were possibly more acquainted with 'weight' terminology as opposed to 'BMI'. The BMI also requires an equation involving height. Within these respondents' high schools the body

image of females and males paralleled with that previous described for 'media's expectation of body image and shape'. Thus, the trending look in the media seemed to have a significant impact on body image and shape at the described high schools.

To address the consequences of having a specific or desired body shape, respondents were asked to elaborate on whether or not this was a pre-requisite for social/school status/acceptance. For those that said *"yes"* the data clearly identified the idea that the learners themselves were responsible. For those that said *"no"* the respondents described the school (as a whole body), to be responsible for dissuading physical appearance as a precursor for social acceptance and status.

Looking at aspects in these high schools that might have contributed to abnormal eating behaviours and body image and shape misperceptions amongst some learners, sport and gym were specifically addressed. The most prominent subtheme that emerged was the significant influence that gym had on boys in some high schools.

Past research has been focused on women and the factors that contribute to losing weight and restricting eating behaviour in the pursuit of *"thinness"*.[1, 7, 10, 12] However there is very little detailed information on male body image and shape perceptions/expectations, and potentially consequential eating behaviours, in order to attain this 'ideal'.[18] It was clear from these particular respondents' answers that it is a requirement for men to be muscular, to go to gym and to *"bulk up"*. Although not often described, the use of anabolic steroids, protein and other supplements in conjunction

with gyming was discussed and recognised as a concern. It was the perception of these respondents that, amongst the adolescent females at their respective high schools, the aim was to lose weight through gyming. This was particularly evident amongst females that participated in ballet. Sporting attire, again amongst females, was identified as contributing to abnormal perceptions of body image and shape possibly leading to specific eating behaviours. Swimming costumes appeared to *"expose"* learners, who may have been vulnerable to the influences of social media/media or having certain at-risk personality traits such as poor self-esteem and self-doubt.

One of the aims of the study was to discuss, based on this specific data, whether there should be programmes implemented at high schools to identify and address eating disorder symptoms. The majority of respondents agreed that programmes should be implemented. However, healthy lifestyles and self-esteem were suggested to be the focus of such groups, rather than necessarily identifying specific learners with concerning cognitions and/or behaviours. A few respondents were overtly against implementation of these programmes and justified their response by saying that this would only serve to stigmatise eating disorders as well as potentially vulnerable learners, and thus would equate to a negative purpose.

Linking the two identified ideas, the overall conclusion appears to be that there should be an awareness of eating disorders, specifically anorexia nervosa, but there should be an emphasis on self-esteem and general physical health that is favoured and encouraged by the schools. Alford and Titterton in 2013 published an article in the

Journal of Eating Disorders describing the need to educate and equip school counsellors, with general knowledge about eating disorders as well as evidence-based treatment for them.[33] It included family-based treatment and how to support those suffering in the school environment.[33]

To conclude the questionnaire respondents were asked to discuss what they personally believed to be the most important aetiological factor(s) contributing to abnormal body image and shape perceptions as well as perceived abnormal eating behaviours amongst their fellow learners (male and female) in their last 3 years of high school.

The majority rated social media and media in general as the most important factor. Linked closely to this were peer pressure and peer discrimination, often described as overlapping with the media/social media subtheme. The parental factor was also identified, but to a far lesser extent, with bullying and sport featuring minimally.

To emphasise, this study only discusses the subjective experiences and opinions of a sample of people, and does not intend to describe casual linkage between eating behaviours and attitudes towards body weight and shape and the subsequent development of an eating disorder.

LIMITATIONS

There are some limitations to the investigation to keep in mind. The responses given are subjective experiences of individuals, thinking back (possibly over a few years) to

their personal experiences, while this research design does not intend to make formal statements regarding aetiology of eating disorders. Conclusions from this study will therefore also not be generalised in any way to other settings. The research focused on the personal views and opinions of a selected group of students at a university, relating to specific schools within a small part of South Africa, the majority being in the Johannesburg region. Themes and subthemes, even when taking into consideration principles to ensure trustworthiness and triangulation, are based on subjective interpretation. However, due to the number of participants and the depth of responses, certain subthemes emerged as potential evidence.

A second limitation is the ability of the students to give an accurate account of their high school years. Over time memories may change and certain events might be forgotten. The way the students interpreted the questions and possibly phrased their answers could be influenced by their recent experiences and current environment.

The strength of this research is that it places emphasis on the need to recognise and effectively manage specific body image and shape perceptions as well as abnormal eating behaviours that may in fact be hidden within schools. There might be a need to recognise body image and shape cognitive distortions in men and particularly focus on the various means (potentially destructive in nature) to reach these subjective *"ideals"*. The information obtained provides a description of personal experiences that are embedded within a specific context.

CHAPTER 5 CONCLUSION AND RECOMMENDATIONS

Despite the mentioned limitations of this research project and study design, there are important conclusions that must be emphasized from the described perceptions of this sample of participants:

- Abnormal perceptions of body image and shape, as well as abnormal eating behaviours, are very evident within a high school environment, across single-sex as well as combined-sex schools;
- Eating disorders are mostly diagnosed within an adolescent context, thus this study highlights the need to actively describe schools as a potential space in which to look for eating disorder traits as well as patients;
- Growing evidence on that abnormal body image and shape, and abnormal eating behaviours, does not exclusively affect women;
- Perceptions about the role of media has featured prominently in participants' responses, in particular social media, and may have an important role to play in the potential aetiology of abnormal perceptions of body image and shape which may possibly result in abnormal eating behaviours. Future studies will need to qualitatively describe this phenomenon.

The aetiological factors that play a role in the potential development of an eating disorder are replicated in the content found from these participants' perceptions and experience of the problem, mirroring literature already described. These include, that abnormal eating behaviour and abnormal body image and shape, are associated by participants with:

- specific personality traits;
- early childhood interpersonal difficulties;
- conflict within the home environment and emphasis placed on young people by mother figures who themselves have distorted views on of body image and shape and/or demonstrate abnormal eating behaviours; and
- peer pressure, peer discrimination and potentially bullying have been emphasised within this study.

In terms of gender, although there are reports on men being diagnosed with eating disorders (although less frequently) the distorted thinking and actions in men is predominantly around muscular, athletic and toned physiques, and not merely loss of weight and *"idealised thinness".*[18] Although not described in the DSM-5 as a disorder *per se*, the abnormal perceptions of the male physique lend themselves to abnormal eating behaviours and the potential misuse of anabolic agents, which may be particularly harmful in an adolescent male.

In terms of the role of media, an important conclusion from this investigation is the perception on the growing evidence that media (whether visual or written), in particular social media, has an important role to play in the aetiology of abnormal perceptions of body image and shape with resultant abnormal eating behaviours, which can potentially result in a diagnosable eating disorder. It cannot be stated that the media/social media causes the development of such a disorder, but based on the subjective experiences of the respondents and the emphasis they placed on this particular subtheme, media/social media should be taken seriously and viewed as a factor towards the

development of an eating disorder, but perhaps also as a vehicle for the intervention in the development of problems.[34]

Concurring also with the literature the results of this study on the perceptions of this group of adolescent learners, further emphasized the need to educate teachers, and possibly parents, about the danger signs of abnormal thinking regarding body image and shape as well as specific abnormal eating behaviours.[30, 31] However, as many respondents described, the emphasis should not be to target and openly identify such persons, but rather advocate healthy living, life skills coaching and actively oppose peer pressure and discrimination.

To answer the question on what can be done about the possible prevention of developing and abnormal body image/shape, or of abnormal eating behaviour, the following is suggested:

- Schools and, in particular, parents need to regularly screen the type of media topics and influences to which adolescents are exposed.
- Although it is far from being policy, social networks and media should restrict the amount and type of information that idealises certain body images and shapes.
- Although it is currently not possible to legislate content, the media in general, and social media in particular, need to be aware of the potential damage that idealising certain body images and shapes can have on vulnerable individuals.
- Schools should be actively engaged in recognising, intervening in and preventing peer pressure, peer discrimination and bullying, especially forms that

encourage idealised thinness, unrealistic beauty standards and self-worth based on physical appearance.

- Schools need to actively screen for and intervene if there is any emergence of cyber-bullying.

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APPENDICES

APPENDIX A

QUESTIONNAIRE

INTRODUCTION

PERCEPTIONS ABOUT ADOLESCENT BODY IMAGE AND EATING BEHAVIOUR

The questionnaire is the main means of obtaining large quantities of qualitative data regarding young adults' experience of their high school environment, and linking this to possible aetiologies for the development of an eating disorder.

The questionnaire is *not* intended to identify students with potential eating disorders themselves, but rather gain knowledge into these people's personal experiences and interpretations of their late adolescent years.

With this accumulated data, current information obtained from a subgroup of a South African adolescent population may be evaluated against already researched and evaluated data in the existing literature.

There are 5 main sections to the survey. Each section will have its own distinct group of questions but will also be introduced as a series of qualitative questions that require personal, subjective answers. Each section, excluding the consent/exclusion criteria and demographics, will have a questions that relate to one another (to ensure a flow of thoughts and subjective experiences) to identify themes.

These sections (excluding 'Demographics') have been identified as the four main themes in the multidimensional aetiology for the development of an eating disorder (particularly anorexia nervosa).

CONSENT/EXCLUSION CRITERIA AND DEMOGRAPHICS

This is the consent page and gives a 'snapshot' of the person in his/her current environment.

PERSONALITY TRAITS

These are the personality traits identified in persons entering the Eating Disorder Unit (EDU) at Tara Hospital and a self-report form is completed on admission. A comprehensive evaluation is done on each patient being admitted to the EDU.

This section is *not* intended to identify students that might be at risk of developing an eating disorder, but rather evaluates the personalities of students within high schools, as subjectively perceived by their peers.

([13] Halmi KA, Sunday AR, Strober M, Kaplan A, Woodside DB, Fichter M, Treasure J, Berrittini WH, Kaye WH (2000) Perfectionism in Anorexia Nervosa: Variation by Clinical Subtype, Obsessionality, and Pathological Eating Behaviour Am J Psychiatry 157:11 1799-1805)

EARLY AND LATE CHILDHOOD EXPERIENCES

To gain an understanding of the type of family environment these young people were exposed to and if they had an impact on certain eating habits, again, based on the subjective experiences of fellow students/learners

In the literature it has been identified that the home environment plays an important role in the early exposure to an eating disorder as well as the development of certain personality traits and eating habits that might form the aetiology of an eating disorder.

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EATING BEHAVIOUR OF STUDENTS/LEARNERS

This section is intended to give an idea of what other pupils were doing (regarding dieting/weight loss/fitness) and the emphasis of social media (which is of particular importance).

It also highlights the reaction of the pupils to colleagues becoming ill.

([21] Derenne JL, Beresin EV (2006) Body Image, Media and Eating Disorders Academic Psychiatry 30:3 257-261)

HIGH SCHOOL ENVIRONMENT (LAST 3 YEARS OF)

The literature has emphasized the high school environment to be of particular importance in cementing 'thin-idealisation' and the development of eating disorders (specifically anorexia nervosa)

I have included questions on sporting activities and school emphasis on achievement that can result in pressure to lose weight. Endurance sport (especially amongst high-achieving adolescent females) has been shown to be a **very** influential factor in these girls losing weight in order to achieve goals.

([14] Schur E, Noonan C, Polivy J, Goldberg J, Buchwald D (2009) Genetic and Environmental Influences on Restrained Eating Behaviour International Journal of Eating Disorders 42:8 765-772)

([18] Striegel-Moore RH, Dohm FA, Pike KM, Wilfley DE, Fairburn CG (2002) Abuse, Bullying, and Discrimination as Risk Factors for Binge-Eating Disorder Am J Psychiatry 159:11 1902-1907)

CONCLUSION

No individual 'theme' is dealt with as a single entity (as the aetiology of eating disorders cannot be grouped into specific 'topics').

Thus, the questionnaire deals with all 4 main themes occurring at the same time in individual's lives, as witnessed by their fellow pupils, and reported as subjective experiences, by these health science students.

CONSENT/EXCLUSION CRITERIA AND DEMOGRAPHICS

I would like to participate in this survey YES ☐ NO ☐

Exclusion Criteria

Have you ever been diagnosed with or treated for an eating disorder? YES ☐

Has a first degree relative ever been diagnosed with or treated for an eating disorder? YES ☐

Thank you for agreeing to participate in this study.

Please answer the following questions for quantitative purposes:

1. **Age(yrs)** _____
2. **Gender** M _ F _
3. **Field of study** Medicine ☐ OT ☐ Physiotherapy ☐ Pharmacy ☐ Nursing ☐ Dental ☐ Other ☐
4. **Year of Study** 1st ☐ 2nd ☐ 3rd ☐
5. **High School** Girls-Only ☐ Co-Educational ☐ Boys-Only ☐
6. **When were your last 3 years of high school?** (e.g. 2011-2013) _____
7. **How would you classify your high school environment in terms of affluence?**

   Private School _

   Government School with additional subsidy (e.g. previous Model C) _

Government School without additional subsidy _

1. Personality Traits

(1) Please describe your and your peers' views and perceptions, during the last three years of high school, of possible **personality attributes** of other students that may have impacted on their body image and shape and on their eating behaviour at the time

_____
_____
_____
_____

(2) With regard to possible students in your school who may, at the time, have demonstrated confirmed eating disorder symptoms (e.g. losing a significant amount of weight over a relatively short period, induced vomiting or have employed other weight or eating restricting behavior), can you comment on their personality traits **by selecting the best suiting attributes** from the following list:

- Introverted _ **or** extroverted _
- impulsive (doing things without thinking) _ **or** considered (taking time to make decisions) _
- confrontational _ **or** avoidant _
- autonomous _ **or** dependent _
- rigid _ **or** flexible _

2. Early and Late Childhood Experiences

(3) Please describe your and your peers' views and perceptions, during the last three years of high school, of **other students childhood experiences** that may have impacted on their body image and shape and on their eating behaviour

_____
_____
_____
_____

(4) With regard to possible students in your school who may, at the time, have demonstrated confirmed eating disorder symptoms, please describe your and your peer's views of the impact of **parenting behaviour** (e.g. being strict, controlling, demanding, or over involved) on these students' body image and shape and on their eating behaviour at the time

_____
_____
_____
_____

(5) Can you provide **examples of parenting behavior**, at the time, that may have impacted on fellow students' body image and shape and eating behaviour at the time (e.g. at award functions or with regards to participation in sport and at sporting events)

_____
_____
_____
_____

(6) How would fellow students (who you recognized to demonstrate abnormal body image perceptions and eating behaviours) describe their **mother's attitude** toward body image and dieting?

_____
_____
_____
_____

3. Eating Behaviour of Students/Learners

(7) How did students in your school describe **body image and shape**? (First words that come to mind).

_____
_____
_____
_____

(8) Please describe what you perceived as **"abnormal eating behaviours"** of some students in your school

_____
_____
_____
_____

(9) To be more specific, please mark which eating behaviors might have applied to some students in your school (can mark more than one if necessary)

- Eat alone, possibly in secret _
- Preoccupation with food, eating, shape and weight _
- Fear of losing of control over eating _
- Attempts to have a completely empty stomach _

(10) Please describe your and your peers' views and perceptions, during the last three years of high school, of the impact of **bullying, peer pressure, or peer discrimination** on other students body image and shape and their eating behaviour

_____
_____
_____
_____

(11)Can you elaborate on you and your peers' views on the impact of **social media** (e.g. TV, magazines, Facebook, Twitter etc.) had, at the time, on other students' body image and shape and on their eating behaviour

_____
_____
_____
_____

(12)From your own experience, briefly describe what you believe your high school environment would have been like in the **absence of social media**

_____
_____
_____
_____

(13) Based on your experience of fellow students in your high school, can you please evaluate the relative importance of
[1_2_3_4_5] 1 – very little importance; 5 – significant importance

- Physical appearance 1_2_3_4_5_
- Weight loss 1_2_3_4_5_
- Beauty standards 1_2_3_4_5_
- Cultural views on beauty on body shape 1_2_3_4_5_

(14)Describe what you believe the media encourages **the 'ideal woman' to look like**?

_____
_____
_____

(15) Describe what you believe the media encourages **the 'ideal man' to look like**?

_____
_____
_____

4. Last 3-Years of Your High School Environment

(16)What in your **high school environment** do you think might have contributed to **abnormal body image and shape perception** of other students?

_____
_____
_____
_____

(17)What in your **high school environment** do you think might have contributed to **abnormal eating behaviours** of other students?

_____
_____
_____
_____

(18)In your high school what was perceived as "normal" or "acceptable" **weight for girls**

_____

(19)In your high school what was perceived as" normal" or "acceptable" **weight for boys**

_____

(20)In your high school what was perceived as "normal" or "acceptable" **physical appearance for girls**?

_____
_____
_____
_____

(21) In your high school what was perceived as "normal" or "acceptable" **physical appearance for boys**?

_____
_____
_____
_____

(22)Do you believe your high school environment placed undue emphasis on physical appearance as a **status symbol/requirement for acceptance**?

Yes ☐
No ☐

Briefly elaborate:

_____
_____

(23)What role do you believe that **sport** (endurance athletics) **and/or gym** played at your high school on **abnormal perceptions of body image and shape**?

_____
_____
_____
_____

(24)How do you and/or your fellow students **respond** to students at your high school who pursued thinness or extreme body shape/image characteristics?

_____
_____
_____
_____

(25)Based on your own experiences in the last three years of your high school, and what you have described thus far, what is your view on the need for **specific programmes in your school to identify individuals with possible eating disorder symptoms**?

_____
_____
_____
_____

(26) What do you think was the **most influential factor** at the time that might have led to disturbed views of perceptions of body image and shape in other student, which may have resulted in disturbed eating behaviour?

_____
_____
_____
_____

APPENDIX B

HUMAN RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

R14/49 Dr Kim Laxton

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M140630

NAME: (Principal Investigator)	Dr Kim Laxton
DEPARTMENT:	Psychiatry Sterkfontein
PROJECT TITLE:	Perceptions about Adolescent Body Image and Eating Behaviour
DATE CONSIDERED:	27/06/2014
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Prof B Jansen van Rensburg
APPROVED BY:	Professor P Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	09/10/2014

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

APPENDIX B

HUMAN RESEARCH ETHICS COMMITTEE CLEARANCE CERTIFICATE

APPENDIX C

Tara, the H. Moross Centre, Ward 1&2

EATING DISORDERS UNIT CLERKING FORM

1. Identification data	
Name:	
File no.:	
Gender:	
Date of Birth:	
Age:	
Grade & school / occupation & work:	
Languages spoken:	

Weight:	(note time, if in clothes, bladder voided, urine specific gravity)
Height:	
BMI:	
Minimum expected healthy weight:	(note how calculated)
Maximum expected healthy weight:	(note how calculated)
Percentage underweight:	

Referred by:	(give name and contact details)
Reason for referral:	

People present at clerking: (Is the patient alone or accompanied in the room by a spouse, mother etc.?)	
Date of clerking:	
Clerked by:	..... (name) ..... (signature) ..... (designation) .....(extension)

Development of the Eating Problem

15. Onset and likely triggers
Age, context, what else was happening in the patient's life? Explore prior vulnerabilities to an eating disorder, e.g. valuing being slender, being involved in a sport like gymnastics, reading about in the media, going on a diet, friend developing an eating disorder, family attitudes to shape and weight, any marked stressor etc. Explore use of social media e.g. pro-ana and pro-mia websites or books or blogs.

16. Subsequent sequence of events

When did the key forms of behaviour start in relation to each other; how did the problem evolve in the first six months (e.g. positive responses from other people etc.), and then how has it evolved subsequently. Attempt to construct a timeline of events. Explore use of social media e.g. pro-ana and pro-mia websites or books or blogs.

24. Psychological functioning specific enquiry	
☐ - indicates items (and clusters) from the Personality Inventory from the DSM-5 (PID-5)	
Negative affect (and affect dysregulation) ☐ I get emotional easily, often for very little reason ☐ I worry about almost everything ☐ I fear being alone in life more than anything else ☐ I get stuck on one way of doing things, even when it will not work ☐ I get irritated easily by all sorts of things	
Detachment ☐ I often feel like nothing I do really matters ☐ I steer clear of romantic relationships ☐ I'm not interested in making friends ☐ I don't like to get too close to people ☐ I rarely get enthusiastic about anything	
Antagonism ☐ It's no big deal if I hurt other people's feelings ☐ I crave attention ☐ I often have to deal with people who are less important than me ☐ I use people to get what I want ☐ It is easy for me to take advantage of others	
Disinhibition ☐ People would describe me as reckless ☐ I feel like I act totally on impulse ☐ Even though I know better, I can't stop making rash decisions ☐ Others see me as irresponsible ☐ I'm not good at planning ahead	

Psychoticism ☐ My thoughts often don't make sense to others ☐ I have seen things that weren't really there ☐ I often have thoughts that make sense to me but that other people think are strange ☐ I often "zone out" and then suddenly come to and realise that a lot of time has passed ☐ Things around me often feel unreal or more real than usual	
Interpersonal relationship difficulties • Patterns of unstable relationships which seldom last • Difficulty setting limits • Difficulty asking for what one wants or saying no • Difficulties being in positions or authority or being subordinate • Always putting others needs before one's own, or vice versa	
Complex trauma features • Alterations in regulation of affect and impulses (affect regulation, modulation of anger, self-destructive behaviour, suicidal preoccupation, difficulty modulating sexual involvement, excessive risk-taking) • Alterations in attention or consciousness (amnesia, transient dissociative episodes and depersonalization) • Alterations in self-perception (feeling ineffective, permanently damaged, shamed, guilty and responsible, not understood, minimising) • Alterations in relationships with others (e.g. struggle to trust, revictimisation, victimizing others) • Somatization (digestive difficulties, chronic pain, conversion sxns, cardiopulmonary sxns, sexual sxns) • Alterations in systems of meaning (despair and hopelessness, loss of previously sustaining beliefs)	
Coping strategies • Preferred ways to manage difficult feelings (enquire specifically about sadness, anger, hopelessness, shame, anxiety and so forth) • Preferred ways to address conflicts • What happens when the person feels that their coping strategies are overwhelmed?	

How would you describe yourself? (when interviewing parents, also ask how they would describe their child)	
How do you think that other people would describe you?	
How would you describe your family of origin? (when interviewing parents, also ask parents about their experiences of their families of origin)	
How would you describe the family with whom you	

currently live?	
Tell me one of your earliest memories.	