

# **The impact of obesity on the psychological well-being of the adolescent learner**

**THE IMPACT OF OBESITY ON THE PSYCHOLOGICAL  
WELL-BEING OF THE ADOLESCENT LEARNER**

by

***Celéste Smith***

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SUPERVISOR: DR I. STRYDOM

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## STATEMENT

**Student number: 3536-111-5**

I declare that THE IMPACT OF OBESITY ON THE PSYCHOLOGICAL WELL-BEING OF THE ADOLESCENT LEARNER is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

\_\_\_\_\_  
SIGNATURE  
(Mrs C. Smith)

\_\_\_\_\_  
DATE

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## **SUMMARY**

**Subject:** The impact of obesity on the psychological well-being of the adolescent learner.

This research study investigates the impact of being obese on all the facets of psychological well-being of the adolescent learner. Definitions for adolescence, obesity and psychological well-being are provided. For the purpose of this study an adolescent is considered to be a scholar between 12 and 18 years. The various methods of measuring obesity are presented and briefly discussed. Body Mass Index is internationally the most commonly used indicator of obesity and was therefore applied by the researcher. The possible causes of obesity are also discussed in this study. Presently there is no accepted standardised definition of psychological well-being, which it was found involves different aspects for different people. This phenomenon varies within various circumstances, is multifaceted in character and is not static. The researcher made use of projection media, expression media, interviews and standardised media to obtain relevant information. The main conclusion is that body image and physical appearance as experienced by an obese adolescent do have a negative impact on the individual's psychological well-being.

**Keywords:** Obesity, methods of measuring obesity, causes of obesity, Body Mass Index, classification of adolescence, psychological well-being, models of psychological well-being, projection media, expression media.

# **CHAPTER 1: INTRODUCTION**

## **1.1 BACKGROUND**

Obesity and being overweight have been increasing vastly among adolescents over the past 10 to 20 years. Various studies have been done on this topic, confirming this trend. According to Campbell and Haslam (2005: vii), obesity is an increasing occurrence in childhood. These authors mention that obesity has been identified by the World Health Organization as the greatest health threat of the 21st century. Kiess, Marcus and Wabitsch (2004: vii) state that an epidemic of obesity already at a young age is being observed in most societies around the world. They emphasise that obesity has a severe impact on a country's economy over and above the impact on an individual's life.

Some organisations and institutions blame the ever-expanding fast-food industry for this tendency. Others are of the opinion that an inactive lifestyle and a tendency among the modern youth to spend hours, on a daily basis, in front of the television, computer or play station is playing a major role. Kiess et al. (2004: viii) highlighted various factors as providing a possible explanation of the causes of obesity. They found that studies on twins indicated that about 50% of the propensity towards obesity is innate. Other contributing factors are an inactive lifestyle and the use of modern technology like computers and television, which is physically a passive activity. The intake of a fat-rich diet is also a contributing factor to obesity. Kiess et al. (2004: ix) also acknowledge the role of numerous disorders, including a number of endocrine disorders and genetic syndromes that can cause a child to present with obesity at a very young age.

Research by the United States Department of Health and Human Services concludes that 22% (almost a quarter) of the United States' adolescents are overweight (Fulkerson & Strauss 2007). Kiess et al. (2004: viii) reported findings from a research sample of 2 630 children in the United Kingdom: the frequency of overweight children varied from 22% at age 6 up to 31% at age 15. The frequency of obesity found during the same research varied from 10% at age 6 up to 17% at age 15 for children. The statistics derived from research are so alarming that obesity is seen as a worldwide epidemic, in both developed and developing countries, as recorded by Campbell and Haslam (2005: 3).

In an effort to try to counter obesity and being overweight, fast-food companies like McDonald's are coming up with initiatives like providing healthier options such as salads, yoghurt, mineral water and fruit juice instead of fries and fizzy drinks. The

world-renowned chef, Jamie Oliver, is involved in promoting healthy food choices in the United Kingdom. Internationally, at restaurants, clients are provided with clearly indicated health options on menus. Domestically, for instance, the Spur family restaurant chain provides its customers with health options on its menu, allowing clients to exchange fries for a salad to go with a burger or steak for example. These are all efforts to assist people to make healthier food choices and represent an attempt to try to decrease overweight and obesity amongst children and adults.

Obesity has serious health implications for the individual. Stice, Presnell and Spangler (2002: 131) reported that adolescent obesity is associated with serious health problems, including high blood pressure, adverse lipoprotein profiles, non-insulin-dependent diabetes mellitus, coronary heart disease, atherosclerotic cerebrovascular disease, colorectal cancer and death from all causes.

The physical impact of obesity receives a great deal of attention, but interesting questions arise about the impact of obesity on an individual's psychological well-being. Consideration should also be given to the opposite, namely the impact that an individual's psychological well-being has on obesity. Another issue to consider is whether a person becomes obese first and this then has a psychological impact on the individual, or whether psychological problems arise first and these emotional problems cause obesity.

If the impact of obesity on the psychological well-being of the adolescent learner can be established – be it positive, negative, both or neutral – the information on this topic would enable parents, educators, psychologists, obese adolescents and societies to identify and address relevant issues. It would also assist in cultivating a greater awareness amongst society and individuals in general. Information regarding the psychological impact of obesity on adolescents could lead to a better understanding of and sensitivity towards obese teenagers. This information could be used to have a positive impact on the lives and psychological well-being of obese adolescent learners.

The purpose of the rest of Chapter 1 will be to analyse the topic at hand. This analysis will include the statement of the problem, demarcation of the research field, clarification of the aims of the research, an explanation of the research method used and of the concepts involved, as well as a description of the planned research programme.

## **1.2 ANALYSIS OF THE PROBLEM**

### **1.2.1 Awareness and investigation of the problem**

Having worked with children, including adolescents, the researcher (as an educator, remedial therapist and sports coach) has observed how they grow and develop as individuals for a number of years. This experience has been quite intriguing for the researcher. It has been very interesting to note the strong influence that public figures, especially in the entertainment arena, as well as various forms of media, such as teenage magazines, the Internet and television, have on the developing adolescent.

Children, and especially adolescents, are emotionally at a very complex developmental phase in their lives. They are faced with managing the hormonal changes in their bodies, developing their own identities as individuals, and also trying to obtain social acceptance and inclusion amongst their peers. Daniels (2005: 39) stated that multiple evidence exists confirming the notion that adolescence is a period marked by emotional turmoil.

According to Schwimmer, Burwinkle and Varni (2003: 1818), obesity is one of the most stigmatising and least socially acceptable conditions in childhood. In keeping with previous studies, the children and adolescents in their study were most likely to demonstrate impairment in psychosocial health when compared with healthy children and adolescents. Both social and psychosocial adjustment are risk factors for obese adolescents and children. Needham and Crosnoe (2005: 49) confirm that social stigmatisation with regard to weight problems causes distress, in accordance with the reflected self-appraisal hypothesis. These authors also mention that in an effort to avoid such stigmatisation, adolescents are motivated to diet, which may also contribute to the psychological consequences of being overweight. This could have serious implications for the psychological well-being of the adolescent learner.

Hoover (1984: 126) stated that the consumer is being bombarded by magazine articles and television programmes on fad diet regimens and diet foods. The media industry also portrays the most admired women as those who have a lean physique. Hoover (1984: 128) also mentions that an adolescent, in his or her fragile search for identity, is continuously confronted by trying to live up to trim, or even skinny, idols. Even the emphasis that Western societies place on being slim and fit, as measurements of success in the interpersonal and economic sectors, as mentioned by Klaczynski, Goold and Mudry (2004: 310), might have a direct influence on the psychological well-being of an individual. Daniels (2005: 35) notes that adolescents are particularly vulnerable to these views,

because self-identity with the importance placed on 'fitting in' is of paramount importance for this age group and is developmentally normal.

Fitzgibbon (2004: 151) mentions that higher levels of anxiety, depression and eating disorders are experienced by obese paediatric patients. Needham and Crosnoe (2005: 49) agree that previous research suggests that during adolescence the individual is deeply worried about appearance norms. Daniels (2005: 35) also states that attempts to attain the culturally ideal physique are made by a large number of adolescents.

Another aspect that might influence the obese adolescent's psychological well-being, as reported by Needham and Crosnoe (2005: 36), is that the opinions of others are likely to have a greater influence on the self-appraisal of adolescents. Needham and Crosnoe (2005: 49) mention that compared with adults, adolescents are more likely to lack adequate differentiation between the perspectives of self and others. Such egocentrism implies that adolescents are more likely than adults to form opinions about themselves that are undifferentiated from the opinions of others in their social group.

There are contradictory results and opinions about what the impact of obesity is on the self-concept development of the adolescent learner. Factors such as the genetic, psychosocial and biological impacts are unknown. Based on his research, Daniels (2005: 19) maintains that there is a general misunderstanding of the psychosocial issues associated with adolescent obesity. He says that sensitivity with regard to the following issues faced by the obese adolescent is essential: the adolescents' perception of their body size, their weight intentions and ethnic norms.

Fitzgibbon (2004: 43) states that there is no doubt that the obese child is exposed to teasing and stigmatisation. In agreement with Daniels (2005: 34), Fitzgibbon (2004: 151) mentions that the overall sense of the self may or may not be influenced. The critical question to ask is: should obesity be placed under the behavioural or psychiatric disorders? Studies focusing on the development of self-esteem among obese adolescents and children often reveal opposing results with regard to the impact on the self.

Miller and Downey (1999: 68) state that attention in modern times has been focused specifically on how having a body weight that deviates from the norm prescriptions may affect the self, as well as the way that people evaluate themselves. Various theoretical perspectives claim that an overweight individual's self-esteem should be low but "the data

has been inconsistent and reviewers disagree about the overall trend” (Miller & Downey 1999: 69). These authors also found that the correlation between being overweight and self-esteem for high school learners is more elevated than the same correlation for younger children. Since high school learners (adolescents) are at their prime dating and mating period in their lives, the significance of appearance and weight increases.

Hill (2005: 18) concludes that obesity and the stigmatisation of those with excess weight, as well as societal rejection of obesity, have received acknowledgement and have also been researched for almost 40 years. The following questions are asked by Hill (2005: 18):

- Does being overweight and growing up in a society riddled with anti-fat attitudes have a psychological impact?
- If so, how is it expressed?

Hill (2005: 18) also records that the adolescent’s self-perception is soundly determined by age, gender and degree of obesity.

Research by Allison, Grilo, Masheb and Stunkard (2005: 73) indicates that individuals with disordered eating should also be evaluated by clinicians for any significant psychological difficulties. Daniels (2005: 19) emphasises that obesity has extensive effects on the individual. It impacts on the physical, psychosocial and financial arenas of a person’s life. He also mentions that literature reports on the psychosocial aspects associated with adolescent obesity are inconsistent.

Daniels (2005: 35) states that the effects of weight on the self-esteem, body image and general viewpoint on health are aspects of obese and overweight adolescents that have been explored. Fitzgibbon (2004: 152) also formulated the following questions:

- How linked are the psychiatric symptomatology and the obesity?
- Is pre-occupation with weight and shape masking more fundamental deficits in self-esteem?

The above-mentioned findings and questions made the researcher think about a possible link between psychological well-being and the obese adolescent. First, the problem needs to be defined and formulated in a problem statement.

### **1.2.2 Statement of the problem**

The previous section substantiates the fact that little research has considered completely the impact of obesity on the psychological well-being of obese adolescents. It is important for educational psychologists to establish an understanding of the effect that obesity has on the psychological well-being of the adolescent learner. Conclusive research may generate greater awareness, as well as enable the psychologist to assist his or her client efficiently during therapy. Taking this into consideration, the following research question has been formulated: *Does obesity have an impact on the psychological well-being of an individual during the adolescent years?*

## **1.3 DEMARCATION OF THE RESEARCH**

In this dissertation specific concepts will be used to describe the impact of the phenomenon of obesity on the psychological well-being of the adolescent learner. To clarify the impact it is important to indicate what each of the specific concepts in the problem statement entails for the purpose of this study.

### **1.3.1 The adolescent**

According to Corsini (2002: 21) and to Statt (2003: 3), adolescence is the time in an individual's life when puberty starts and it ends with completed growth and physical maturity. Both Corsini (2002) and Statt (2003) considered more than biological changes alone. These authors included changes in body image, sexual interest, career development, intellectual development, as well as self-concept. For the purpose of this study, an adolescent will be considered to be a person in secondary school, aged between 12 and 17 years.

### **1.3.2 The learner**

The term 'learner' refers to an individual who is currently of a school-going age, as well as to the fact that this individual is receiving formal scholastic education. According to the South African National Education Policy Act (No. 27 of 1996), receiving formal education is compulsory for learners up to the age of 16. Legally, a learner is still dependent on his or her parents or legal guardian(s).

### **1.3.3 Obesity**

A person with a body mass index that equals or is higher than a score of 30 is considered to be obese. Obesity is calculated from the body mass index formula. A person's body mass index is calculated by the person's weight in kilograms, divided by his or her height in metres squared.

### **1.3.4 Psychological well-being**

It would seem that psychological well-being can be conceptualised with reference to a person's affective processes, physical processes, cognitive processes, spiritual processes, the self and social processes, according to Roothman, Kirsten and Wissing (2003: 33). This implies that psychological well-being is multi-dimensional by nature. The implication is that all of the mentioned facets of psychological well-being should be considered when aiming to establish an individual's psychological well-being.

## **1.4 AIMS OF THE RESEARCH**

### **1.4.1 General aims**

A full literature study was undertaken to explore and stipulate what the impact of obesity might be on the psychological well-being of adolescent learners. The intention was to establish the nature of the impact of obesity on the adolescent's psychological well-being, be it positive, negative or a combination of these.

### **1.4.2 Related aims**

Through the application of a quantitative research method, specific functions were identified to determine the factors that play a paramount role in the psychological well-being of the adolescent learner. This part of the study was used to draw conclusions and formulate recommendations for therapists and society. The information gained can be applied in practice with the aim of improving effectiveness and focus during therapy, to achieve psychological well-being for the obese adolescent, sensitivity in his or her treatment, as well as to create an awareness and sensitivity in daily interaction when working with obese adolescents.



## **1.5 RESEARCH METHOD**

### **1.5.1 Literature study**

The literature study concentrated on accumulating existing information on the research question, and focusing on and clarifying concepts such as:

- exploring obesity and its origins
- providing a definition of psychological well-being for the purpose of this study
- attempting to explain the importance of psychological well-being
- considering the impact that obesity has during adolescence on the psychological well-being of a person
- elucidating adolescence as a developmental phase and its developmental tasks
- reaching a conclusion on the impact of obesity on the psychological well-being of the adolescent learner according to the literature.

### **1.5.2 Empirical study**

A qualitative method of research was applied during the empirical study, which aimed at researching, gathering information and interpreting this information on the subject being studied. Since a phenomenon was being researched, it was necessary to obtain applicable candidates. The following criteria applied to these candidates: adolescent (specific age group); obese adolescent; specific Body Mass Index. The researcher undertook an individual interview with each candidate, discussing certain topics like culture, religion, family, community and peers. An interview schedule was developed for this study. Each candidate was required to complete a Self-Concept Questionnaire. Projection media were also applied and discussions about these, e.g. DAP (draw-a-person) and KFD (kinetic family drawing), are given in Section 3.4. The information collected was then interpreted (Section 3.7).

## **1.6 CLARIFICATION OF CONCEPTS**

A number of specific concepts will be referred to frequently in this dissertation and it is therefore appropriate to provide a description of each concept.

- **Obesity**

Campbell and Haslam (2005: 2) record that obesity can be defined by calculating an individual's Body Mass Index (BMI). A state of obesity exists if the Body Mass Index is equal to or higher than 30 ( $BMI \geq 30$ ). A general definition of obesity is provided by Kiess

et al. (2004: 1): “Obesity is generally defined as the abnormal or excessive accumulation of fat in adipose tissue to the extent that health may be impaired”.

- **Adolescent**

According to Lerner and Hess (1999: ix), adolescence is a transition period during which an individual moves from childhood to adulthood. These authors also state that not only are there physical changes taking place, but changes also occur on both a cognitive level and a psychological level. Social characteristics undergo transformation during this period too.

- **Psychological well-being**

Roothman et al. (2003: 213) conceptualise psychological well-being by referring to affective, physical, cognitive, spiritual, self and social processes. Van Eeden and Wissing (2002: 32) describe psychological well-being as being multi-dimensional with regard to facets of self that are involved (including affect, cognition and behaviour), as well as with regard to the domains of life in which these facets manifest themselves (e.g. intra- and interpersonal, social and contextual, in love and work). A sense of coherence, satisfaction with life and affect-balance are strong indicators of general psychological well-being (Van Eeden & Wissing 2002: 32).

- **Learner**

The word ‘learn’ is defined by *The New Choice English Dictionary* (1999) as a transitive or intransitive verb, meaning to gain knowledge of or skill, to memorise, to become aware of or to realise. The word ‘learner’ is a noun (*The New Choice English Dictionary* 1999). For the purpose of this study, a learner will be considered as an individual who is in a formal school set-up and is between 12 and 17 years of age. The learner will also be receiving formal schooling. In this study when reference is made to the child or the learner, the adolescent is also implicated.

- **Impact**

The word ‘impact’ originates from the Latin word *impingere* which means to dash against, impinge. The Oxford English Dictionary provides an explanation of ‘impact’ as a noun and a verb.

Used as a noun, impact has three meanings:

- i. The impact is the effect of an act.
- ii. A significant or strong influence. An effect.

iii. The force or energy of a collision of two objects.

Used as a verb, impact has three meanings:

- i. To compress. To compact. To press or pack together.
- ii. To influence. To affect. To have an impact on.
- iii. To collide or strike.

In this study the word 'impact' implies that some aspect has a negative or positive influence on the psychological well-being of the adolescent learner.

## **1.7 RESEARCH PROGRAMME**

### **Chapter 1**

Chapter 1 gives a summary of the intended research programme, provides a rationale for the study, describes the concepts involved and explains briefly how the research project was carried out in relation to the study title "The impact of obesity on the psychological well-being of the adolescent learner".

### **Chapter 2**

The second chapter contains the results of a literature study, and considers, interprets and compares existing research findings, as well as information, on adolescence and the impact that obesity has on the psychological well-being of the adolescent learner. Different facets of psychological well-being are researched and discussed.

### **Chapter 3**

The third chapter describes the empirical research study that was undertaken by the author to investigate the phenomenon as stipulated in the problem statement. To obtain the required information, the researcher selected appropriate candidates according to specified criteria, made use of a standardised self-concept questionnaire and had candidates complete a questionnaire developed by the researcher with the aim of gathering information on the research problem. Projection media were also employed with each candidate to collect relevant information. The findings of the empirical research are also provided and discussed in this chapter.

## **Chapter 4**

Chapter 4 contains the conclusions and recommendations drawn from the results of the research. It includes a summary of the findings, as well as a discussion of the limitations of the present research study.

### **1.8 SUMMARY**

The findings of previous research studies contradict each other somewhat regarding the impact of obesity on the psychological well-being of the adolescent learner. It is therefore important to obtain conclusive research results on this topic to enable educators, psychologists and counsellors to provide suitable therapy and support to obese adolescents. It is hoped that the information gained from this study will also create a greater awareness and thus sensitivity among the broader community.

## **CHAPTER 2: LITERATURE STUDY**

### **2.1 INTRODUCTION**

The aim of this chapter is to collate existing information to clarify concepts contained in the problem statement. It focuses on exploring and investigating the various facets of obesity, considering the physical, emotional and environmental causes. The terms 'adolescence' and 'psychological well-being' are also defined and described in broad terms. Consideration is given to each concept's multiple facets.

### **2.2 ADOLESCENCE DEFINED**

The Wikipedia (2008) describes adolescence as "the developmental and transitional phase occurring between childhood and adulthood". This is the period of human development during which a child matures into an adult. According to Rice (1992: 3), the concept 'adolescence' is derived from the Latin verb *adolescere*, meaning to grow up or to grow into maturity. In agreement with this, Atwater (1996: 561) describes adolescence as "the period of rapid growth, both psychological and physical, between childhood and adulthood".

Siddique and D'Arey (1984: 13) describe adolescence as a period in an individual's life during which dramatic transformation occurs in all areas of the individual's functioning. These authors state that adolescence entails major alterations in the sexual, intellectual, social and physical spheres of a person's life and, due to the impact of these major changes, it has to be stressful. The Wikipedia (2008) confirms Siddique and D'Arey's opinion on adolescence by saying that this period in a person's life is characterised by prominent changes in the human physique, combined with changes in an individual's psychology and academic career. According to the Wikipedia (2008), the transition taking place during adolescence includes changes in the biological, social and psychological spheres of the individual's life. Siddique and D'Arey (1984: 13) state that although both females and males experience the stress caused by these changes, females experience this developmental stage as being more stressful than their male counterparts.

Jacobs, Bleeker and Constantino (2003: 13) agree with Siddique and D'Arey (1984: 13) with regard to a human being's intellectual development during the period of adolescence. Jacobs et al. (2003: 13) state that a person develops the intellectual ability of abstract thinking, especially during the beginning stages of adolescence. These researchers also agree that during adolescence an individual experiences feelings of distress and

confusion and that if these feelings are long-lasting and powerful, the adolescent may feel intense despair or frustration.

According to Lefrancois (1993), adolescence starts during puberty or when an individual's reproductive system has reached maturity. Both Corsini (2002) and Statt (2003) are in agreement that the time of life starting with puberty and ending with completed growth and physical maturity is 'adolescence'. Adolescence is considered to be the period between ages 13 – 22 for males and 12 – 21 for females during human life. The Wikipedia (2008) states that according to the World Health Organization, 'adolescence' is considered to be generally the period of life between 10 – 19 years of age. Corsini (2002) Statt (2003) look beyond the biological transformation which takes place during puberty and consider other cardinal changes occurring at varying rates as well. These alterations take place in body image, career development, sexual characteristics, self-concept, sexual interest and intellectual development, which substantiates what Siddique and D'Aray (1984: 461) stated about the different spheres being affected by adolescence. Kazdin (2000) has the same opinion with regard to the physical maturation and development of the human body during adolescence. This growth period includes reaching adult mass and height, as well as the development of external and internal organs with regard to the reproductive system.

Park (2004: 55) concurs with Corsini (2002), Statt (2003) and Siddique and D'Aray (1984) regarding the cognitive changes taking place in the brain during the adolescence period of human development. However, in contradiction to Corsini (2002) and Statt (2003), Park (2004) indicates the possibility that puberty might last longer – up to the age of 25 years. This is based on research done which indicates that physiological alterations in the brain continue up to 25 years, which have a direct influence on the behaviour archetypal of adolescents.

From the above it can be concluded that adolescence is a developmental period of human life consisting of prominent changes occurring on the cognitive, emotional, attitudinal and physical levels of the individual. Emotional discomfort and stress may result from the fact that prominent changes are taking place in all the facets of a person's life.

The researcher will use the next section of the literature study to clarify and explain obesity in depth. Attention will be given to the neurological, physical, social and emotional causes of obesity.

## 2.3 OBESITY DEFINED

A general definition for obesity is provided by Kiess et al. (2004: 1): "Obesity is generally defined as the abnormal or excessive accumulation of fat in adipose tissue to the extent that health may be impaired." Campbell and Haslam (2005:2) agree that a state of excess adiposity is referred to as 'obesity', which in turn leads to an augmented threat of emerging related co-morbid disease. Pignone and McPhee (2007) agree with Kiess et al.'s definition of obesity by stating that obesity may be defined as an excess of adipose tissue.

De Garine and Pollock (1995: xiv) are of the opinion that obesity is an aspect of body image that is measured against what a particular society considers acceptable body size. It can therefore be examined from an anthropometric (physical), a sociological and a psychological perspective. This implies that obesity is a multi-dimensional concept and should be approached accordingly.

In an effort to simplify the definition of obesity, Alleyne and LaPoint (2004: 30) stated that obesity is the consequence of energy intake surpassing energy expenditure over a substantial period of time. They regard this definition of obesity as appropriate and uncomplicated, in contradiction to other, more complex, definitions of obesity.

Campbell and Haslam (2005: 2) state that obesity can usually be defined by calculating an individual's Body Mass Index (BMI). BMI is calculated on the basis of a person's height relative to their total weight. A state of obesity is defined if the body mass index is equal to or higher than thirty ( $BMI \geq 30$ ). The formula for calculating BMI is:

$$BMI = \text{weight (kg)} / \text{height (m)}^2$$

The individual's weight in kilograms is divided by his or her height in metres squared. The authors also differentiate between different levels of obesity according to a person's Body Mass Index.

- Underweight:  $BMI < 18.5$ ; considered to be underweight; a low risk of co-morbid disease.
- Normal weight:  $BMI = 18.5 - 24.9$
- Overweight (grade 1 obesity):  $BMI = 25.0 - 29.9$ ; risk of disease is considered as mildly increased.

- Obese (grade 2 obesity): BMI  $\geq$  30; considered as being obese; co-morbid disease is extensively increased.
- **Morbid Obesity: BMI  $\geq$  40**

According to *Setting Standards in the Definition of Obesity* (Obesity focussed, 2008), the Body Mass Index by itself is the most accurate and internationally used measurement to define obesity. Pignone and McPhee (2007) agree with this and describe the BMI as a more quantitative evaluation of obesity. They state that a BMI of 30 and higher qualifies as being obese, thus agreeing with Campbell and Haslam (2005: 2).

Although the BMI is most commonly used to classify obesity, there are some arguments against the use of the BMI as the only measuring method to define obesity as raised by the article *Setting Standards in the Definition of Obesity* (<http://www.obesityfocused.com>). The BMI does not distinguish between the muscle or fat percentages of an individual's weight. The next argument noted against the use of BMI alone to define obesity is that human frame sizes differ, which implies that a person with a larger frame (bone structure) has a greater overall mass but a smaller proportion of lean mass to fat mass. Lastly, it is mentioned that body fat percentages for males and females differ and that BMI applies the same weights to both genders.

Kiess et al. (2004: 1) highlight the fact that BMI is unsuccessful in distinguishing between fat and lean body mass: "Thus, the relationship between the BMI and body fatness varies according to body composition and proportions". They substantiate this by referring to the fact that for females and males with the same BMI, a female's percentage of body fat is higher than that of her male counterpart. Another issue raised is that before maturity and during ageing, discrepancies occur in body fatness. Kiess et al. (2004) also question the accuracy of the BMI because the BMI is influenced by age-related changes in height.

Campbell and Haslam (2005: 2) state that researchers have attempted to provide optional criteria for defining obesity by making use of the adipocyte cell size. The adipocyte cells are composed primarily of adipose tissue, which specialises in storing energy in the form of fat. There are two types of adipose tissue within the cells, namely white adipose tissue and brown adipose tissue, more commonly known as 'white fat' and 'brown fat'. Unfortunately, this alternative criterion has been proved to be unreliable and without practical application.



It can be concluded from the previous paragraphs that BMI is trusted and most often accepted to be the most accurate indicator of weight status, as well as being the method most widely used to define obesity. For the purpose of this study, the researcher made use of BMI to establish a definition of obesity.

### **2.3.1 Definition of obesity in childhood and adolescence**

In this section the researcher will investigate the various opinions about and differences in defining obesity for adults in comparison with defining obesity for children/adolescents, if any exist.

According to Kiess et al. (2004: 2), there is a lot of controversy and difficulty surrounding both the diagnosis and the definition of obesity during adolescence and childhood. They argue that body fat mass in both children and adolescents depends on factors such as age, ethnic background, developmental stage and gender. Despite the other contributing factors, Kiess et al. (2004) affirm that the use of BMI is now commonly acknowledged as a clinical definition of obesity during childhood and adolescence.

In direct contrast with this, Zimetkin, Zoon, Klein and Munson (2004: 43) conclude that BMI alone is the most general measurement tool for establishing and categorising obesity during childhood. To them, the BMI correctly reflects the quantity of surplus body fat, disregarding factors like age, gender, ethnic background and the developmental stages of the adolescent or child. BMI also indicates a relationship with markers of obesity's secondary problems, as well as long-term mortality. Campbell and Haslam (2005: 2) agree that BMI is sufficient to classify obesity during adolescence and childhood.

Alleyne and LaPoint (2004: 30) emphasise that providing a definition for obesity among adolescents and children is complex because the BMI differs with age, for example. It is therefore important to relate the child's or adolescent's age to his or her BMI. They also state that the ecology of obesity in every particular group must be regarded against the background of the phenomenon occurring in the universal population and over time. Therefore, definitions and conceptualisations of obesity will be influenced by cultural norms, within time periods.

Kiess et al. (2004: 5) also state that various anthropometrical (physical measurement of the human body) measurements have been applied to determine obesity in adolescents and children, but mention that consistency is a shortcoming in its application. De Garine

and Pollock (1995: xiii) found that biological and medical criteria for obesity coming from Western societies are considered inapplicable if used without reference to their cultural context.

It is evident that consensus has not yet been reached on the use of BMI alone to establish and define obesity amongst adolescents and children. Some researchers argue that the BMI alone is sufficient to indicate obesity, while other researchers uphold a multi-facet viewpoint, including factors like age, gender, developmental stages, culture and ethnic background.

### **2.3.2 Measurement of obesity**

Over the years researchers have developed a number of methods to measure obesity. It is important to be familiar with the various methods and to consider the strengths and weaknesses of each method. A brief description and discussion of each of the anthropometric measurement methods used to classify obesity follows. Anthropometric measurements are the physical measurements of a living human being for the purpose of understanding the variations in the human physique.

- ***Relative weight for height and age***

Kiess et al. (2004: 8) assert that the growth reference charts they have developed are used by many countries. These charts have been obtained from studies done on individuals from birth to maturity. This has allowed the documentation of normal weight and height changes at different ages in boys and girls. The average weight is usually determined as the mean, which is established from a reference distribution for the applicable population. It is also stated that by fitting growth curves and then classifying percentiles on these charts, the spread of variation in growth patterns is indicated. If an individual's measurement falls within the very low percentiles of weight in comparison with his or her age, then that individual is regarded as being underweight. A person who falls within the upper percentiles of weight for age is regarded as being overweight or obese. In using this approach, obesity during childhood and adolescence has been defined by using relative weight for age and height. A set percentage below or above the standard weight for a specific height within the person's age and gender peer group is used for cut-off points for being underweight and overweight.

- **Body Mass Index (BMI) for age**

According to Kiess et al. (2004: 3), "Body Mass Index is a ratio of the body weight in kilograms divided by the square of the height in meters." BMI still appears to be a valuable instrument in identifying overweight and obesity in children, even though the correlation between BMI and adiposity is not as tight in children as in adults. De Garine and Pollock (1995) mention that both the United States of America and Great Britain mainly use the calculation of a person's BMI to indicate obesity. They agree that BMI is the measure most commonly used to define obesity and also note that BMI assists physicians to establish the degree of a person's obesity (Measuring obesity, 2008).

- **Additional weight-for-height ratios**

Kiess et al. (2004: 4) state that in an effort to define adiposity in children, a variety of ratios by means of weight and height, supplementary to relative weight and BMI, have been proposed as methods. These include the Ponderal Index, otherwise known as the Rohrer Index. The Ponderal Index is a way of characterising the relationship of height to weight for an individual. It is calculated by body weight in grams x 100 and divided by the cube of height in centimetres, somewhat similar to the way BMI is calculated. Another method mentioned by Kiess et al. (2004: 4) is the Conicity Index, which is a ratio that uses a person's waist circumference divided by height or weight. The following formula is used to calculate the Conicity Index:  $\text{waist circumference} / (0.109 \times \text{square root of height/weight})$ . The latter index is occasionally used with young children too. These indicators are not commonly used, but take into account relative leg length, body frame size and lean body mass, as well as fatness.

- **Skinfold thickness**

Insufficient and excessive adiposity, in children, have been identified for many years by applying the measurement of skinfold thickness at different positions on the human body (Kiess et al. 2004: 4). Skinfold thickness measures the quantity of subcutaneous fat, which is the area just below the skin, but a more dependable approximation of total adiposity is supplied by an equation developed from the combination of measurements at distinct bodily positions. In agreement with this, De Garine and Pollock (1995: xviii) state that skinfold thickness measurements have been applied to establish the amount of fat on a person's body.

According to Kiess et al. (2004: 5), "Skinfold measurements taken at just the triceps by trained operators were shown to correlate well with estimates of total adiposity from DEXA in United States children, and measurements of abdominal skinfolds also correlated highly

with estimates of intra-abdominal adiposity obtained from CT (computerised tomography) or MRI (magnetic resonance imaging) scans. The ratio of subscapular (beneath the shoulder blade) to triceps skinfold thickness has also been shown to be a good predictor of a centralised fat distribution.” DEXA is a means of measuring bone mineral density through dual-energy X-ray absorptiometry. DEXA scans can also be applied to measure an individual’s total body fat content. This is a relatively uncomplicated and inexpensive measurement to execute, although in obese subjects the skinfold measurement is difficult to obtain. Kiess et al. (2004: xviii) also mention that skinfold thickness differs with regard to race and that replicating both for one observer on a similar subject and for various observers fluctuated significantly.

- ***Waist circumference***

Kiess et al. (2004: 5) are of the opinion that waist circumference is an indicative guide to the levels of intra-abdominal fat, as well as indicating a clear connection with the danger of metabolic disease during adulthood. They also state that the conclusions from waist circumference measurement are less sure when applied to children, although waist circumference apparently trails throughout childhood, adolescence and into adulthood. An advantage of waist circumference measurement is that it is a cost-effective, simple manner of evaluating obesity. It has, however, been criticised for focusing more on the measurement of abdominal fat than on an individual’s total adiposity (body fat). Therefore using waist circumference alone as an indicator is not a useful measurement of obesity. De Garine and Pollock (1995: xix) substantiate this viewpoint by stating that the waist-to-hip ratio, which includes separate standards for males and females, is a better measurement of body size.

Campbell and Haslam (2005: 6) highlighted the fact that Professor Mike Lean from Glasgow University found in 1998 that a waist circumference for males of  $\geq 102$  cm and  $\geq 88$  cm for females indicated the same risk of developing cardiovascular disease as a BMI of 30 for both males and females. Thus waist circumference can be a useful gauge of excess body fat and an indicator of amplified health threat for individuals.

- ***Measures of body composition***

Kiess et al. (2004: 6) state that: “A number of techniques have been developed for estimating body composition, total body fat stores and fat distribution.” The use of these methods is generally limited by the high cost because highly specialised staff and expensive equipment are required to conduct these assessments. The high cost means that these methods are mostly limited to tertiary care centres or research institutions.

They also note that such measures have been used to define obesity in children in the past but that aspects like high costs, the lack of standards and the inconvenience of application have counteracted their value as measures of obesity. Nevertheless, since measures of body composition provide more trustworthy estimations of body fat stores, they could be applied to confirm the more practical anthropometric measures.

- ***Informal observation***

Campbell and Haslam (2005: 169) state that informal observation of a child can be applied to establish if it is necessary to get professional advice. This informal observation can be done asking the following questions:

- **Does the child run around the playground with the other children?**
- **Does the child take part in school games?**
- **Does the child get out of breath when running much earlier than his or her friends?**
- **Does the child get teased by other children about his or her weight?**
- **Do clothes of the right size for the child's age fit easily?**

If most of these observational aspects are positive, Campbell and Haslam (2005: 169) recommend that a child's parents should obtain professional assistance.

- **Summary**

It may be concluded from the above discussion that BMI is the most widely used and accepted measurement tool to measure obesity. For the purpose of this study, the researcher will make use of the BMI to establish if a candidate is obese.

### **2.3.3 Causes of obesity**

The prominent rise in the number of obese individuals over the past 10 to 20 years has received a lot of attention and led to much debating. It is imperative not only to consider obesity simply as a phenomenon, but also to consider and gain knowledge about the origin/s of obesity. The various causes of obesity are discussed below.

- ***Nutrition***

Kiess et al. (2004: 53) state that apart from quantitative food consumption, a person's eating patterns and food choices are important risk factors for obesity and being overweight. Pignone and McPhee (2007) say that the continuous intake of excess calories may cause obesity. This is in accordance with the opinion expressed in an article

on the causes of obesity (Causes of obesity, 2008) that consuming more calories than necessary for daily energy needs has to be a prominent factor in causing obesity.

The other risk factors for being overweight and obese are portion size, meal frequency and psychological aspects. Kiess et al. (2004: 53) also found that most adolescents and children indicated a preference for unhealthy food like take-aways. Campbell and Haslam (2005: 25) substantiate this viewpoint by stating that studies have found a clear association between the development of obesity and the accessibility of high-sugar foods and high-fat foods. There is a noticeable movement towards fast foods, processed foods and enriched foods, augmented by advertisement campaigns claiming that these foods are nutritious, simplify life and are easy to prepare (Obesity focussed), confirming Campbell and Haslam's viewpoint about high-fat and high-sugar foods.

Obesity may also be caused by the type of food eaten by an individual (Causes of obesity, 2008). Research has indicated that an overconsumption of trans-fats and white flour carbohydrates, combined with minimal fibre consumption, cause excessive fat storage and metabolic and digestive disorders, and may even cause obesity.

Nutritional surveys done by Zemetkin et al. (2004: 43) elaborate on this by indicating that there is a correlation between the quantity of fat consumed and obesity levels. Their research on dietary inclination also indicates that individuals of average weight hunger after high-carbohydrate foods, while obese individuals hunger after high-fat foods.

Alleyne and LaPoint (2004: 30) identified the following key terms in an effort to provide an explanation from an ecological perspective for the causes of obesity:

- environmental
- social
- physical
- behaviour
- genetics
- hormonal
- excessive dietary intake
- low physical activity
- energy imbalance.

Figure 2.1 (taken from Alleyne & LaPoint 2004) aims at clarifying the key role players and each aspect's interrelatedness with other aspects in the ecological process of causing obesity. According to Figure 2.1, the environment and an individual's behaviour are the primary factors that have an influence in causing obesity. Secondary factors that are

directly impacted by the primary factors are excessive dietary intake and low physical activity, which in turn cause an energy imbalance in the human body. On a tertiary level, genetics and hormonal levels impact on excessive dietary intake, which in turn may have an influence on the energy balance of an individual's body.

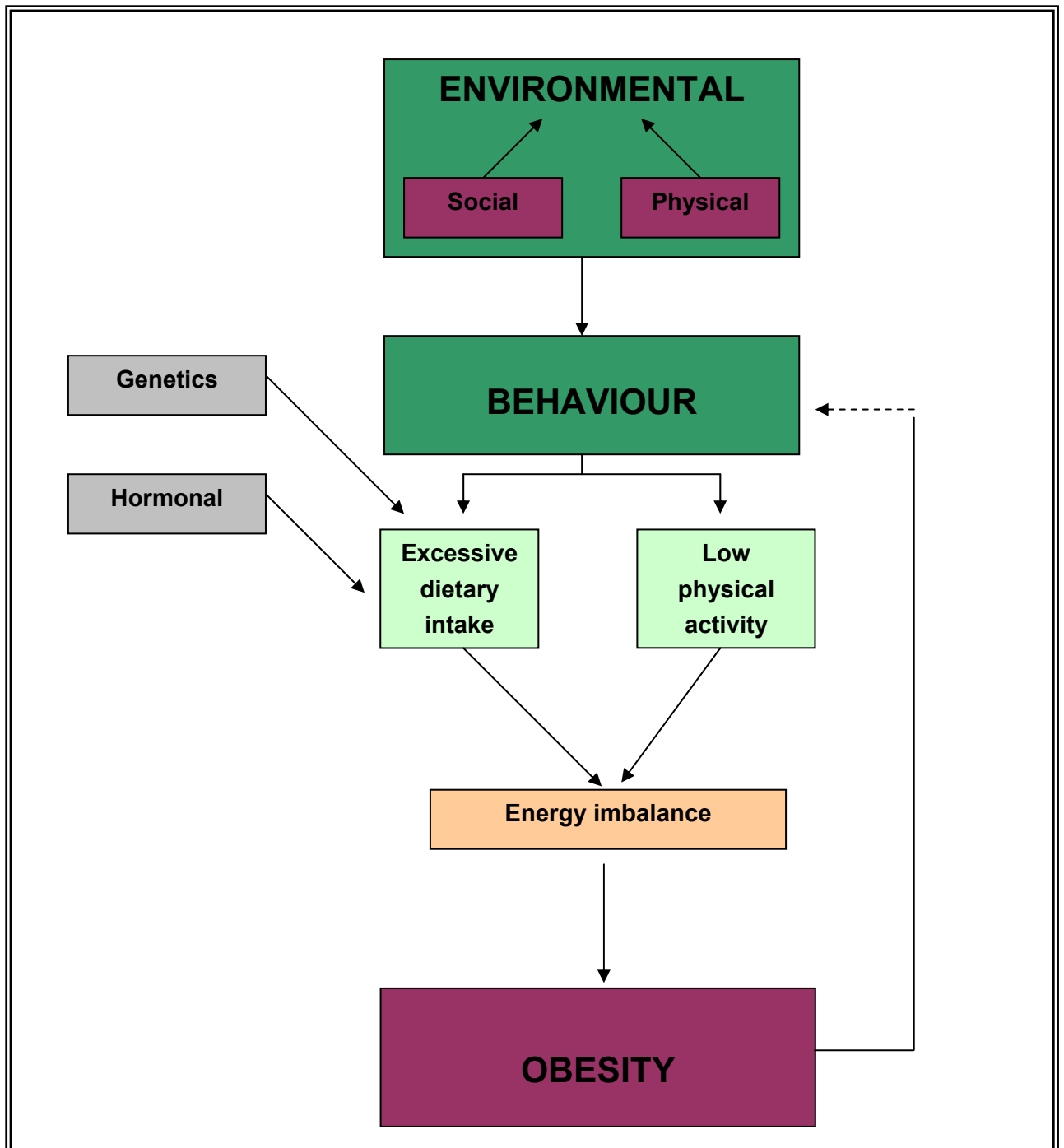


Figure 2.1: Model of an ecological perspective on obesity (Alleyne & LaPoint 2004: 347)

- ***Psychological***

According to Campbell and Haslam (2005: 160), both social withdrawal and social isolation might be a direct result of not wanting to take part in active play, which in turn might cause a child to develop a low self-esteem, eat for emotional comfort and even develop obesity and other eating disorders.

These authors also list the following psychological causes of obesity. One of the reasons is intensive marketing campaigns which strongly endorse the consumption of high-fat and high-sugar foods by associating these products with representations of fun, contentment and happiness. Through these campaigns millions of people, especially children, are under the impression that 'happiness' is obtained through eating a fast-food, high-calorie meal or children's meal. Another important fact they emphasise is that it is estimated that between 80 and 90% of advertisements during children's peak television viewing time is focused on endorsing the consumption of high-fat and high-sugar foods.

Previously it was thought that some of the causes of obesity might be attributed to *psychiatric* disorders. Zimetkin et al. (2004: 43), though, have reason to conclude that obesity is not generally caused by currently classified psychiatric disorders. They base this conclusion on the fact that "weight gain sometimes accompanies such psychiatric disorders as depression, and some Axis I disorders are associated with overeating, but most obese subjects do not have a diagnosis".

The website *Obesity Focussed* states that stress and depression are prominent causes of both obesity and eating disorders (Definition of obesity, 2008). An increase in weight may be caused by psychological aspects or even behavioural problems. The connection between feelings and food can become very strong over a period of time.

Alleyne and LaPoint (2004: 30) point out that emotional eating during stressful life circumstances is a common occurrence. This type of emotional eating is present in all social status groups; it is also episodic in character and can be directly linked to specific periods or events of tension and/or stress in an individual's life. An interesting phenomenon which Alleyne and LaPoint (2004: 30) highlight is that when a stressor or tension is not periodic in character, but constant and repetitive, it inhibits the individual's ability to manage the stressor, sometimes to such an extent that the person is overwhelmed by it, which may have negative health consequences like overeating and obesity.



- ***Physical activity***

According to Zimetkin et al. (2004: 43), the average time spent in front of a television set by children is between 3 and 5 hours on a daily basis. This gives reason for concern since an average male who spends more than 3 hours in front of the television set daily is twice as likely to become obese as his peer who spends less than an hour a day in front of the television set. Zimetkin et al. (2004: 43) also report that the Muscatine Heart Study indicated that a maximum of between 8 and 10 minutes daily are spent on aerobic activity by pubertal and post-pubertal children. The increasing obesity epidemic is enhanced by this decrease in physical activity.

Campbell and Haslam (2005) agree that there is a clear association between the increased amount of time spent watching television and the ready availability of transport, and the prominent increase in obesity. They also found that decreased physical activity in children is caused by factors such as fewer formal physical exercises performed during school hours, computerised entertainment and safety perceptions, for example that it is dangerous to walk to school, and that this has had a direct impact on children being overweight and obese. They highlighted the fact that if a child spends a daily average of four or more hours watching television, the probability of this child being overweight increases by eight times in comparison with peers spending half the amount of time watching television. The chances of an overweight child taking part in physical activity decline and this become a vicious cycle which compounds the weight problem (Campbell & Haslam 2005).

The typical modern Western life style of little to no exercise, combined with a high-fat diet, may lead to a person becoming obese (Obesity focussed, 2008). Television and the computer are key role-players in this modern phenomenon as they take the place of physical activities which were previously common forms of entertainment.

The more a person eats, the more that person needs to exercise to counteract the surplus of calories consumed (Obesity focussed, 2008). Ironically, the exact opposite happens: people tend to spend an increased amount of time in front of the television or computer being passive and thus none of the excess calories consumed are being burned. Pignone and McPhee (2007) agree with this observation and note that an inactive lifestyle and the constant intake of excess calories cause obesity.

- **Social**

Zametkin et al. (2004: 43) stress the importance of the example set by parents to a child's eating habits, as well as the fact that these examples of eating habits have a tendency to linger with the person all through maturity. They also state that the children of obese parents, from as young as 3 years of age, may show an increased preference for high-fat foods.

Zametkin et al's view on parental influence as a possible cause of obesity is substantiated by the article *Causes of Obesity* (Obesity focussed, 2008). The example set by the parent(s) with regard to food preparation, physical activity, shopping and food consumption has a major impact on the child's energy balance and, in the long run, on the child's weight.

The importance of familial influences that may contribute to a person becoming obese is strongly highlighted by researchers (Obesity focussed, 2008). A genetic connection is implied since obesity runs in families but families, in addition, also share nutritional consumption patterns, physical activity levels, lifestyle and attitude habits which may contribute to their being or becoming obese.

Campbell and Haslam (2005: 158) agree that a change in social movements, especially where both parents are working, has different results which may enhance a trend among children towards being overweight and obese. In the opinion of these authors, some aspects usually associated with family life have disintegrated. The first of these aspects is home-cooked meals and snacks, which mostly have lower levels of fat in comparison with take-aways and fast food. The next aspect is family mealtimes, which refers to having meals around a table and interaction between family members. Family mealtimes are important since the rate of eating is usually slowed down through social interaction. Increased mealtime leads to better digestion of food, as well a feeling of satiety from a lower food intake. The last aspect of disintegrating family life they mention is the amplified high-sugar, high-fat meals and snacks available in the school environment and home environment. Easy-to-prepare-meals are part of a modern lifestyle where time constraints are almost always evident. Most meals that are easy and quick to prepare are high in sugar and fat levels, thus leading to an increased intake of sugar and fat.

According to Zametkin et al. (2004: 43), neglect, abuse and a generally non-supportive home environment are social aspects linked to obesity. These authors also state that the prevalence of neglected children becoming obese is nine times higher in comparison with

other children and that there is a fourfold increase in the incidence of sexual abuse during childhood in adults who seek treatment for obesity. Zametkin et al. (2004: 140) note that “one psychosomatic theory of obesity is that food provides comfort and therefore that eating serves as a compensatory mechanism for children who have survived traumatic experiences or who live in difficult environments” and overeating might be a result of a child’s environmental deprivation, depression, somatisation or familial abuse.

Adding to this, Alleyne and LaPoint (2004: 30) are of the opinion that the cause of obesity cannot be simplified to being purely the result of social factors or genetic factors only. They believe that obesity may be ascribed to an intricate interaction between both genetic factors and social factors.

- **Medical**

Zametkin et al. (2004: 43) state that obesity may be a result of systemic, medical conditions, though this cause of obesity is scarce amongst the general population, and that more than 90% of childhood obesity is idiopathic and less than 10% of childhood obesity can be attributed to endogenous causes.

According to Zametkin et al. (2004: 43), the endogenous causes of childhood obesity can be divided in two broad categories, namely hormonal causes and genetic syndromes. In the case of genetic syndromes, obesity may be caused by a chromosomal imbalance or abnormalities.

Alleyne and LaPoint (2004: 30) mention that hormones can have an influence with regard to nutritional aspects of dietary intake. They make special reference to the hormone leptin, produced by fat cells, which is responsible for regulating body mass and energy outflow via specific actions on the central nervous system. An obese person’s leptin levels are higher than those of a person of average weight, which might indicate that hormonal functions are being opposed. The hormone leptin is usually secreted by fat cells when an individual is satiated and if the production of leptin is deferred, the fat cells are incapable of indicating to the person that he or she is full and thus weight gain comes about (Obesity focussed, 2008).

Another hormonal factor to consider with regard to causing obesity is as hypothyroidism (Obesity focussed, 2008). Hypothyroidism is a condition that has a direct impact on the body’s metabolism, slowing it down considerably and causing significant weight gain as a result.

Ousman and Burman (2002) state that functional hypercortisolism, which is a dysfunction of the hypothalamic-pituitary-adrenal, may be a cause of abdominal obesity because of its various metabolic consequences, which include insulin resistance, reduced glucose homeostasis, hypertension and lipid irregularities. It is also mentioned that the impairment of growth hormone secretion, which has a direct impact on the adipocyte (fat) cells, is believed to be a result, instead of a cause, of obesity.

The different genetic syndromes that might cause obesity are listed in Table 2.1. Hormonal causes of obesity might be attributed to hormonal malfunction or imbalance within the human body. Table 2.1 provides a list of the possible hormonal causes of obesity.

**Table 2.1: Endogenous causes of childhood obesity (Zametkin, Zoon, Klein & Munson et al. 2004: 140)**

<i>Hormonal Causes</i>	<ul style="list-style-type: none"> <li>• Hypothyroidism</li> <li>• Hypercortisolism</li> <li>• Primary hyperinsulinism</li> <li>• Pseudohypoparathyroidism</li> <li>• Acquired hypothalamic deficiency</li> </ul>
<i>Genetic Syndromes</i>	<ul style="list-style-type: none"> <li>• Prader-Willi</li> <li>• Laurence-Moon/Bardet-Biedl</li> <li>• Alström</li> <li>• Börjeson-Forssman-Lehmann</li> <li>• Cohen</li> <li>• Turner</li> <li>• Familial lipodystrophy</li> <li>• Beckwith-Wiedemann</li> <li>• Sotos</li> <li>• Weaver</li> <li>• Ruvalcaba</li> </ul>

In contradiction to the fact that less than 10% of childhood obesity may attributed to endogenous causes, Alleyne and LaPoint (2004: 30) reported that there is a significant amount of discussion about the impact of specific hormones which may alter appetite and therefore cause sustained over-consumption. In their opinion, it is of the utmost importance to keep the focal point on both genetic traits and the social environment, which are considered to be the determinants of energy input and output. Heredity has a role of

33% in human obesity according to Alleyne and LaPoint (2004: 30); the other two-thirds (66%) are thus left to environmental factors and social factors.

Pignone and McPhee (2007) agree that heredity has an influence on obesity but they attribute between 40%-70% of obesity due to genetic influences thus attributing a higher percentage of obesity to heredity. Pignone and McPhee (2007) stress that there is now proof of compelling genetic influences on the development of obesity. They studied adopted children, who were found to exhibit a marked association between their own BMI and that of their birth parents, to substantiate the last-mentioned conclusion. There is strong agreement with Pignone and McPhee's ideas and some research into adopted children indicates that there is a tendency to acquire the same weight-related problems as those of their natural parents, rather than their adopted parents (Obesity focussed, 2008). Various weight-related functions in the human body that may cause obesity are influenced by genetic factors, which are blood glucose, fat storage, hormones, metabolic rate and metabolism, to mention a few (Obesity focussed, 2008).

Although genetic and hormonal factors play an important role in causing obesity, it is evident from the above paragraphs that a lower percentage of obesity may be attributed to these endogenous factors. It appears that psychological aspects, physical activity levels, nutrition and social aspects are more prominent in causing obesity. To conclude this discussion of the causes of obesity, it is of extreme importance to consider all the possible causes of obesity since this phenomenon seems to be multi-dimensional and therefore more than one aspect of an individual's life might be considered to be the cause of obesity.

#### **2.3.4 Major events associated with obesity in children**

In the next few subsections the researcher will focus on the major life events of children that are associated with obesity. These three life events are: the prenatal period, adiposity rebound and adolescence. Knowledge of these major events associated with obesity will enable early identification of children who are at risk of being obese and possibly allow for early intervention strategies.

##### *2.3.4.1 Prenatal period*

According to Campbell and Haslam (2005: 158), an elevated risk of obesity during childhood is linked with a person's birth weight. Another risk factor is if the biological

mother of the child is a diabetic. Campbell and Haslam (2005: 158) made these deductions based on the fact that physiological programming takes place during the prenatal phase of infant development, due to the possible impact of above-average intra-uterine sustenance on the hypothalamic set points for body weight.

#### *2.3.4.2 Adiposity rebound*

The escalation of BMI, which is followed by the lowest point in BMI, is the next major event that Campbell and Haslam (2005: 158) mention. The lowest point in BMI happens before 5 years. A person's BMI begins to increase at 5 to 6 years of age. Thereafter, all through childhood and adolescence, the BMI rises continuously. A child or adolescent is more prone to develop a high BMI during adulthood if this 'rebound' occurs early. Campbell and Haslam (2005: 158) also state that this rebound can be used to forecast the probability of obesity during adulthood.

#### *2.3.4.3 Adolescence*

Campbell and Haslam (2005: 158) describe adolescence as the greatest risk period of possible obesity. According to Campbell and Haslam (2005: 158), "Up to 75% of obesity present in adolescence persists into adulthood". This contributes to the increased risk of co-morbid disease during maturity. Proneness to develop diseases like diabetes, cardiovascular disease, gout, osteoarthritis and colorectal cancer is greatly increased. Adult obesity is greater if pubertal maturation occurs early.

## **2.4 PSYCHOLOGICAL WELL-BEING DEFINED**

### **2.4.1 Definition of psychological well-being**

Psychological well-being has a lot of different meanings and includes different aspects of what it means to various people to be human. In general, it appears to be a broad and inconsistently defined concept. To enable the researcher to answer the research question, it was important to investigate this concept and to determine a more precise meaning for psychological well-being.

Pasquali (2006: 69) asks the following question about psychological well-being: "Is well-being merely the flip-side of studying psychological maladjustment to adverse internal or external factors or do well-being and ill-being constitute separate, independent dimensions of mental functioning?"

Focusing on one aspect as the determinant of psychological well-being, Hayes and Ross (1986: 27) noted the impact that physical appearance may have on psychological well-being, but contribute this impact to the meaning attached by social evaluation by others or to an internal process within the individual self which is not influenced by the response of others. Hayes and Ross (1986: 27) also state that research has established that happiness, self-esteem and emotional well-being are correlated to a person's physical appearance.

In direct contrast with Hayes and Ross' one-dimensional viewpoint of psychological well-being, Bryan and Tiggemann (2001: 36) made use of people's mood, self-esteem and cognitive style assessments in an effort to obtain information and calculate an individual's psychological well-being. This calculation of psychological well-being using feelings, self-concept and intelligence implies that it is not a one-dimensional phenomenon.

Agreeing with Bryan and Tiggemann (2001: 36) that psychological well-being is multi-faceted, Roothman, Kirsten and Wissing (2003: 33) state that psychological well-being is explained by some researchers using explicit components as well as processes. Roothman et al. (2003: 33) add more dimensions to psychological well-being than Bryan and Tiggemann (2001: 36) by including relationships, spirituality and health. Examples of the components and processes of psychological well-being are the affective processes and the physical processes, as well as promoting a focus on the inter-relationship between a good quality life linked with good health, and cognitive processes with the focus on life fulfilment. The last process noted by the authors is the spiritual process, which entails living a purposeful life that has optimal functioning as a result. Roothman et al. (2003: 33) conclude that to conceptualise psychological well-being, attention should be given to the cognitive, spiritual, affective, social, physical and self processes. According to them, the latter are all the aspects of psychological functioning and therefore determine an individual's psychological well-being.

Wissing and Van Eeden (2002: 32) are in agreement with Roothman et al. that psychological well-being is multi-dimensional. This diversity lies within the facets of the self that are involved, such as affect, cognition and behaviour, and includes the areas of human life in which these facets discern themselves, like intrapersonal and interpersonal, social and contextual, in love and work. The implication of these facets and domains, according to Wissing and Van Eeden (2002: 32), are that general psychological well-being

may be achieved through the following indicators: contentment with life, a perception of stability and affect balance. Wissing and Van Eeden (2002: 32) add to this perspective of psychological well-being by stating that current research substantiates views about combinations of important facets that relate to psychological well-being, such as distinction of the self, family, and social components of fortitude, conceptualisation of autonomy, competence and relatedness, as being basic needs which require fulfilment to achieve psychological well-being. They state that worldwide, gauges of general psychological well-being appear to be a sense of coherence, satisfaction with life and affect balance.

Another aspect of psychological well-being worth mentioning at this stage is the noteworthy connection that Fulkerson and Strauss (2007: 75) found between psychological well-being and family connectedness, especially for adolescents. This accentuates the important role that general feelings of family connectedness plays in the well-being of individuals and, more specifically, adolescents. This familial connectedness emphasises the importance of the social aspect of psychological well-being, as mentioned by Wissing and Van Eeden (2002: 32).

According to research done by Wissing and Van Eeden (2002: 32), general psychological well-being is an amalgamation of definite affective, cognitive, behavioural and interpersonal virtues. Wissing and Van Eeden (2002: 40) identified the following qualities and features of general psychological well-being:

- A person's **affect**, where positive feelings prevail over negative feelings
- A person's **cognition** process, in which life is viewed as understandable and meaningful, there is a general belief and expectation that demands will be met and coped with, and global life satisfaction is experienced, as judged by own criteria
- An individual's **behaviour**, which confirms that there is an acceptance of challenges without avoidance of problems, interest in work or activities and management of own (including financial) affairs
- **Self-concept**, which implies that a person experiences self-worth and that the ability to affirm oneself exists
- **Interpersonal relationships** with others, which are perceived as supportive, having the feeling of trust towards others, enjoying their company and feeling needed
- The **absence of general symptoms of a mental disorder**, such as intense anxiety, severe depression, negative affect or somatic symptoms.



In agreement with Wissing and Van Eeden's (2002: 32) characteristics of psychological well-being, Ryff (2005: 1) identified the following areas that contribute to an individual's sense of well-being:

- **Self-acceptance** implies that a person has a positive attitude towards himself or herself, recognises and accepts various characteristics of the self and has a positive attitude towards your past.
- **Personal growth** means to experience feelings of constant growth, potential, effectiveness, expanding knowledge and being receptive to new experiences.
- Having a **purpose in life** refers to the fact that a person has goals and a sense of direction in life. An individual considers past and present encounters as meaningful and holds beliefs that provide a reason for life.
- To experience **environmental mastery** refers to the feeling of competence, the ability to deal with a complicated environment and creating or selecting personally appropriate contexts.
- Self-determination, being independent, internal regulation of your own behaviour, the ability to resist social pressures and evaluation of yourself by your own personal standards are aspects of **autonomy**.
- **Positive relations with others** imply that an individual experiences trust, warmth and contentment in relationships. It also indicates an ability to be capable of strong compassion, affection, closeness and comprehending the concept of give-and-take in relationships.

From the above it may be deduced that psychological well-being encompasses all facets of a person's life. These facets are emotional, social, familial, intellectual, spiritual and physical. Psychological well-being does not consist only of multi-dimensional facets on their own, but is also influenced by the inter-relatedness of the aspects and domains of being-human.

#### **2.4.2 Models of psychological well-being**

Being overweight or obese has an influence on the person, possibly in every aspect of life like emotional, physical, social, economic and familial. Some people may be overweight or obese and happy, as well as content with their lives, in other words they may experience psychological wellness. Then there are other individuals who are overweight or obese and unhappy with themselves and their lives, and thus experience psychological 'unwellness'. The latter condition has given rise to questions about the reasons for these

two contrasting experiences of psychological well-being and to a search to identify the key factors that cause such vast differences in life experience.

During the past few years 'psychological well-being' has become a prominent term in psychology. The researcher will examine five different models in an effort to understand psychological well-being completely. To obtain a complete and holistic view, it is necessary for this examination of psychological well-being to include an investigation of the development of psychological well-being as a concept/phenomenon over the past two decades.

#### *2.4.2.1 Jahoda's Model*

Jahoda (1958) studied the existing information and research results of her era during the late 1950s and early 1960s. She was one of the first writers to offer proof that psychological wellness has other attributes than those initially acknowledged. Jahoda (1958) recognised the features of what she considered to be 'positive mental wellness'. According to her, the absence of a mental disease as a criterion of psychological wellness has been substantiated to be an inaccurate indicator because of the complexity of defining disease. 'Positive mental wellness' is determined by the author (Jahoda 1958) through making use of six concept categories. She regarded these six concept categories and criteria as the minimum for an individual to achieve wellness. The six concept categories and criteria may also be considered to be the fundamental thinking about psychological wellness.

Table 2.2 lists the six 'positive mental wellness' categories as identified by Jahoda. A concept category may be described as a characteristic of 'positive mental wellness'. The six concept categories are

- the attitude of an individual towards his own self
- the individual's style and degree of growth
- integration
- autonomy
- perception of reality
- environmental mastery.

The second column Table 2.2 provides a brief description of what each of the concept categories entails.

**Table 2.2: Concept categories and criteria for positive mental wellness (Jahoda 1958: 23)**

	Concept Category	Description of the category
1	Attitude of an individual towards his own self	Accessibility of the self to consciousness Correctness of the self-concept Feelings about the self-concept Sense of identity
2	The individual's style (manner) and degree of growth, development or self-actualisation	Motivational processes Investment in living
3	Integration	Balance of psychic forces A unifying outlook on life Resistance to stress
4	Autonomy	Regulation of behaviour from within Independent behaviour
5	Perception of reality	Perception free from need-distortion Empathy or social sensitivity
6	Environmental mastery	The ability to love Adequacy in love, work and play Adequacy in interpersonal relations Meeting of situational requirements Adaptation and adjustment Problem-solving

The above model implies that relationship with the self, relationship with the environment, relationship with others and relationship with emotions are characteristics of 'positive mental wellness'. The main contribution from Jahoda's model is that it acknowledges psychological well-being as a multi-dimensional concept.

#### 2.4.2.2 Seeman's model

Seeman (1989) made use of a wide-ranging framework of all human systems' behavioural subsystems to generate a model of psychological wellness. He guaranteed an advance on calculable health conceptualisation and measurement over those formerly provided by Western biomedical theory. This model has both a developmental focus and a systems viewpoint (Seeman 1989).

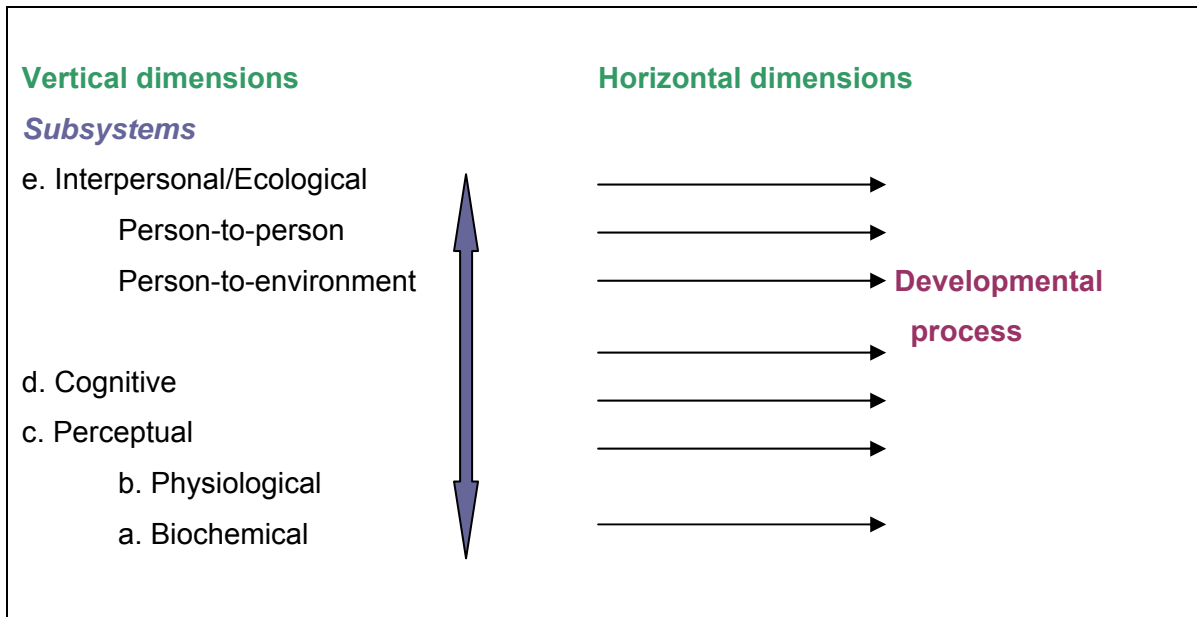
As illustrated in Figure 2.2 (Seeman 1989), the model consists of three components of a hierarchical system, beginning at the bottom and moving up. Reciprocal interaction between the subsystems is shown by the bi-directional arrows and the longevity aspect of the complete system is denoted by the horizontal arrows. This model implies that an individual has to pay attention to the integration of the subsystems and not to a single system only to obtain psychological wellness. The subsystems in this case are the biochemical, physiological, perceptual, cognitive and interpersonal/ecological subsystems. Each of Seeman's subsystems will now be briefly discussed.

According to Seeman (1989), the *biochemical* subsystem includes human-system functioning, which involves biochemical processes. This model refers to the function that the immune system has in preserving strategic wellness, with reference to investigations done into the functioning of T-lymphocytes and natural killer (NK) cells, and into the effect of natural incidental stressors on the immunocompetence. The *physiological* subsystem, in Seeman's opinion, infers that there are qualitative variations in the efficiency of the information movement and feedback between well-adjusted people and those who are not so well adjusted.

Seeman (1989) describes the *perceptual* subsystem as being the interconnectedness between behavioural subsystems and the prominent links of perception and cognition. He concludes that a well-functioning individual has a fairly distinguished personality organisation, a trait found to apply to an individual who is inclined towards a field-independent organisation, allowing this person to make the most of available information.

The *cognitive* subsystem is described by Seeman (1989: 1105) as "so powerful in its impact on health that it would be difficult to overstate its centrality". The concept of mind-brain relationships is applied to investigate the probabilities that further higher-level intellectual resources can be used to preserve and improve health.

The *interpersonal/ecological* subsystem consists of person-to-person relationships and the person-to-environment matrix. Person-to-person relationships include matrimonial accord, upholding relationships with an individual's own offspring, interpersonal affection and sincerity, as well as sustained interaction with a person's kin of origin. According to Seeman (1989), a great amount of person-to-environment interaction is indicative of a highly functioning person. He states that from a developmental point of view, there are two important processes, namely the process of individuation and a positive manner of person-to-environment interchange. These processes are represented in Figure 2.2 by the vertical dimension and the horizontal dimension.



**Figure 2.2: The human-system wellness structure (Seeman 1989: 1102)**

It can be deduced from Seeman's (1989) model that psychological well-being does not consist of subsystems only, but that exchanges between these subsystems occur, implying that these subsystems are inter-related to each other. Thus it may be concluded that psychological well-being, according to Seeman's model (1989), is a more complex concept than that originally stated by Jahoda (1958).

#### 2.4.2.3 Witmer and Sweeney's model

Witmer and Sweeney's model (1992) was intended for theory building, investigation, clinical use, training, endorsement and the cultivation of awareness. According to these authors, this model aspires to clarify that interaction between the components as illustrated in Figure 2.3 is a requirement for attaining psychological wellness. Witmer and Sweeney (1992) try to take into account the inter-relatedness of the characteristics of a psychologically well person, the life tasks and the life force, which are the three primary components of their theory. They list five life tasks, namely spirituality, self-regulation, work, friendship and love. Each of these life tasks is now discussed briefly.

*Spirituality*, which is life task number 1, entails that each civilisation, culture or nation practises and gives preference to a form of religious belief which in turn accentuates specific values, thus emphasising what is considered to be sacred and essential for maintenance of life (Witmer & Sweeney 1992). In this context 'spirituality' may be defined as the search for personal or advanced awareness which is synchronised with the

universe. According to Witmer and Sweeney (1992), spirituality has two characteristics: oneness (the inner life and purposiveness, leading to optimism) and values.

Life task 2 is *self-regulation*. Witmer and Sweeney (1992) describe self-regulation as the course of action that organises the long-term patterns of a person's objective-orientated actions, complying with social norms. The following are aspects of self-regulation as listed by Witmer and Sweeney (1992): sense of worth, sense of control, realistic beliefs, spontaneity, emotional responsiveness, intellectual stimulation, problem solving, creativity, sense of humour, physical fitness and health habits.

Witmer and Sweeney (1992) identified *work* as the third life task. This life task is believed to provide social, economic and psychological benefits with regard to a person's wellness, thus implying that work is a life-span task. They are of the opinion that if an individual does not take part in work activities, he or she will experience a struggle to survive psychologically as well as economically. Other benefits of work as a life task are psychological, social and economic. According to Witmer and Sweeney (1992), work develops identity, self-worth, self-efficacy, commitment and a feeling of mastery. Social status, potential friendships, the feeling of being valued or needed by others and interaction with others are some of the social benefits derived from work. The economic benefits, according to Witmer and Sweeney (1992), include the ability to acquire goods and services, evidence of assets and success, and the capability to acquire free or leisure time.

*Friendship* is the fourth last life task according to this model. Friendship consists of social interest and connectedness, as well as social support, interpersonal relationships and health. Witmer and Sweeney (1992) define 'social interest and connectedness' as every social relation that includes contact with others in the community or individually, excluding familial, marital or sexual commitments. They state that there are three functions that social support fulfils, namely emotional support, tangible support and informational support. Emotional support refers to attachment, reassurance and the ability to be able to confide in and rely on an individual. Tangible support entails direct aids like services, gifts and loans. Informational support involves providing information or advice, as well as feedback.

The last life task mentioned by Witmer and Sweeney (1992) is *love*. This life-task implies that an individual can be trusting, co-operative, intimate and self-disclosing, has the ability to make long-term commitments and is secure within the intimacy of sexual relations.

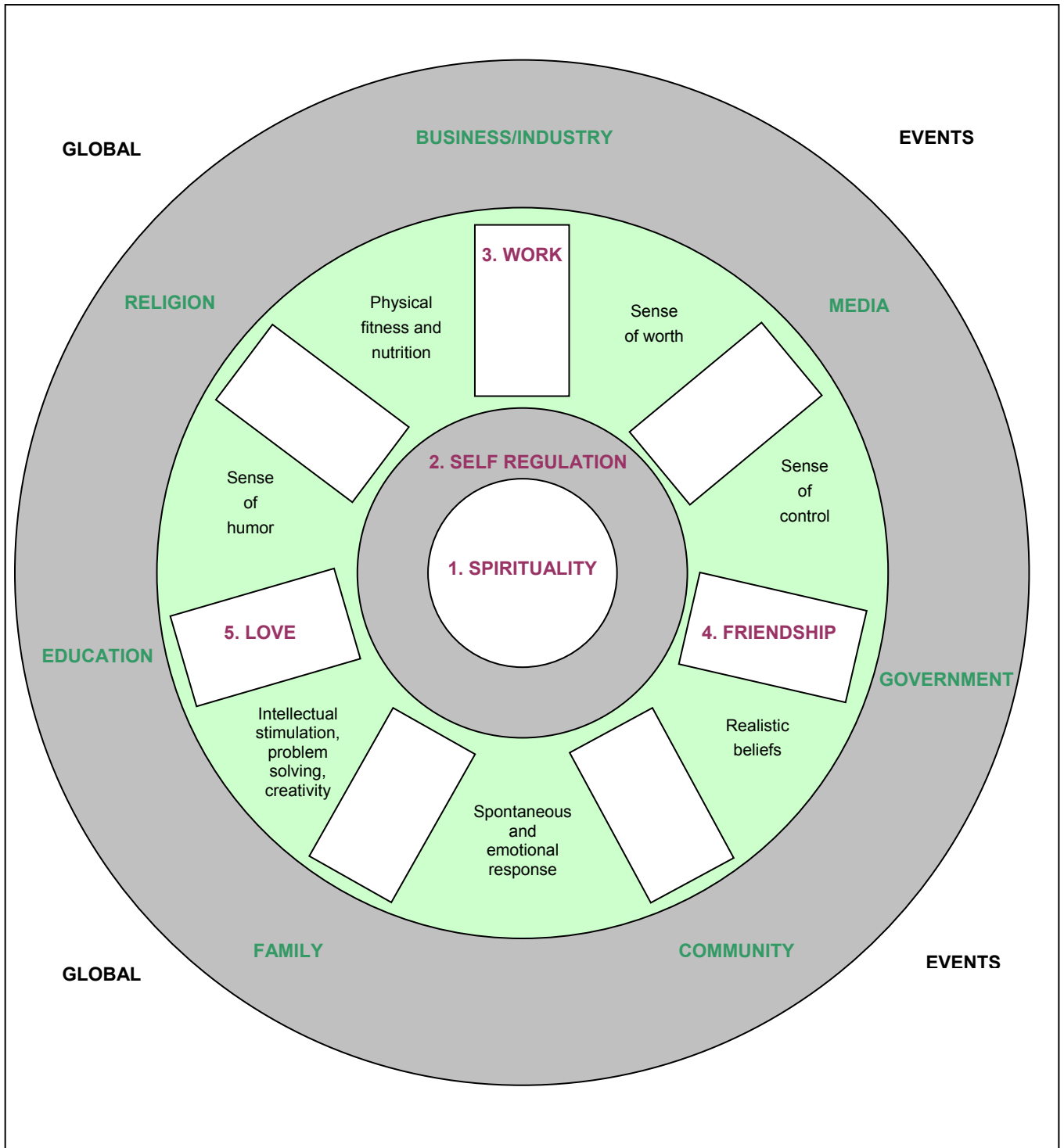
The component life forces are explained by Witmer and Sweeney (1992) as the external forces and internal forces that have an effect on the above-mentioned five life tasks. Family, religion, community, media, education, business, industry and government are the life forces that have an influence on the five life tasks. These refer to the way that societal institutions function to achieve their purposes, which in turn will have an effect on the advancement and achievement of the five life tasks.

According to Witmer and Sweeney (1992), global events reach beyond life forces. Examples of global events that will have a direct influence on a person's way of living and quality of life are environmental pollution, disease, overpopulation, hunger, poverty and war.

This model implies that psychological wellness is multi-dimensional, with a person's spiritual side, which refers to the internal process, as the starting point. Figure 2.3 shows Witmer and Sweeney's (1992) 'Wheel of Wellness and Prevention'. To conclude, it may be deduced that these authors are in agreement with Seeman (1989) that psychological well-being is a multi-dimensional phenomenon. It appears that there is also continuous interaction and inter-relatedness between the various facets of psychological well-being, confirming Seeman's (1989) findings. Witmer and Sweeney (1992) elaborate on Seeman's model by including the spiritual side of an individual as the starting point of psychological well-being. Another contribution by Witmer and Sweeney in their effort to clarify psychological well-being is the attention paid to the important influence of both intra-personal and inter-personal relationships, which form a prominent part of their model.

#### *2.4.2.4 Adams, Bezner and Steinhardt's model*

The Wellness Model compiled by Adams, Bezner and Steinhardt (1997) contains six elements, illustrated in a cone format (Figure 2.4). According to Adams et al. (1997), wellness is represented by the top section of the cone due to the fact that it is extended to the fullest and the bottom of the cone symbolises illness. They argue that a person has the capacity to operate between these two scales, with countless combinations of wellness between the various elements, and different states of balance between these extremes.



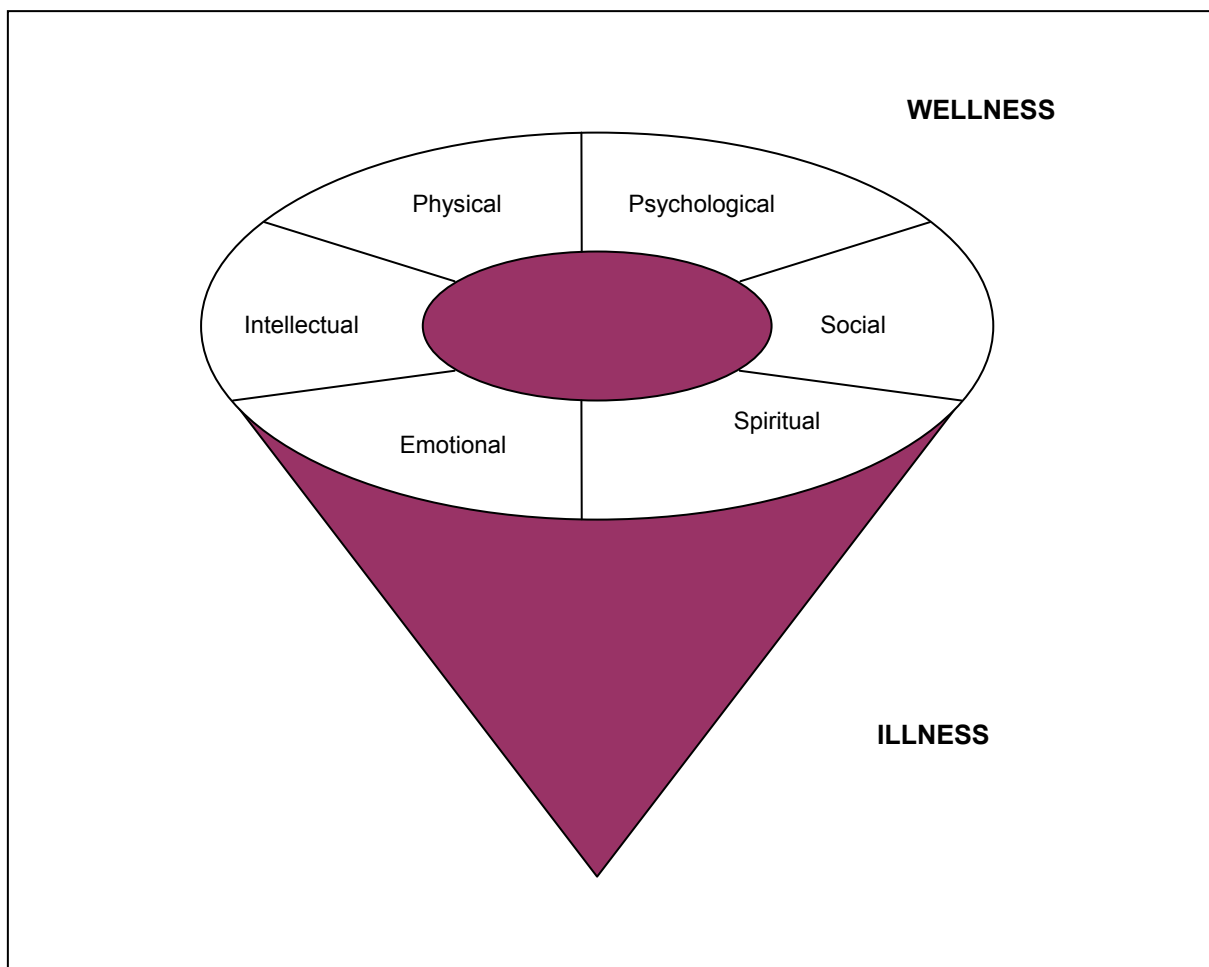
**Figure 2.3: Wheel of Wellness and Prevention (Witmer & Sweeney 1992: 142)**

Adams et al. (1997) say the following about the six elements in their model:

- *Physical wellness* is depicted as a positive consciousness and an assumption about an individual's physical condition.



- *Spiritual wellness* is the ability to maintain positive awareness of significance and intention in life, or believing in a unifying power as an assimilative force between the mind and body.
- *Social wellness* is the experience of having support at hand from family and friends in the midst of challenging situations and the assumption that an individual is a valued provider of support.
- *Emotional wellness* is described as the capability of having a confident self-identity and an awareness of a positive self-regard. A secure self-identity and positive self-regard are both aspects of a positive self-esteem.
- *Intellectual wellness* may be depicted as an optimal amount of intellect-stimulating activity, instigating a person to become internally energised.



**Figure 2.4: The Wellness Model (Adams, Benzer & Steinhardt 1997: 210)**

Adams et al.'s Wellness Model confirms that psychological wellness is multi-dimensional, although this model does not assume that interaction between the various elements occurs, as is the case with the models of Seeman (1989) and Witmer and Sweeney (1992). A very important contribution of Adams et al.'s Wellness Model is that it substantiates the fact that psychological wellness is an evolving process, which is continuous on a daily basis and not an inflexible condition/phenomenon.

#### 2.4.2.5 Compton's model

Compton (2001) asserts that psychological well-being is achieved through a tripartite model which consists of subjective well-being, personal growth and other-centred religiosity. Compton (2001: 491) states that in a quest to attain improved psychological well-being, a person may:

- focus on immediate social realities and the use of mutually supportive interpersonal relationships to enhance self-esteem
- pursue an existential search for the actualisation of the authentic or real self
- pursue self-renunciation and other-centred compassion within a religious context

Compton (2001) acknowledges that a relationship exists between the friction that people experience in their pursuit of happiness and achievement of the good life. In Compton's (2001) opinion, the three autonomous factors involved in the achievement of complete psychological wellness appear to be dependent on each other and must include a stable sense of identity.

## 2.5 SUMMARY

After using the five models discussed above to study the development of the concept of psychological well-being over the past two decades, the researcher concludes that psychological well-being is a multi-dimensional concept which includes the emotional, physical, intellectual, social and spiritual aspects of being human. Moreover, these aspects of human life do not exist in isolation, but are inter-related with one another and have an influence on one another. Lastly, a characteristic of psychological well-being noted by the researcher is *flexibility*. This flexibility of psychological well-being implies that the same individual may experience both psychological 'wellness' and 'unwellness', depending on different circumstances, emotions and experiences during his or her lifetime.

Chapter 2 was aimed at elucidating the term 'obesity' and its causes, as well as the term 'adolescence'. Different models and explanations of psychological well-being were studied in an effort to highlight the multi-dimensional facets of psychological well-being.

In Chapter 3 attention is focused on the research method chosen. The tests and methods applied to the subjects (participants) are explained and their rationale with regard to the research topic.

## CHAPTER 3: EMPIRICAL STUDY

### 3.1 INTRODUCTION

Chapter 3 explains the empirical aspects of this research study. The first section briefly reiterates the research question and the research aim. Attention is also given to the research methods and media applied, and the chapter includes an in-depth discussion of each participant's test results.

### 3.2 RESEARCH QUESTION

As mentioned in Chapter 1, the full extent of obesity's impact on an adolescent's psychological well-being has not been explored completely. It appears that various research studies have obtained contradictory results about the impact of obesity on the psychological well-being of the adolescent learner. This led the researcher to believe that it would be of value to study this phenomenon in depth. As a result, the following question was formulated: What is the impact of obesity on the psychological well-being of the adolescent learner?

### 3.3 RESEARCH METHODS

According to De Vos (1998), there are two primary research methods that a researcher can apply, namely the qualitative research method and the quantitative research method. They also say that it is possible to combine a qualitative research method with a quantitative research method. The two research methods are discussed below.

- **The qualitative research method**

De Vos (1998) describe a qualitative research method as the application of a methodology in which the procedures are not precisely prescribed. Other characteristics of a qualitative research method include a higher possibility of a vague scope and the implementation of a more philosophical mode of functioning.

A basic view of qualitative research is that it explores the *how* as well as the *why* of decision making in human behaviour, not only the *when*, *what* and *where*. This research method results in a comprehensive understanding of the motives that manage human behaviour. A qualitative research method relies on four techniques to obtain information, namely participation in setting, direct observation, interviews, and analysis of documents and materials ([http://en.wikipedia.org/wiki/Qualitative\\_research](http://en.wikipedia.org/wiki/Qualitative_research)).

- **The quantitative research method**

According to De Vos et al. (1998), a quantitative research method implies that the research is more overtly controlled and very much formalised, more closely resembling the methods applied in the physical sciences and having a scope that is more specifically stipulated.

A quantitative research method entails the methodical technical examination of quantitative characteristics and phenomena, as well as their interactions. The aim of quantitative research is to acquire and implement arithmetical models, theories and/or hypotheses concerning natural occurrences. Vital to quantitative research is the method of measurement since it supplies the essential relationship between empirical observation and mathematical expression of quantitative interactions ([http://en.wikipedia.org/wiki/Quantitative\\_research](http://en.wikipedia.org/wiki/Quantitative_research)).

- **Differences between qualitative and quantitative research methods**

The prominent differences between the methods are shown Table 3.3. It is important for the researcher to be familiar with these differences in order to be able to make an informed decision about the research method appropriate to the current study.

For the purpose of this study, the researcher decided to apply a qualitative research method in an effort to obtain the most recent and first-hand information. The following factors were considered in choosing a qualitative research method.

- The characteristics of the exploration media are more applicable to the use of a qualitative research method.
- The researcher would make use of one quantitative test during this study. The interpretation and scoring of the Adolescent Self-Concept Scale would be applied qualitatively throughout this research, thus limiting the quantitative impact of this measuring instrument on the test results.

**Table 3.3: Comparison of qualitative and quantitative research methods (De Vos (Ed.) 1998: 242-243)**

<b>Qualitative research method</b>	<b>Quantitative research method</b>
Uses an inductive form of reasoning: develops concepts, insights and understanding from patterns in the data.	Uses a deductive form of reasoning: collects data to assess preconceived models, hypotheses and theories.
Uses an emic perspective of inquiry: derives meaning from the subject's perspective.	Uses an etic perspective: the meaning is determined by the researcher.
Is idiographic: thus aims to understand the meaning that people attach to everyday life.	Is nomothetic: aims to objectively measure the social world, to test hypotheses and to predict and control human behaviour.
Regards reality as subjective.	Sees reality as objective.
Captures and discovers meaning once the researcher becomes immersed in the data.	Tests hypotheses that the researcher starts off with.
Concepts are in the form of themes, motifs and categories.	Concepts are in the form of distinct variables.
Seeks to understand phenomena.	Seeks to control phenomena.
Observations are determined by information richness of settings, and types of observations used are modified to enrich understanding.	Observations are systematically undertaken in a standardised manner.
Data are presented in the form of words, quotes from documents and transcripts.	Data are presented by means of exact figures gained from precise measurement.
The research design is flexible and unique and evolves throughout the research process. There are no fixed steps that should be followed and cannot be exactly replicated.	The research design is standardised according to a fixed procedure and can be replicated.
Data are analysed by extracting themes.	Data analysis is undertaken by means of standardised statistical procedures.
The unit of analysis is holistic, concentrating on the relationships between elements, contexts, etc. The whole is always more than the sum.	The unit of analysis is variables which are anatomistic (elements that form part of the whole).

- The researcher would also made use of expression media. Movements of the human body in a picture drawn by the participant are considered to be expressions; therefore these expressions may be identified since they provide evidence of forms of behaviour. Expressions can be noted from the attitude of the person, as well as from gestures like facial expression, motor disorganisation and expression by portrayal. The expression media applied for the purposes of the study were: draw-a-person and kinetic family drawing.

- The researcher would incorporate some projection media in this study as well. Projection media can be described in a nutshell as the projection of some aspects of the self onto the picture/object, thereby freely expressing unconscious in the guise of artistic/picture interpretation. The following projection media were used to obtain information for this research: incomplete sentence bank, three wishes and using a metaphor.
- Due to the requirements of this research, there is a limited amount of space to record the investigation results.
- A limited number of participants would be used to investigate this phenomenon since the researcher would be obtaining copious and descriptive information from each participant.

### **3.4 MEDIA USED**

#### **3.4.1 Draw-a-person (DAP)**

- **Rationale**

Draw-a-person (DAP) has been used to evaluate or indicate an individual's personality and/or intellectual functioning since the 1920s. DAP also conveys a lot of information about the person's personality. Meaning can be derived from both the content, which refers to the symbolic meaning, and structural aspects like line quality, position and size. In short, DAP is a psychological projective personality or cognitive test used to evaluate children and adolescents for a variety of purposes (Schildkrout, Shenker & Sonneblick 1972).

- **Aim**

The researcher used DAP test since it is a good method for exploring the world of the child, or in this case the adolescent. This test is easy and simple to administer, and creates a non-threatening environment for the participant.

- **Instructions**

The participant is requested to draw a picture of a person. The researcher should prevent the drawing of a stick person or a head alone (Leibowitz 1999).

### **3.4.2 Three wishes**

- **Rationale**

The three wishes test is applied to gain insight into the internal processes in both children and adults. These processes include a person's thoughts, wishes, hopes and the perceptions of the self. The wishes are considered to provide clues to the respondent's emotional life, also providing an opportunity to obtain information about the individual's sense of self and others, in a non-threatening environment (Dykens, Schwenk, Maxwell & Myatt 2007: 51)

- **Aim**

In an effort to establish whether the participants had any specific needs, desires and wishes, the researcher used the three wishes test as an evaluation medium.

- **Instructions**

The participant is requested to write down on a piece of paper provided what he or she would wish for if he or she could have any three wishes come true (Dykens et al 2007: 51). The participant is also requested to give the reason for each of the three wishes on a separate piece of paper provided.

### **3.4.3 Kinetic family drawing (KFD)**

- **Rationale**

Burns developed the kinetic family drawing in 1982 as a personality assessment technique ([http://en.wikipedia.org/wiki/Kinetic\\_family\\_drawing](http://en.wikipedia.org/wiki/Kinetic_family_drawing)). The characteristics of the drawing, such as the absence of family members, consistency with reality, alterations by the child, the placement of family members, the absence of specific body parts, erasures, elevated figures and so forth, are all considered during the interpretation of this drawing.

- **Aim**

The researcher used the KFD technique in an effort to establish how each of the participants functions within his or her family system. Another purpose of using the KFD was to determine whether the participant experiences himself or herself as an involved, active part of the family.



- **Instructions**

The participant is requested to draw a picture of a family where everyone is busy doing something. The participant is reminded again to make everyone do something, some kind of action (Burns & Kaufman 1971).

### **3.4.4 Incomplete sentence bank (ICSB)**

- **Rationale**

The foremost purpose of the incomplete sentence bank is to diagnose character. This test is used mainly for screening purposes and further investigation is required to confirm the conclusions. The total score of the ICSB is also an indication of adjustment, with a total score of 135 and higher being indicative of maladjustment. This test is applicable to both children and individuals on a college level (Lessing 2006).

- **Aim**

The researcher decided on using this particular test because it provides an indication of a person's own wishes, desires, fears and attitudes. Other aspects the researcher considered in choosing the ICSB are that there is no time limit for completion, correct and incorrect responses do not exist, and there is no real pressure for immediate association, thus creating a safe and relaxed atmosphere for the participants.

- **Instructions**

The researcher read the printed instructions to each of the candidates. She stressed that they were to complete all the items. They were also informed that there are no correct and incorrect responses to any of the items (Lessing 2006).

An example of an empty Incomplete Sentence Bank (ICSB) form has been included as Annexure A.

### **3.4.5 Metaphor**

- **Rationale**

A metaphor is one way for an individual to describe himself or herself, or his or her life. Metaphors can be used to explain a person's world and they may even reflect how people live their lives. When a metaphor is applied, it can be assumed that one subject or object has the same characteristics as the other subject or object (Metaphor, 2008).

- **Aim**

The researcher chose to make use of a metaphor to establish how the participants view themselves, as well as to obtain information about their personalities and characteristics. This information was obtained without the researcher having to ask the various participants direct questions, thus again putting some distance between the content and the individuals to provide a non-threatening and safe test environment.

- **Instructions**

The participant is requested to describe himself or herself as an object. Each participant is also instructed to think carefully about the object's characteristics and to compare these with his or her own characteristics. The participant is told to write these characteristics down on the paper provided and if he or she can find a picture in a magazine depicting his or her object, the participant is allowed to include this picture on the answer sheet provided (Metaphor, 2008).

### **3.4.6 Adolescent Self-Concept Scale**

- **Rationale**

Self-knowledge is an important task which each individual has to obtain. This self knowledge encompasses more than knowing your own name and recognising your own face in the mirror; it is also an awareness of your physical and psychological capabilities, including your limitations. Thus the aim of the Adolescent Self-Concept Scale is for an individual to develop various conceptions of himself or herself in all facets of life, creating self-knowledge through self-disclosure (Vrey & Venter 1983).

- **Aim**

In an effort to obtain a specifically South African standardised evaluation medium to measure the psychological well-being of adolescents, the researcher contacted various psychometric institutions, namely Careers.co.za in Pretoria and Jopie van Rooyen in Johannesburg. Both these institutions were unable to provide the researcher with such a test. The researcher then decided to undertake Internet searches, which were also unsuccessful in providing such tests. Due to the fact that psychological well-being is a multi-faceted concept, it was important to apply a test that would provide scores in the various facets of human life. The researcher then decided to use the Adolescent Self-Concept Scale from Vrey and Venter (1983) since it is possible to derive a physical self, psychological self, familial self, social self, ethical self and self-critique from this test.

A brief explanation of each of the facets of the self-concept identified by Vrey and Venter (1983) follows:

- The **physical self** refers to the self of the individual in relationship to his or her body.
- The **psychological self** implies the self within the person's own psychic relationships.
- The **familial self** represents the self of a person situated within family relationships.
- The **social self** denotes the aspect of the self involved in social relationships.
- The **ethical self** implies that the self is in relationship with morality.
- The **self-critique** indicates that the self also consists of so-called 'negative characteristics'.

- **Instructions**

The researcher explains to each participant that contrasting descriptions of two individuals are provided under A and B. The researcher instructs the participant to read each description and compare each of the descriptions with himself or herself. Then the participant has to decide which of the two descriptions correlates the most with himself or herself. He or she is then instructed to make a cross on one of the descriptions – A or B only. Each of the participants is also informed that all the items should be answered (Vrey & Venter 1983).

- **Reliability**

In connection with reliability, Vrey and Venter (1983: 13) mention that "under the concept of reliability we are concerned about the accuracy with which a score represents the status of an individual in whatever aspect the test measures him." They also state that no test can serve as a fully reliable measurement instrument, even if the test requirements are meticulously controlled. A way to increase test reliability is to create a uniform and standardised test environment, instruction time limits, and a uniform relationship between the tester and test taker. Taking these measures will decrease error variance and increase reliability.

The Kuder-Richardson formula was applied to establish the reliability of the Adolescent Self-Concept Scale (Vrey & Venter 1983):

$$K - R_{20} r_{tt} = \frac{k}{k - 1} \frac{[1 - \sum s^2g]}{Sx^2}$$

- K = total items
- s<sup>2</sup>g = variance of items
- Sx<sup>2</sup> = test variance

- **Validity**

According to Vrey and Venter (1983), the construct validity is of the utmost importance for an instrument like the Adolescent Self-Concept Scale. The construct validity is established through the theory on which a specific test is based. Vrey and Venter (1983) note that in order to establish the validity of such a test, the specific test scores should be correlated with the results of other, similar tests of which the construct validity has been proved, and then calculated for the Adolescent Self-Concept Scale.

Since the interview is an important part of the qualitative research method, the researcher applied the interview during the evaluation process to gain more information and to verify the participant's responses. An informal initial interview was also introduced in order to establish a relationship with each participant. According to the UNISA Study guide (2002), the interpretation of non-standardised tests like projection media and expression media may be subjective. It is therefore the responsibility of the test administrator to validate the test results. This could be achieved by making a comparison between the test results and the interview results, for example.

Burns and Kaufman (1971) highlight the fact that the use of drawings alone might be relatively deceptive. Thus it is important to validate the meaning of the applied drawings through other sources, such as the interview. Schildkrout et al. (1972) reinforce this by asserting that projection media, especially drawings alone, may not be used to diagnose a client. Projection media should be used only to determine the need for further intensive studies of the client since they may indicate a possible problem. A complete clinical study is necessary to reach a diagnosis for a client, of which the interview forms an integral part (Schildkrout et al. 1972).

### **3.5 CHOOSING APPROPRIATE PARTICIPANTS**

Taking the key words of the research problem into consideration, the researcher established the following requirement criteria to identifying appropriate participants:

- Each participant should fall within the chronological age category of adolescence, which is between 12 and 18 years of age for the purpose of this study.
- The term 'learner' implies that each of the participants has to be currently enrolled in and attend a private or public school.
- The next requirement refers to each participant's weight. For the purpose of this study, a BMI of 30 and higher qualifies a participant as being obese and makes him or her an appropriate choice for this study.
- The last requirement set by the researcher was that the participant group should consist of both females and males, which would enable the researcher to establish if there are prominent differences between the two genders with regard to obesity.

After finalising the participant criteria, the researcher approached various schools in her environment in the search for appropriate candidates. The researcher then approached identified participants and informed them about the research project. The various participants were also informed that due to the sensitivity of the research problem, their identities would not be made public or used in this study. The researcher obtained permission from each participant and established contact with the parents to obtain parental consent. The next step was to arrange dates with the specific schools involved to conduct the assessments during school hours that did not interfere with lesson presentation time. Due to the requirements of this dissertation, restricted space is available to report all the findings and this had an influence on the number of participants. The researcher decided to limit the number of candidates to five since a rich and large amount of information is obtained from each participant through using the different evaluation media.

A meeting was held with each participant individually in a secure, private and quiet environment in an effort to maintain confidentiality and to avoid interruptions during the

evaluation process. The participants were seen for three sessions over a period of three to four weeks, depending on their availability.

The researcher used the first session to introduce herself, to establish a relationship with the participant and to inform him or her about the intended research process and its purpose. Biographical information on each participant was also collected during the first session.

During the second session, each participant was weighed and his or her height was measured in order to enable the researcher to calculate each participant's BMI. The Adolescent Self-Concept Scale was then implemented and this was followed by the implementation of the metaphor.

The third session was used to complete the rest of the evaluation media. The participant was requested to complete the draw-a-person, three wishes, kinetic family drawing and lastly the incomplete sentence bank. Feedback sessions were organised if the researcher had sustainable reason for concern about a specific participant. The researcher will also make the applicable referrals to other professionals if required.

In the following sections each participant's results for the various evaluation media applied are discussed. The researcher will also interpret the responses, as well as deduce various hypotheses regarding each of the participants.

### **3.6 RESEARCH RESULTS**

All the answer sheets and responses from participant A are included in Annexure B in the following order:

- Draw-a-person
- Three wishes
- Reason for each wish
- Kinetic family drawing
- Incomplete sentence bank score sheet
- Metaphor
- Adolescent Self-Concept Scale

### 3.6.1 Participant A

Age:	15 years
Grade:	Grade 9
Gender:	Female
Weight:	86 kg
Height:	1,64 m
Body Mass Index:	32 (86/1,64 m <sup>2</sup> )
BMI classification:	Grade 2 obesity

- **Draw-a-person**

The participant drew a picture of a female person, which indicates that she identifies with her gender. The person is slim and dressed in a mini-skirt which may imply that participant A is acutely aware of her weight problem, as well as expressing the desire to be sexually attractive, thin and attractive. The fact that the participant drew a thin person implies that she is not satisfied with her physical appearance, which may be indicative of a low body image, impacting negatively on her self-concept.

Another aspect to take note of is the amount of attention that the participant pays to the hair of the person in the picture. The hair is indicated by dark lines, which are possibly a sign of underlying aggression towards someone, something or even herself. The fact that the person is looking from underneath her fringe substantiates the aggression implied by the dark lines used to draw the hair. Other possible interpretations of the person in the picture looking from underneath her fringe might be a suspicious nature or the fact that the person is not trusting. An additional consideration is that aggression serves as a defence mechanism for this participant, which provides protection on an emotional level. The participant may feel that it is necessary to protect herself against constant comments and gossip about her physical appearance.

The feet of the person are turned towards the side, suggesting that the participant has the need to get away, possibly referring to the participant's personal dissatisfaction with her obesity. She might also feel trapped in her overweight body since the person in the picture is also on her way to "the club".

The fact that the person is on her way to the club also possibly expresses the need of participant A for more social interaction with her peer group. The person in the drawing is

reaching out to other people for social interaction, implying that she experiences loneliness.

Both arms of the person in the drawing are behind her back. This highlights the fact that the participant might be hiding something, such as how she really feels about her weight problem or how comments and gossip from peers about her weight are hurting her feelings. The participant may present a front of happiness, joy and serenity for everybody to observe on the outside, while on the inside she feels sad, angry and lonely. The latter might imply that the participant experiences being socially isolated or not connected to others.

The arms behind her back may also be indicative of the participant feeling stuck and helpless at the moment. She may have tried various methods or diets to loose weight but been unsuccessful each time, not being able to control her weight gain.

Participant A also wrote that the person in the drawing is three years older than what she is at the moment, possibly referring to an expectancy that things will improve in the future and that her weight issues will be resolved within the next few years, or this might indicate a need to get out of her uncomfortable present situation.

- **Three wishes**

<i>First wish</i>	<i>Second wish</i>	<i>Third wish</i>
I wish I could turn back time, to the time before my parents started fighting.	I wish I could loose weight quickly and be thin and sexy.	I wish I could meet my true love.

It can be inferred from the three wishes that the divorce of the participant's parents had a significant impact on her. Emotionally, she was extremely vulnerable, in pain and lonely. During this difficult period of her life her friends withdrew from her and her sense of belonging and security were removed. Therefore it may be concluded that she felt that she stood alone during the divorce with no social support from her friends and thus she had to deal with the burden and pain of the divorce on her own.

The second wish of the participant refers to her physical appearance and weight, emphasising again the negative emotional impact that being overweight has had on her.



The participant mentioned that people frequently refer to her weight, implying that she is sensitive about her weight and is aware of her weight problem. There is also a sense of the participant feeling helpless since she mentions that she tries unsuccessfully to lose weight, adding to her frustration levels. The participant's expectations regarding the solution to her weight problem might also be unrealistic since she wants to lose the weight quickly – in a sense like using a magic formula – and then everything will be perfect. This implies unrealistic, wishful thinking because the participant may think that fixing her weight will fix all the other problems she is experiencing in her life.

The last wish of the participant refers to finding her true love and being happy together with this person. This may be a confirmation of the fact that she is currently feeling lonely and that nobody really understands her and what she is going through at the moment. It may also be an expression of the need for unconditional acceptance, understanding and emotional support since she is currently not experiencing such support and understanding among her circle of friends. Lastly, being in a steady relationship provides a sense of belonging and emotional security, both of which the participant felt she lost when her parents got divorced.

- **Kinetic family drawing**

In participant A's drawing, each family member is smiling, which may indicate that the family is a happy family in general. The participant drew her mother busy cleaning the house, which may imply that her mother is the caretaker of the family as well as the provider. The other adult in the picture is her mother's boyfriend who is busy working, possibly implying that he took over the role of father in the family and helps to fix things. It appears as if children play a prominent part in this family since the same amount of space is given to the adults and the children.

The fact that participant A drew herself larger than the other family members may imply that she is aware of her large physique in comparison with her family members. It is also possible that the latter might also be indicative of a need to be noticed or a need for attention. She is busy singing in the sketch, implying that she probably has the need for attention or the need to be the centre of attention, the need for appreciation or even that singing is a true passion of hers. Participant A portrays herself as a slim figure in a mini-skirt again, as also seen in the draw-a-person sketch; this may be indicative of an unrealistic body image, wishful thinking or unrealistic expectations.

Another important point worth mentioning is the fact that the participant did not include her biological father in the kinetic family drawing. This may possibly indicate that she does not experience her father as actively involved in her life or that she is not close to her father on an emotional level or lastly, that her mother's boyfriend has 'replaced' her father in a sense.

- **Incomplete sentence bank**

According to participant A, the order of the factors which have the most prominent influence at this stage of her life are firstly, her peers, then herself and thirdly her parents. This emphasises the importance of the peer group and peer pressure during adolescence as a developmental stage.

Repetitive themes arising from the incomplete sentence bank are social interaction with peers, as well as the importance of having a circle/group of friends, pointing to the significance of a sense of belonging and fitting in. Expanding on the importance of peers is the fact that social rejection and not being accepted are also implied and dreaded by the participant.

Participant A also expressed the desire to be more popular among adolescents of the opposite sex. She believes that her weight is the main reason for not receiving a lot of attention from boys. The participant wants to perform and maybe has the need to be noticed, implying that she is experiencing that she is not significant enough.

Another theme derived from the incomplete sentence bank is that participant A expresses dissatisfaction with regard to her physical appearance and realises that she is overweight. Possibly in an effort to compensate for her feelings of inferiority/disappointment, she emphasises the fact that it is important to do things that she enjoys, helping her to feel better or to be distracted from the negative feelings.

The participant's parents got divorced a few years ago and the emotional pain caused by this has had a significant impact on her, although she states that she has dealt with this incident in her life and is coping well with the current situation.

The last theme noticed by the researcher involves future expectations. Participant A has already started to consider various career possibilities for herself. She expresses the hope of a good and improved future. This may indicate dissatisfaction with her current situation of being overweight and feelings of insecurity.

- **Metaphor**

Participant A chose a radio as her metaphor. The first characteristic she attributed to the radio was that a person can adjust its volume. This may disclose that the participant can be loud, but that she also has a gentle and sensitive side to her personality. She also noted that the radio has a large variety of music to play, possibly indicating that she has a need for constant change or that she is frustrated as well as bored with her current situation.

The next characteristic of this radio is that it is cold at the beginning but warms up when used, perhaps pointing to the fact that the participant is cautious about exposing herself emotionally, especially at the beginning of a new relationship. The caution continues until she is certain she can trust the person and then she reveals her true self. An alternative interpretation could be that she is shy and withdrawn when she meets somebody new and as she gets to know the person, she opens up.

Lastly, this radio may be considered as conversation, perhaps indicating that she feels lonely and has the need to interact with other people. One more possibility is that social interaction with other human beings is very important to her and that she enjoys socialising with others.

- **Adolescent Self-Concept Scale**

Self-concept score achieved:	Low self-concept (Stanine-3)
Physical self:	Below average
Psychological self:	Average
Familial self:	Average
Social self:	Average
Ethical self:	Average
Self-critique:	Above average

Participant A achieved a below-average score on the Adolescent Self-Concept Scale with regard to her physical self, indicating that she is dissatisfied with her physical appearance and size. It can also be deduced from the above-average score she achieved on the sub-scale self-critique that she is overly critical towards herself and judges herself harshly.

- **Summary**

In conclusion, it can be deduced that for participant A her peers and friends, as well as their opinions and her interaction with them, are extremely important. The participant

experiences social rejection and this makes her feel lonely. This loneliness is accentuated by the fact that she feels that nobody truly understands her. She also mentions the profound impact that other people's comments about her being obese have had and still have on her emotionally. She is also wearing a mask by pretending that others' comments about her physique do not bother her and this facade is prolonged by the fact that she feels that she herself has to pretend that her being obese does not bother her or that it has no emotional impact on her. Participant A is fully aware of the fact that she is very overweight and this impacts on how she feels about and sees herself. She is sensitive about her physical appearance and desires to be slim and sexy to attract attention from the opposite gender. The desire to escape from her current situation (being obese) and its impact, as well the fact that in the near future her obesity will disappear and therefore all her problems along with it, are unrealistic expectations. All this is having a negative impact on the participant's body image and her self-concept is being influenced negatively.

### **3.6.2 Participant B**

All the answer sheets and responses from participant B are included in Annexure C in the following order:

- Draw-a-person
- Three wishes
- Reason for each wish
- Kinetic family drawing
- Incomplete sentence bank score sheet
- Metaphor
- Adolescent Self-Concept Scale

Age:	14 years
Grade:	Grade 8
Gender:	Female
Weight:	83 kg
Height:	1,49 m
Body mass index:	37 (83/1,49 m <sup>2</sup> )
BMI classification:	Grade 2 obesity

- **Draw-a-person (DAP)**

The first thing that draws one’s attention is the fact that participant B did not draw a face, possibly suggesting that she does not consider herself to be unique or that she does not accept her physical appearance at all. It should also be noted that the sketch portrays a slim, feminine person, which may point to unrealistic expectations or even that it is easier to avoid reality than to face her weight problem or a low self-acceptance.

The participant also drew a much older person, which might imply that she is hoping that things will change for the better in the future, especially with regard to her weight. She expresses the desire to help other people and to be valued by others, conceivably pointing to the need to do something for somebody else because it might make her feel better about herself, or a need to be appreciated by people. Another probability with regard to assisting others is that the participant herself may be in need of help or even in need of being rescued.

Both the person’s arms in the sketch are behind her back, perhaps meaning that the participant is trying to hide something, such as how she really feels about her body being overweight, pretending to others that it does not really matter to her when in fact she is troubled by her weight. Lastly, the participant did not draw any feet for the person, which might indicate that she feels stuck in her current situation, and feels helpless as well as disheartened, with no way out.

- **Three wishes**

<i>First wish</i>	<i>Second wish</i>	<i>Third wish</i>
A beautiful body and a beautiful face.	To become famous.	A lot of money.

Participant B’s first wish was to have a beautiful body, in other words to be slim, as well as a beautiful face, perhaps implying that she has not accepted herself and the way she looks or that her being obese is a real problem to her on an emotional level. This might also indicate that she is currently avoiding reality and that her expectations about her physical looks are unrealistic.

Secondly, the participant wished to become famous, perhaps representing the need to be noticed and to receive attention from others, as well as to be admired and accepted by

other people. The wish to be famous might also refer to the fact that if others accept and admire her, that may lead to her own self-acceptance.

Lastly, she wished for money to acquire pretty clothes, again insinuating that she would like to change her appearance and also that she is not happy with the way she looks. This last wish again reflects that she is dissatisfied with her physique and desires to improve her appearance.

- **Kinetic family drawing (KFD)**

All family members are present in this drawing, perhaps indicating that each member of the family is important and a valued part of this family system. The whole family is also taking part in a single activity, namely taking a family photograph, which probably indicates that there is good interaction between the family members and that the individuals enjoy spending time with each other and doing things together. The four smiles may mean that this is a happy family and reinforces the conclusion that they are happy to be together.

The family members are also sketched in a hierarchy of chronological position within the family, perhaps revealing that each member has a specific place in the family and a specific role to fulfil within the family. This may also indicate that the participant feels that she has a place where she belongs, fits in and is accepted.

- **Incomplete sentence bank**

According to participant B, the most prominent influences on her at the moment are herself, then her peers and lastly her school environment. This highlights the prominent role that the peer group plays in an adolescent's life.

One of the themes from the incomplete sentence bank is the desire to be popular among peers of the opposite gender, which may indicate her need for attention and to be noticed. Another possible meaning that could be attributed is her need to feel loved, valued and accepted by somebody special. The fact that the participant wants to be an actress could confirm the notion that she has a need for attention and to be noticed by people.

Participant B frequently refers to the impact that her weight gain has had on her life, probably referring to the fact that being overweight has a limiting effect on her social interaction with peers. This also implies a need for social acceptance by her peers.

However, she is currently experiencing social rejection, which has had a negative impact on her on an emotional level, as well as on her body image.

The participant states that she experiences feelings of inferiority with regard to her physical appearance, which might reveal a heightened awareness and sensitivity about her weight difference in comparison with other adolescents in her age group. It may also imply that she feels that because of her weight she does not belong or fit in with her peers, alienating her even more from the social interaction which she so desires.

Another theme evident from the incomplete sentence bank is that the participant is starting to think about her future and a future occupation, perhaps suggesting that she would like to get through this phase in her life as quickly as possible, or it could be an indication of the process of emotional maturation, which is normal for adolescents. Participant B also expresses the expectation of a better and improved future, probably suggesting that she is not truly happy with herself and her situation at the moment, or it might be an unrealistic expectation since she does not mention taking any actions to achieve this goal.

The last theme involves school and its influence on the participant. Participant B highlights the fact that she experiences stress at school since she has a fear of academic failure, which could reveal that she feels she is not coping with the workload at the moment, or it may point to the fact that academic failure will be the cause of even more social rejection by her peers.

- **Metaphor**

Participant B chose a bear cub for her metaphor. She starts by describing this bear cub as looking out for and protecting his or her family. This may suggest that she has the need to be looked after and taken care of. Another possibility is that participant B has a need to be protected from harm and being hurt emotionally.

Giving nice 'bear hugs' is the next trait of this bear cub, which could suggest that she has the ability to give a lot of love. Another way of looking at this characteristic could be a need for physical contact, allowing her to experience the feeling that she is loved and special.

- **Adolescent Self-Concept Scale**

Self-concept score achieved:	Average self-concept (Stanine-4)
Physical self:	Average
Psychological self:	Average
Familial self:	Above average
Social self:	Average
Ethical self:	Average
Self critique:	Average

According to the Adolescent Self-Concept Scale, participant B achieved average scores on all the various subscales, except for familial self which scored above average. This above-average score for familial self might indicate that the participant perceives herself as a valued and important family member. It might also mean that she has established close relationships with all her family members and that she feels safe and cherished in her family environment.

- **Summary**

To summarise, it may be concluded that for participant B, the fact that she is obese and the impact that obesity has on her is her biggest concern at the moment. She rejects her own physical appearance and wants to be beautiful, as well as attractive to boys. The participant is not satisfied with the way she looks and is fully aware of her physical shortcomings. She expresses the desire to change herself to become socially more acceptable; thus she is currently experiencing rejection from her peers. Participant B feels inferior in comparison with her peers and is of the opinion that her being obese is the cause of her limited social interaction. She also has to hide her true feelings and the impact that being obese has on her emotionally by pretending that her weight issues do not bother her. The participant wants to help others, possibly because it will help her to gain acceptance from others or because it will enable her to feel good about herself and therefore accept herself. She feels stuck in this 'unacceptable' body of hers and possibly wants to be helped herself. It is important for participant B to have good family relationships since she is accepted in the family context and experiences a sense of belonging in her family. She also has a fear of failing scholastically, making it another area in which she could experience herself as a failure. One last comment would be that she has unrealistic expectations for the future in the sense that she thinks that her obesity will disappear when she reaches adulthood and therefore everything else in her life will be fine. All these findings substantiate the negative impact that obesity has on an adolescent's social life, self-concept, body image and emotions.



### **3.6.3 Participant C**

- Due to the limits on the length of this dissertation, a complete discussion of only participant C's results is given in Annexure D and all the answer sheets and responses are included in Annexure E.

### **3.6.4 Participant D**

- A summary of participant D's results is given in Annexure F.

### **3.6.5 Participant E**

- A summary of participant E's results is given in Annexure G.

In the following sections an attempt will be made to present a holistic interpretation of the participants' evaluation results and to make general deductions from the information obtained.

## **3.7 INTERPRETATION OF RESULTS**

- Firstly, it can be stated that there is a noticeable gender difference between male and female adolescents in the pressure experienced to be thin and physically attractive. Female adolescents are more vulnerable and susceptible to being influenced by their peers. They also burden themselves by being overly critical about their physical appearance.
- Obese female adolescents are also more likely to compare their physical appearance with that of their peers, which in turn influences their expectations about their bodies and weight and is likely to make these bodily expectations more unrealistic.
- Obese adolescents are usually exposed to being teased about their weight and also receive insensitive comments about their weight from their peer group. This teasing and the insensitive comments have a negative effect on how the obese adolescents perceive themselves.
- An added complication of being an obese adolescent seems to be the fact that these adolescents have to 'wear a mask' and pretend that their weight and

people's comments about their weight do not touch them emotionally, whereas in reality they are deeply hurt. This facade becomes a defence mechanism for these adolescents in an effort to protect themselves.

- Another aspect to consider is social rejection from the peer group. It appears that if a male adolescent is obese, the chances of him experiencing social rejection are less likely than with an obese female adolescent. This means that it is socially more acceptable for a male adolescent to be obese than for a female adolescent.
- All the participants stressed the fact that peers and friends play a prominent role in their lives. They expressed the need for social interaction and developing sustainable relationships, which in turn will enable them to fit in somewhere and to be accepted.
- All the participants are also acutely aware of the fact that they are overweight and emotionally they are extremely sensitive with regard to their weight problems, which has an influence on their own body image.
- The fact that all the participants have future expectations of their weight problems decreasing or disappearing, without making any plans to achieve this weight loss, could indicate unrealistic expectations with regard to their weight.
- Four of the five participants mentioned that they have the need to help people or to support their friends during difficult times. This need may stem from the fact that they achieve social acceptance and acknowledgement through helping others and, in turn, this positive feedback assists them to feel good about themselves.
- Obese adolescents, like any other adolescents, also experience tension and stress with regard to schoolwork and academic pressure. It is mainly the possibility of experiencing failure that causes tension, which is normal at this stage of an adolescent's life.
- All the participants, with the exception of participant C, experience some difficulty with self-acceptance. The main difference between participant C and the rest of the participants is that participant C has an area where he experiences success, namely hospitality studies (cooking). Therefore it may be deduced that it is

important for an obese adolescent to discover at least one skill or talent that he or she is good at so that the individual can experience success and positive feedback, which may have a positive impact on the obese adolescent's self-acceptance.

- The importance of family and having a place where you fit in and experience unconditional acceptance is important to all the participants.

### **3.8 SUMMARY**

Chapter 3 contains all the information gained during the evaluation process from each participant. It has also scored and interpreted the test results from the participants. The researcher looked for common factors among the participants' results and these were used to make general deductions.

Chapter 4 of the dissertation shifts the emphasis to reaching various conclusions on the research topic. Previous chapters are summarised, the results are interpreted recommendations are made about the research area.

## **CHAPTER 4: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 INTRODUCTION**

This chapter summarises the whole of the research study. It covers both the deductions made from the literature study, and the method and findings of the empirical study. Chapter 4 also covers the various recommendations made on the basis of Chapters 2 and 3.

In addition, the problems experienced during this study are discussed. A final summary of the research study is provided, including a discussion on the findings relating to the problem statement given in Chapter 1. Finally, suggestions are made with regard to topics that can be investigated further.

### **4.2 SUMMARY OF THE LITERATURE STUDY, DEDUCTIONS AND RECOMMENDATIONS**

#### **4.2.1 Summary and deductions with regard to the impact of obesity on the psychological well-being of the adolescent learner**

The research question was: *Does obesity have an impact on the psychological well-being of an individual during the adolescent years?*

The first aim of the literature study was to conceptualise 'adolescence'. This was done by providing various definitions and classifications of adolescence. The researcher also compared the various definitions and classifications of adolescence with each other.

It was found that there are different opinions with regard to the chronological age range considered to be adolescence. Most of the sources regarded adolescence as pertaining to a person's physical maturation, i.e. the period during which a human being's reproductive system becomes active. The majority of researchers are of the opinion that adolescence should be regarded as the period in a person's life between childhood and adulthood. Some researchers consider that adolescence can last up to the chronological age of 25 years.

Researchers are in agreement that adolescence is a period in an individual's life which entails prominent changes in all areas of human functioning. The facets of human life

influenced by these changes are body image, career development, sexual characteristics, sexual interests, self-concept and intellectual development. In other words, adolescence has an impact on every area or facet of the individual's life, making this a stressful experience for the person.

The second aim of the literature study was to conceptualise, classify and describe obesity. Various definitions were sourced and are provided in an effort to gain insight into and knowledge of the causes of obesity among adolescents. The researcher established that obesity has become a worldwide health epidemic. Adolescents' reduced physical activity levels and eating habits, which consist largely of high-fat and high-sugar food intake, contribute to the increasing occurrence of obesity among both children and adolescents. Researchers have found that adolescents spend a lot of time in front of the television and computer, playing games, which has a negative impact on their physical activity levels, thus possibly attributing to some adolescents becoming overweight and obese.

The researcher realised that obesity has both emotional and physical causes, and that some adolescents have a genetic predisposition to become obese. Different degrees and classifications of obesity are provided by the various researchers. These classifications range from overweight (grade 1 obesity) to obese (grade 2 obesity) and lastly morbid obesity. The importance of cultural views about obesity became evident since obesity is acceptable according to some cultures and unacceptable in other cultures.

The researcher found that there are various methods for measuring obesity and arguments both for and against applying specific measurement methods of obesity. These methods are: relative body weight for height and age; Body Mass Index; additional weight-for-height ratios; skinfold thickness; waist circumference; measures of body composition and informal observation. The researcher concluded that Body Mass Index is the most generally accepted and internationally used measurement to establish whether a person is obese. It was therefore decided to use Body Mass Index as the measurement tool to assess the obesity of the participants in this study.

Thirdly, attention was given to conceptualising psychological well-being. This was achieved by considering the development of different models of psychological well-being over the years. The researcher provided multiple definitions of psychological well-being given by a variety of researchers.

It was found that consensus has not yet been reached on the definition of psychological well-being, which it is generally agreed has multi-dimensional characteristics and functions. These dimensions include features of the self like intrapersonal, cognitive and emotional conduct, personal development and spirituality. Other dimensions of psychological well-being pertain to the different domains of human life, such as the occupational, love and interpersonal, social and contextual domains.

The researcher found that these traits and functions operate within an intricate system, as well as interrelated subsystems. Psychological well-being is also flexible and changes with time, place and circumstances. In order for a human being to experience psychological well-being, the various dimensions of this well-being need to be in balance with each other.

The explicit goals of the literature study have been achieved and the relevant aspects of the problem statement with regard to the literature study have also been dealt with.

#### **4.2.2 Recommendations**

According to the literature study, there appear to be contradictory findings on the impact of obesity on the psychological well-being of the adolescent learner. The researcher believes that an in-depth study on this topic would be of benefit to this research field. The information obtained from this study should serve to create greater awareness and sensitivity during interaction and communication with obese adolescents. However, larger numbers of obese adolescents need to be studied at some point in the future. Another aspect to consider is that obese participants from a broad variety of cultures should be involved. This will allow the inclusion of different cultural views on obesity which could vastly enrich the understanding of this phenomenon.

It became evident to the researcher that psychological well-being is conceptualised differently by various researchers. In order to avoid any misconceptions or misinterpretations, it would be desirable for researchers to agree on a general definition of psychological well-being. This definition should include the multi-dimensional facets of psychological well-being. Another aspect that should be incorporated into this definition is the inter-relatedness of the various facets of human life involved within this phenomenon.

From the literature study it became evident that Body Mass Index is the most accurate indicator for establishing whether a person is considered to be obese or not. However,

some differences in weight may be attributed to an individual's bone structure and the gender aspect also accounts for some of the weight differences. The latter two factors should be included in some way during the calculation of a person's Body Mass Index to provide a more holistic evaluation of an individual's weight.

### **4.3 SUMMARY OF THE EMPIRICAL STUDY, DEDUCTIONS AND RECOMMENDATIONS**

#### **4.3.1 Summary and deductions with regard to the impact of obesity on the psychological well-being of the adolescent learner**

Since psychological well-being is a multi-dimensional phenomenon which includes the social, academic, occupational, sexual, physical, familial and emotional spheres of being human, the researcher had to make use of a broad spectrum of tests in an effort to encompass psychological well-being. The tests applied in this study were: the informal interview, which was applied throughout the evaluation process; projection media, including the draw-a-person, the three wishes and the kinetic family drawing; expression media, including the incomplete sentence bank and the metaphor; and the Adolescent Self-Concept Scale which is a quantitative test. However, the interpretation of the results of the Adolescent Self-Concept Scale was done qualitatively.

The researcher also made use of the Body Mass Index formula to establish whether a candidate qualified as being obese. This index was used since it is the least intrusive measurement tool for obesity, with the only measurements required being the person's weight and height. The Body Mass Index is also most widely used internationally and acknowledged as an accurate measurement of obesity.

The following conclusions were drawn from the empirical study:

Obesity does appear to have a definite impact on the psychological well-being of the adolescent learner. This impact has a **negative influence** on the adolescent's psychological well-being. The two domains of human life mainly influenced by obesity are the physical self (body image) and the social self (social interaction and social acceptance).

**Gender** seems to play a prominent role in the impact that obesity has on an adolescent's psychological well-being. The male participants were less prone to making negative comments about their physical appearance, and being attractive to the opposite gender

was also less important to them since they had established and were able to maintain platonic relationships with the opposite sex.

The researcher also noted that it is socially more acceptable for male adolescents to be obese than for female adolescents. It was found that the obese female adolescent is ridiculed and socially rejected more often than her male counterpart. Thus the female adolescent is far more harshly judged on physical appearance than the male adolescent. The obese female adolescents are acutely aware of their weight condition and physical appearance, and want to improve their physique by losing weight. This leads to the development of decreased psychological well-being, especially with regard to the obese female adolescent's body image, self-concept and confidence.

The researcher also realised that **peers** and the ability **to fit in (to belong)** somewhere are of the utmost importance to obese adolescents of both gender groups. This might also imply that social acceptance and interaction are important parts of adolescence as a developmental phase in human life. Thus it may be concluded that being rejected by peers and not being able to fit in have a negative impact on the psychological well-being of the obese adolescent since both these factors play a prominent role during adolescence.

Another factor that has a major influence on the adolescent's psychological well-being and which is an important cause of obesity among adolescents is **today's modern lifestyle**. This includes eating habits, such as the continuous intake of high-fat foods, in combination with a decrease in physical activity levels. Adolescents tend to spend more time in front of the television and computers instead of taking part in physical activities. Thus a higher energy consumption rate and a decreased calorie usage rate contribute to an increase in body mass. This causes feelings of frustration and possible anger towards the self, thus impacting negatively on the adolescent's psychological well-being.

The fact that most obese adolescents experience social isolation may have an impact on their **eating patterns** and **food choices**. It may be that food is being used to provide some kind of emotional consolation or the adolescents may have developed a 'don't-care' attitude and, in a sense, may have given up on themselves and any efforts to reduce their body mass. Unresolved emotional feelings like guilt, frustration, anger and failure should not be ignored. This could have a negative impact on almost all the dimensions of the adolescent's psychological well-being and may have a snowball effect of increased social



isolation, food consumption and body mass, and eventually a decline in the adolescent's psychological well-being.

#### **4.3.2 Recommendations**

The Adolescent Self-Concept Scale is an outdated test instrument. It was developed by Vrey and Venter (1983) more than 20 years ago and needs to be updated to enable it to be more relevant to modern South African adolescents. There is a definite need for the development of a South African standardised test instrument to determine and evaluate the psychological well-being of adolescents. It is important to develop a test that correlates with the cultural diversity of South Africa in order to eliminate culturally biased items, as well as to increase the test's reliability. As part of further studies, the Adolescent Self-Concept Scale may undergo further development, research, standardisation, adjustments and item development, as well as the development of a new set of norms, in an effort to make this instrument more current and relevant to the modern South African adolescent population.

Secondly, a South African standardised test instrument to evaluate psychological well-being appears to be lacking. Various institutions were contacted and not one of them was able to provide the researcher with the name of an instrument that measures psychological well-being among adolescents. The researcher was informed by these institutions that such a test instrument does not currently exist for the adolescent population of South Africa.

The empirical study only included adolescents from a Western culture. This implies that the research findings pertain to only the Western cultural component of South African adolescents. The psychological well-being of adolescents from all the various local cultures, including the African culture, the Asian culture and the Western culture, needs to be evaluated. This will enable the results of future studies to be more representative of the South African race proportions.

Although a vast amount of information was obtained from each candidate, the number of candidates involved was limited due to the requirements of this research study. A larger number of multi-cultural participants would have enabled the researcher to apply the findings to the broader spectrum of cultural diversity for South African adolescents.

#### **4.4 PROBLEMS EXPERIENCED DURING THIS STUDY**

During the literature study the researcher found it difficult to formulate a definition of psychological well-being. It became evident that psychological well-being is a complex phenomenon with various facets and definitions. Apart from this complexity, it also appears that psychological well-being implies different aspects and attributes to different researchers. There is a vast number of different definitions of psychological well-being available in the literature.

Since this research study entails a dissertation of a limited number of pages, the researcher found that she was unable to explore in depth each section of the subject of this study.

It proved difficult to obtain suitable adolescents to take part in this study. Firstly, there was the sensitivity of the topic. Then, the fact that such adolescents are at a fragile developmental phase in their lives contributed to the difficulties experienced by the researcher. Various private practices and institutions were contacted, but most of these were reluctant to give contact details of clients or patients due to the sensitivity of obese adolescents. The latter attempt caused a considerable time delay, especially with regard to the empirical study.

Another aspect that complicated the empirical part of the research study was the availability of relevant literature sources. The researcher struggled to obtain recent literature which provided the goals and rationales of the various projection media and expressive media. She therefore had no choice but to use outdated sources to obtain the information required. Publications on evaluation media also appeared to be outdated, especially with regard to psychological well-being. The search for appropriate sources and tests also resulted in a time delay with regard to this study.

#### **4.5 ASPECTS TO BE FURTHER INVESTIGATED**

The fact that there is a prominent gender difference in social acceptability between obese male and obese female adolescents gives reason for further study. The focus of such an investigation could be on the causes of these gender differences, as well as on the impact that such differences in social acceptability have on obese male and obese female adolescents.

In addition, the impact of social rejection as experienced by obese adolescents during this important developmental phase of human life, into adulthood, could be investigated. The latter could be researched with regard to the long-term impact of social rejection experienced during adolescence owing to obesity.

A possible approach to consider for future investigation would be to gather obese adolescents together in workshops and/or focus groups which would focus on the development of emotional intelligence. Since obese adolescents have to pretend that comments about their weight and physical appearance do not bother them, when they are in fact deeply hurt indeed, workshops with adolescents in the same position may possibly improve their resilience and also provide them with the skills to deal with these negative emotions in a constructive manner. These workshops could also focus on self-knowledge and realistic future expectations because all the participants mentioned unrealistic future expectations with regard to their physical appearance and weight.

#### **4.6 FINAL SUMMARY**

In the light of the problem statement – “Exploring the impact of obesity on the psychological well-being of an individual, during the adolescent years” as stated in Chapter 1 – the following final findings can serve as a summary of this research study.

Body image and physical appearance as experienced by an obese adolescent have a negative impact on the individual’s psychological well-being. Obese adolescents experience their physical appearance as being unattractive and unacceptable in comparison with that of their peers. These adolescents also tend to compare their own body weight/size with that of the rest of their age group, which accentuates their perception of being obese even more.

The peer group and its social acceptance or social rejection has the potential to influence the obese adolescent’s psychological well-being negatively. This refers mainly to the occurrence of demeaning and insensitive comments about the obese adolescent’s physical appearance. Such comments result in obese adolescents experiencing rejection and being hurt on an emotional level by their peers, who are the group that have the most prominent influence on an individual during the adolescent years.

Another aspect to consider is the fact that there is an obvious gender difference with regard to the social acceptability of an adolescent being obese. It appears that it is more

acceptable for a male adolescent to be obese than for a female adolescent. This may also have a negative influence on the psychological well-being of the adolescent learner, especially the female adolescent.

The importance to the obese adolescent of experiencing success in one or more domains of his or her life is highlighted. Any such success appears to assist the obese adolescent to experience self-acceptance and self-acknowledgement to some extent, and also has a positive effect on his or her psychological well-being.

Chapter 4 concludes the final stage of this research study. The main goal of this study, which was to establish the impact of obesity on the psychological well-being of the adolescent learner, has been accomplished. In general, the study has substantiated the fact that obesity has a mainly negative impact on the psychological well-being of the adolescent learner, especially with regard to body image, self-concept and social interaction with peers.

These adolescents are acutely aware of their obese physical appearance, on top of being rejected and teased by their peers. This implies that most obese adolescents are emotionally fragile. Thus it is important to create awareness in schools and communities about the impact of obesity on the psychological well-being of the adolescent learner in an effort to create sensitivity towards and support for these individuals in their struggle with obesity.

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## Annexure A: Example: Incomplete sentence bank

ONVOLTOOIDE SINNETOETS

NAAM: \_\_\_\_\_ SKOOL: \_\_\_\_\_  
STANDERD: \_\_\_\_\_ DATUM: \_\_\_\_\_ GEBOORTEDATUM: \_\_\_\_\_

Deur hierdie sinne te voltooi kan jy aandui hoe jy oor verskillende sake voel. Jy moet met elke sin probeer om jou werklike gevoelens uit te druk. Probeer elke sin voltooi. Maak ook seker dat elke sin wat jy voltooi 'n volsin is.

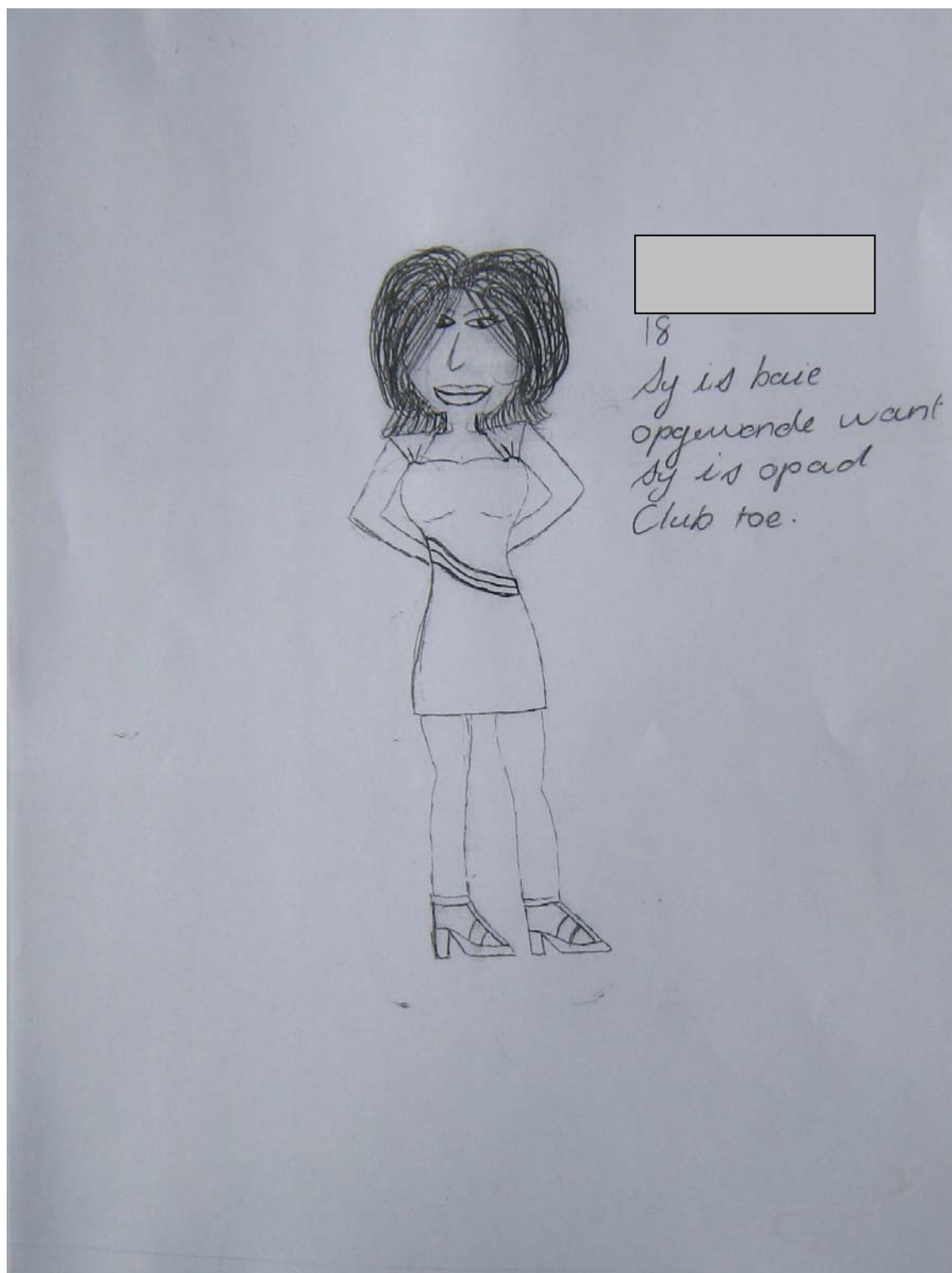
- 1 Ek hou van \_\_\_\_\_.
- 2 Die gelukkigste oomblik \_\_\_\_\_.
- 3 Ek voel \_\_\_\_\_.
- 4 Snags in my bed \_\_\_\_\_.
- 5 Selfs my beste vriend(in) \_\_\_\_\_.
- 6 Ek wil baie graag \_\_\_\_\_.
- 7 As ek dit eendag kan bekostig \_\_\_\_\_.
- 8 Ek verdra nie \_\_\_\_\_.
- 9 My vriende weet \_\_\_\_\_.
- 10 Ek is spyt \_\_\_\_\_.
- 11 Die beste \_\_\_\_\_.
- 12 Mense wat my nie verstaan nie \_\_\_\_\_.
- 13 Ek vererg my \_\_\_\_\_.
- 14 'n Moeder is \_\_\_\_\_.
- 15 My grootste vrees \_\_\_\_\_.
- 16 Ek kon nooit \_\_\_\_\_.
- 17 Dit walg my \_\_\_\_\_.
- 18 Toe ek 'n kind was \_\_\_\_\_.
- 19 Ek ly \_\_\_\_\_.
- 20 Ek sal nooit vergeet nie \_\_\_\_\_.
- 21 My senuwees \_\_\_\_\_.
- 22 My grootste bekommernis is \_\_\_\_\_.
- 23 My gedagtes \_\_\_\_\_.
- 24 Die toekoms \_\_\_\_\_.
- 25 Ek kan nie \_\_\_\_\_.
- 26 Ek wonder soms \_\_\_\_\_.
- 27 Mense wat nie van my hou nie \_\_\_\_\_.
- 28 Ek het geen tyd vir \_\_\_\_\_.

- 29 Ek voel 'n behoefte aan \_\_\_\_\_.
- 30 Ek geniet \_\_\_\_\_.
- 31 Ek haat \_\_\_\_\_.
- 32 Ek is baie \_\_\_\_\_.
- 33 Die enigste struikelblok \_\_\_\_\_.
- 34 Ek wens \_\_\_\_\_.
- 35 My vader \_\_\_\_\_.
- 36 In die geheim \_\_\_\_\_.
- 37 Die meeste meisies \_\_\_\_\_.
- 38 Ek verbeel my soms dat \_\_\_\_\_.
- 39 Ek het vas besluit \_\_\_\_\_.
- 40 Daar is niks wat my so ontstel \_\_\_\_\_.
- 41 Tot my spyt \_\_\_\_\_.
- 42 Die meeste seuns \_\_\_\_\_.
- 43 My grootste gebrek \_\_\_\_\_.
- 44 Ek strewe \_\_\_\_\_.
- 45 My sterkste begeerte \_\_\_\_\_.

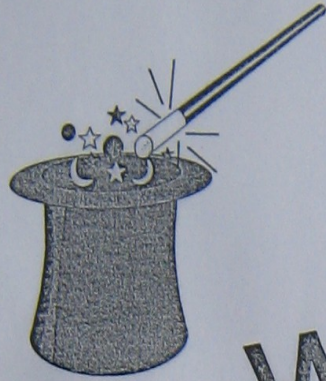
## Annexure B: Participant A – media results

\* The names of the participants have been removed to protect their identity.

Draw-a-person



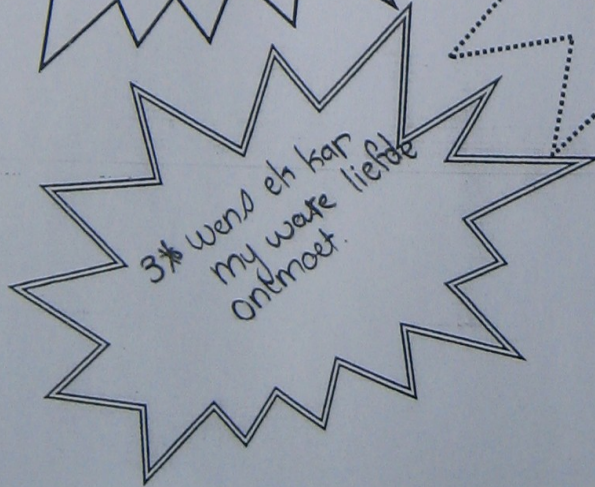
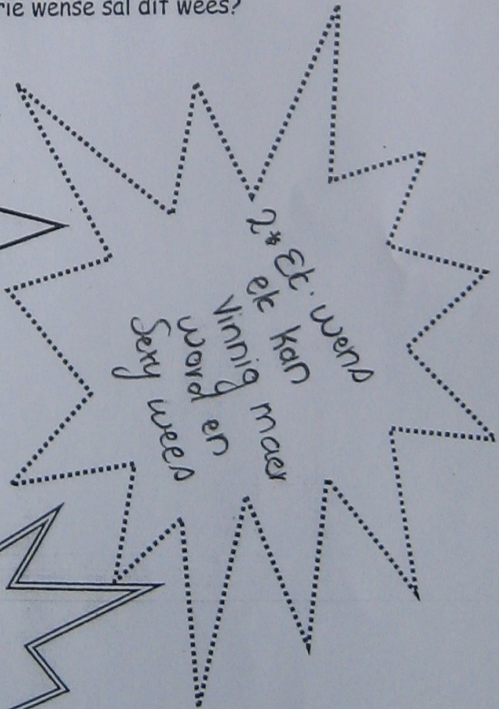
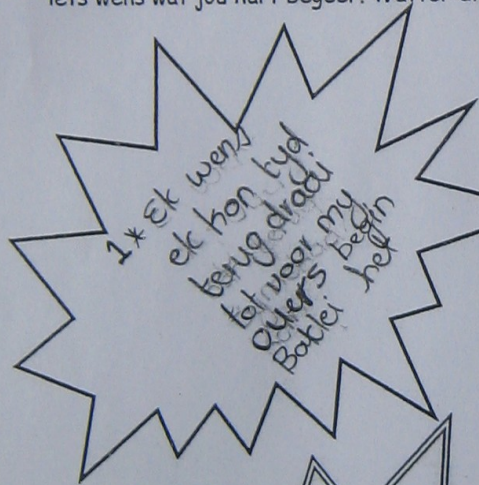
## Three wishes



# 3

# wense

Kom ons verbeel ons dat 'n feetjie vir jou slegs 3 wense gee. Jy kan enige iets wens wat jou hart begeer. Watter drie wense sal dit wees?



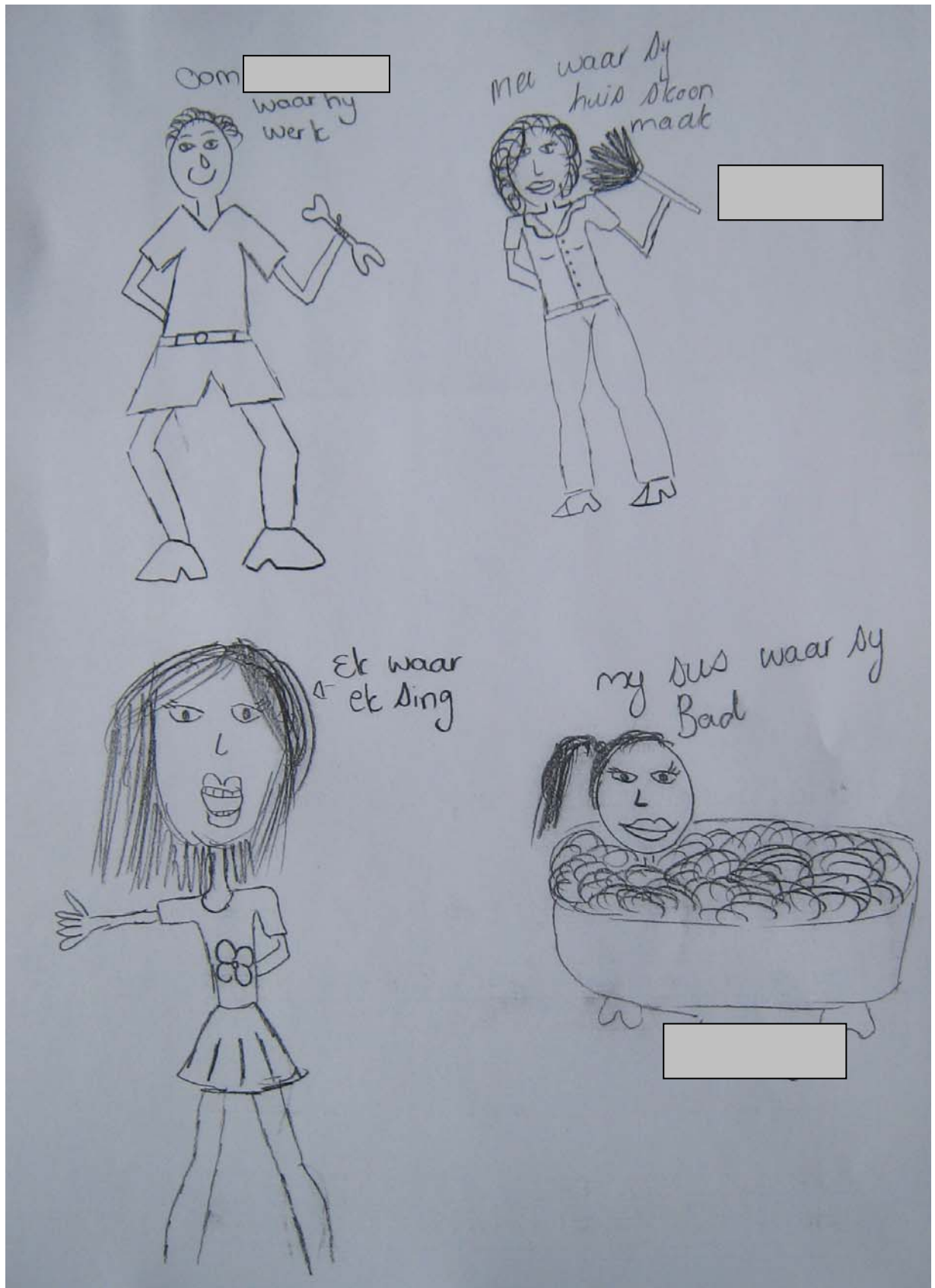
## Reason for each wish

Wens 1: Ek het altyd gedink ek  
het is gelukkige lewe gehad.  
Maar toe my ouers Stei  
was my natuurlik onder my  
uitgeroe en was totaal en  
all onsteld. ek het nog nooit  
so seer gemaak nie. al my  
vriende het verdwyn en ek was  
alleen. daarom wil ek tyd terug  
draai.

Wens 2: Mensde spot my gereeld  
oor my gewig en ek werk  
daaraan, maar ek wil dit  
vinnig verloor en mooi lyk.

wens 3: Baie dae voel ek 'alleen. veel asof  
niemand omgee en asof niemand hier is.  
Maar as ek my ware liefde kan vind.  
Ons sal mekaar verstaan en ons sal  
mekaar ondersteun met alles wat  
Ons doen!

Kinetic family drawing



Incomplete sentence bank score sheet

S C O R E	R E S P O N S E	C / P	Onvoltooide Sinne - Score Sheet					A F F E C T I V E	C O G N I T I V E	S C H O O L / T E A C H E R S	P A R E N T S	P E E R S	S E L F	E N V I R O N M E N T
			SENTENCE & RESPONSE					A	C	R	S			
3	N		1.Ek hou om te act.					A					+	
2	P <sub>1</sub>		2.Die gelukkigste oomblik was toe ek die eerste keer opgetree het vir 'n sang eksamen.					A					+	+
2	P <sub>1</sub>		3.Ek voel gelukkige, want my maai kyer by my.					A				+		
3	N		4.Snags in my bed mxit ek met my pele.						C			+		
3	N		5.Selfs my beste vriend(in) het dieselfde karakter eienskappe as ek.						C			+		
3	N		6.Ek wil baie graag eendag in 'n movie act en famous word.						C				+	
3	N		7.As ek dit eendag kan bekostig sal ek vir my 'n laptop koop en alle tipes musiek kollekteer.						C				+	+
5	C <sub>2</sub>		8.Ek verdra nie as mense vol is van hulself, of dink hulle is beter as ek nie.					A				-		
3	N		9.My vriende weet hoe ek voel.						C			+		
3	N		10.Ek is spyt as ek iets vir iemand sê en later anders voel.					A				-		
2	P <sub>1</sub>		11.Die beste ding op aarde is jou vriende.						C			+		
4	C <sub>1</sub>		12.Mense wat my nie verstaan nie gee gewoonlik ook nie o <sup>er</sup> my nie.					A				-		
5	C <sub>2</sub>		13.Ek vererg my as ek praat oor iets belangrik en iemand chip in om oor iets simple te praat.					A				-		
2	P <sub>1</sub>		14.'n Moeder is iemand wat 'n kind help en raad gee.					A			+			
3	N		15.My grootste vrees is goggas.						C				-	
3	N		16.Ek kon nooit ballroom dancing doen nie.						C				-	
5	C <sub>2</sub>		17.Dit walg my as iemand snuif en jy hoor hoe die gob af by die keel gly.						C				-	
3	N		18.Toe ek 'n kind was het ek en my sus baie dinge gedoen wat ons in die moeilikheid gebring het.						C				-	
5	C <sub>2</sub>		19.Ek ly omdat my ouers geskei is.					A				-		
5	C <sub>2</sub>		20.Ek sal nooit vergeet nie die dag toe my ouers ons					A				-		





## Metaphor

### ...ek as 'n voorwerp...

Beskryf jousef as 'n voorwerp. Dink goed na oor die voorwerp se eienskappe, en vergelyk dit met jou eie. Dink aan die eienskappe van die voorwerp en hoe dit dieselfde is as eienskappe wat jy het! As jy 'n prentjie in die tydskrif kry kan jy hom hier plak:



- \* Jy kan hom harder en sagter stel
- \* Kry 'n groot variasie van musiek
- \* is koud maar soos hy gebruik word, word hy warm
- \* kan as geselskap beskou word.

### Adolescent Self-Concept Scale score sheet

ASKS

NAAM:

DATUM:

OUDERDOM:

1. B	0	26. B	0	51. A	0	76. B	1
2. A	0	27. A	0	52. A	1	77. A	1
3. A	1	28. A	1	53. A	0	78. B	0
4. B	1	29. A	0	54. A	0	79. A	1
5. B	0	30. A	1	55. A	1	80. A	1
6. B	0	31. A	0	56. A	0	81. B	0
7. B	0	32. B	0	57. B	0	82. A	1
8. A	0	33. A	0	58. B	1	83. A	0
9. A	0	34. B	0	59. A	0	84. B	0
10. B	0	35. A	0	60. B	0	85. B	0
11. A	1	36. A	1	61. A	0	86. A	0
12. A	1	37. B	0	62. B	0	87. A	1
13. B	0	38. A	0	63. A	0	88. A	0
14. B	1	39. A	1	64. A	0	89. A	1
15. A	1	40. B	1	65. A	1	90. A	1
16. A	0	41. A	1	66. A	0	91. A	0
17. B	1	42. B	0	67. A	1	92. B	0
18. B	0	43. A	0	68. B	0	93. B	0
19. A	0	44. B	1	69. A	0	94. A	0
20. B	0	45. A	0	70. B	0	95. A	0
21. B	1	46. B	0	71. B	1	96. A	1
22. A	1	47. A	0	72. A	1	97. A	0
23. B	1	48. A	1	73. A	0	98. B	0
24. A	1	49. A	0	74. A	1	99. B	0
25. A	0	50. B	0	75. B	0	100. A	1

lae selfkonsep

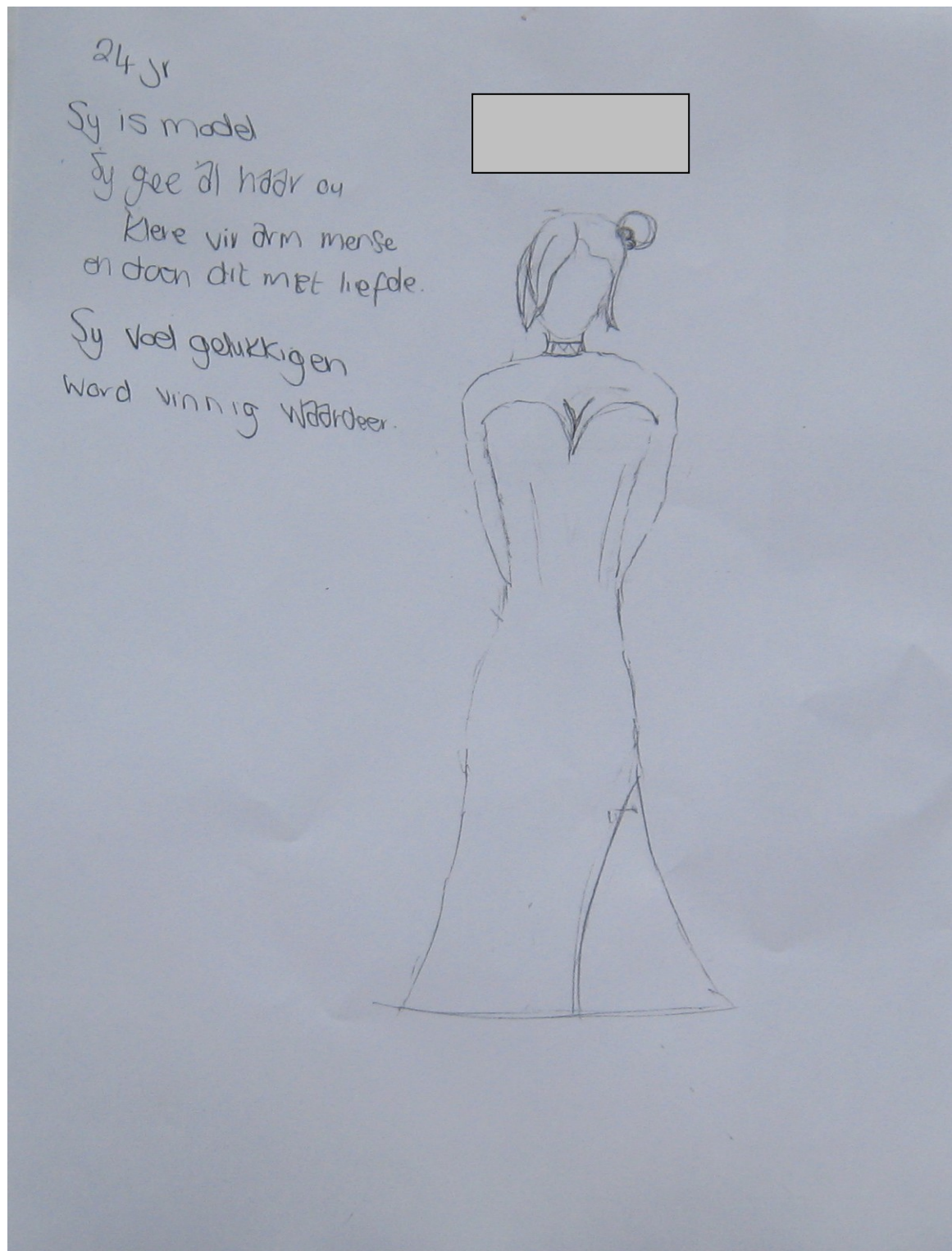
Stanege 3

$\frac{100 - 37}{63}$

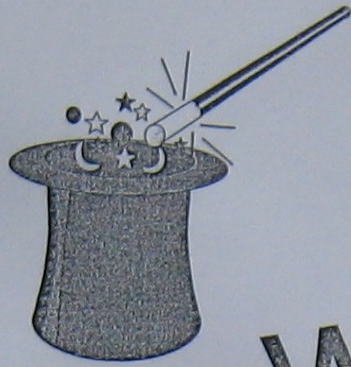
Fisieke self	12,6	2,7	2	Order gem
Persoonlike self	12,6	3,1	6	Gemiddeld
Gesinself	14,3	2,8	6	Gemiddeld
Sosiale self	12,6	3,5	8	Hoog gem
Waardeself	12,2	2,8	7	Hoog gem
Self kritiek	6,8	2,1	8	La gem

## Annexure C: Participant B – Media results

### Draw-a-person



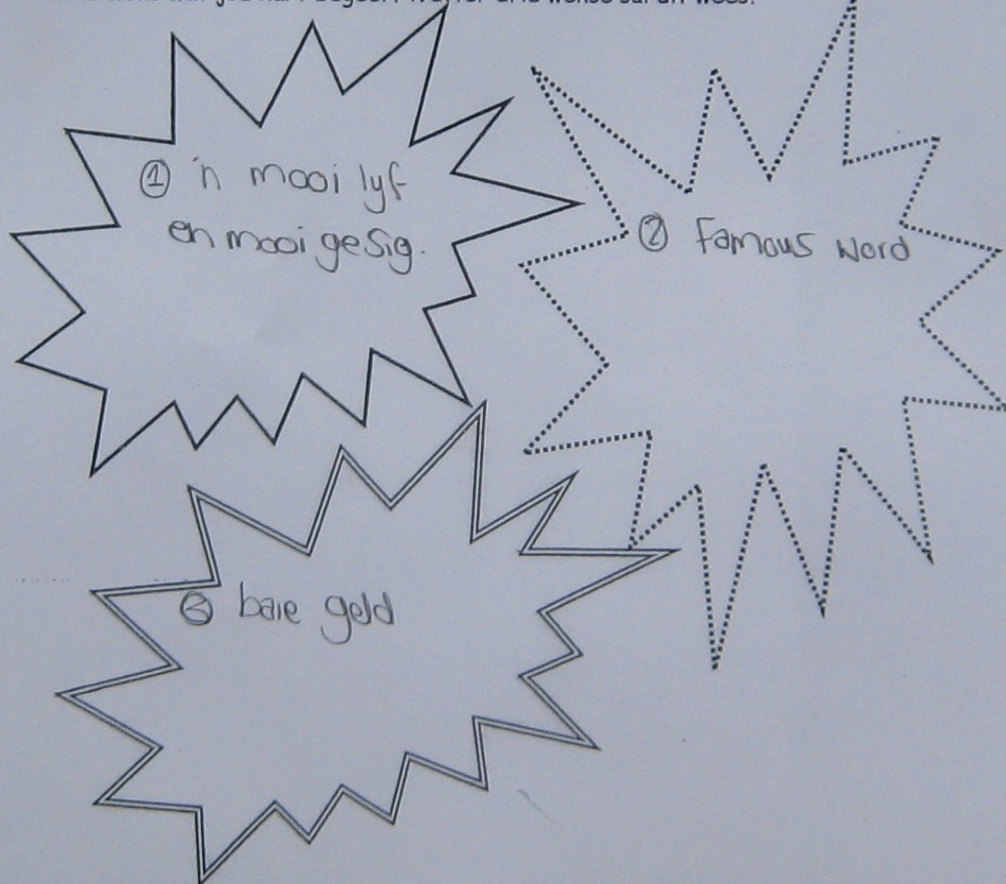
## Three wishes



# 3

# wense

Kom ons verbeel ons dat 'n feetjie vir jou slegs 3 wense gee. Jy kan enige iets wens wat jou hart begeer. Watter drie wense sal dit wees?



Reason for each wish

① Ek het gewens vir n mooi lyf omdat ek voel dat ek bietjie gemis vorm is.  
Mooi gesig omdat ek nie vir my self mooi is nie

② Ek wil "Famous" word omdat dit my grootste passie is en dat ek wil doen

③ Ek wens dat ek baie geld het dat ek vir my mooi kere kan koop

Kinetic family drawing



Incomplete sentence bank score sheet

S C O R E	R E S P O N S E	C / P	Onvoltooide Sinne - Score Sheet					S E L F	E N V I R O N M E N T
			A F F E C T I V E	C O G N I T I V E	S C H O O L / T E A C H E R S	P A R E N T S	P E E R S		
SENTENCE & RESPONSE			A	C	A	C	R	S	
1	P <sub>2</sub>		1.Ek hou van dans en sing.	A				+	
1	P <sub>2</sub>		2.Die gelukkigste oomblik in die lewe was toe ek my kat gekry het Sushi.	A				+	
5	C <sub>2</sub>		3.Ek voel gelukkig soms hartseer.	A				+/-	
5	C <sub>2</sub>		4.Snags in my bed begin my rug te pyn, ek lees soms 'n boek as ek nie kan slaap nie.		C			+	
2	P <sub>1</sub>		5.Selfs my beste vriend(in) is baie oulik sy is baie populær teenoor die seuns.		C		+		
3	N		6.Ek wil baie graag populêr wees maar ek glo as jy met almal vriende is even die "nerds" gaan almal van jou hou.		C			-	
3	N		7.As ek dit eendag kan bekostig sal ek graag 'n plek oop maak vir ronde kinders en hulle probeer help om gewig te verloor.		C		+	+	
5	C <sub>2</sub>		8.Ek verdra nie dat kinders in my ore skree ek word ontsteld as hulle dit doen.	A			-		
2	P <sub>2</sub>		9.My vriende weet date k baie "nice" kan wees en ook baie slim is.		C		+	+	
5	C <sub>2</sub>		10.Ek is spyt dat ek my 10 kg opgetel het.	A				-	
2	P <sub>1</sub>		11.Die beste ding was om gewig te verloor en dat ek die verskil kan voel.		C			+	
4	C <sub>1</sub>		12.Mense wat my nie verstaan nie is baie anderste as ek.		C		-		
5	C <sub>2</sub>		13.Ek vererg my soms as kinders my goed vat.	A			-		
2	P <sub>1</sub>		14.'n Moeder is baie besig soms kwaai sy kan baie oulik wees.	A		+/-			
5	C <sub>2</sub>		15.My grootste vrees is dat mense nie meer van my gaan hou nie.	A			-		
5	C <sub>2</sub>		16.Ek kon nooit mooi aantrek soos 'n ander kinders nie.		C		-		
4	C <sub>1</sub>		17.Dit walg my om mense te sien wat hulle naels kou.		C		-		
3	N		18.Toe ek 'n kind was het ek baie met seuns gespeel.		C		+		

4	C <sub>1</sub>	19. Ek ly soms goed te doen wat ek mag nie.		C				-			
4	C <sub>1</sub>	20. Ek sal nooit vergeet nie dat ek van die swaai af geval het nie.		C				-			
4	C <sub>1</sub>	21. My senuwees is soms klaar die einde van die jaar.	A					-	-		
4	C <sub>1</sub>	22. My grootste bekommernis is dat ek gaan druipe.	A		-						
3	N	23. My gedagtes is dat ek eendag kan goed kan "act".		C				+			
2	P <sub>1</sub>	24. Die toekoms vir my is dat ek eendag 'n goeie werk sal kry.		C				+	+		
3	N	25. Ek kan nie te veel gas koeldrank drink nie.		C				+			
3	N	26. Ek wonder soms as daar 'n plek vir my sal wees in die "acting" bedryf.		C				-			
4	C <sub>1</sub>	27. Mense wat nie van my hou nie kan maar wegloop.	A				-				
3	N	28. Ek het geen tyd vir myself nie.		C				-			
5	C <sub>2</sub>	29. Ek voel 'n behoefte aan liefde en aandag.	A					-			
3	N	30. Ek geniet om te dans en te teken.		C				+			
3	N	31. Ek haat vuil klere.		C				-			
2	P <sub>1</sub>	32. Ek is baie lief vir my kat.	A					+			
4	C <sub>1</sub>	33. Die enigste struikelblok is om wisk te doen.		C	-						
3	N	34. Ek wens om eendag als te bereik wat ek kan.		C				+			
1	P <sub>2</sub>	35. My vader het ek baie lief ons het baie in gemeen.	A			+					
2	P <sub>1</sub>	36. In die geheim dat daar seuns van my gaan hou.		C			-				
3	N	37. Die meeste meisies is maer en skraal.		C			-				
3	N	38. Ek verbeel my soms dat ek een van die maer meisies is.		C				-			
3	N	39. Ek het vas besluit dat ek myself gaan wees.		C				+			
5	C <sub>2</sub>	40. Daar is niks wat my so ontstel as mense my dreig om iets te doen nie.	A				-	-			
5	C <sub>2</sub>	41. Tot my spyt sal ek besluit wat gaan ek doen met my gewig.		C				-			
3	N	42. Die meeste seuns is arrogant en self bewus.		C			-				
3	N	43. My grootste gebrek dat ek nie kan wisk doen nie.		C	-						
3	N	44. Ek strewe aan 'n mooi lyf.		C				-			
0	P <sub>3</sub>	45. My sterkste begeerte is om een dag iets kan doen met my lewe.		C				+			
Score	147						3	2	15	27	3

↓   ↓   ↓   ↓  
 ③   ②   ①   1

135 Indication of maladjustment

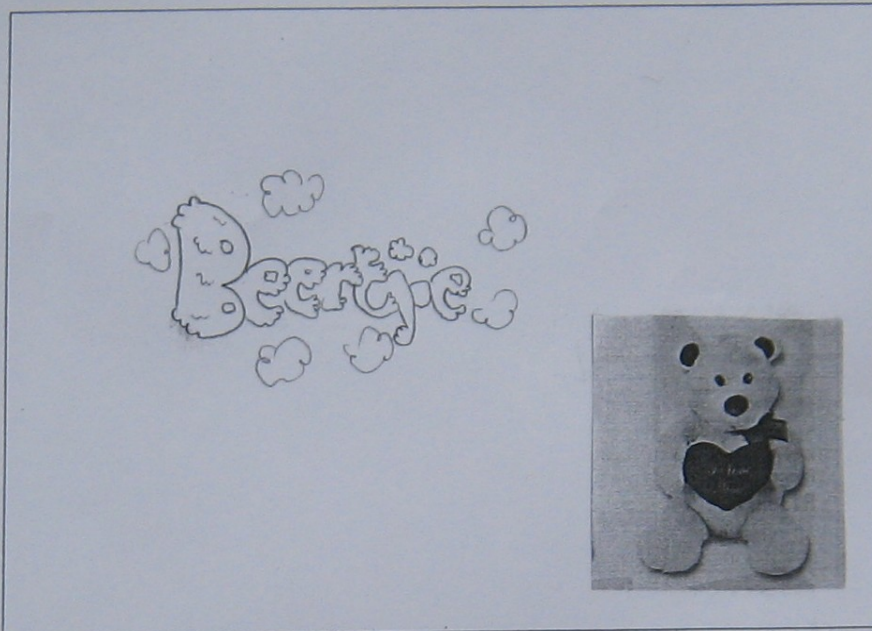
1. Self
2. Peers
3. Parents



## Metaphor

### ...ek as 'n voorwerp...

Beskryf jouself as 'n voorwerp. Dink goed na oor die voorwerp se eienskappe, en vergelyk dit met jou eie. Dink aan die eienskappe van die voorwerp en hoe dit dieselfde is as eienskappe wat jy het! As jy 'n prentjie in die tydskrif kry kan jy hom hier plak:



<sup>kyk</sup>  
Hulle <sup>kyk</sup> uit vir hulle gesinne en bestorm hulle  
en hulle gee letter "Bearhugs".

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Adolescent Self-Concept Scale score sheet

ASKS

NAAM:

DATUM:

OUERDOM:

1.A		26.A		51.A	o	76.A	o
2.B		27.A	o	52.B	o	77.A	
3.A		28.A		53.B		78.A	
4.B		29.B		54.A	o	79.A	
5.A		30.A		55.A		80.A	
6.B	o	31.A	o	56.B		81.A	
7.A		32.A		57.A		82.A	
8.B		33.B		58.B		83.A	o
9.A	o	34.A		59.B		84.B	o
10.B	o	35.A	o	60.A		85.A	
11.A		36.A		61.B		86.B	
12.B	o	37.B	o	62.A		87.A	
13.A		38.A	o	63.B		88.B	
14.A	o	39.A		64.A	o	89.A	
15.A		40.B		65.A		90.A	
16.B		41.A		66.B		91.A	o
17.A	o	42.A		67.A		92.A	
18.B	o	43.A	o	68.A		93.B	o
19.A	o	44.B		69.B		94.A	o
20.A		45.A	o	70.A		95.A	o
21.B		46.B	o	71.A	o	96.A	
22.A		47.A	o	72.B	o	97.A	o
23.B		48.A		73.A	o	98.B	o
24.B	o	49.B		74.B	o	99.A	
25.B		50.A		75.A		100.A	

Medium selfkonsep.

Stage 4

100  
-35  
65

Fisieke self	12,6	2,7	10	Gemiddeld
Persoonlike self	12,6	3,1	11	Gemiddeld
Gesinself	14,3	2,8	16	Bo gem
Sosiale self	12,6	3,5	12	Gemiddeld
Waardeself	12,2	2,8	11	Gemiddeld
Self kritiek	6,8	2,1	5	Gemiddeld

## **Annexure D: Participant C – Complete discussion**

All the answer sheets and responses from participant C are included in Annexure D in the following order:

- Draw-a-person
- Three wishes
- Reason for each wish
- Kinetic family drawing
- Incomplete sentence bank score sheet
- Metaphor
- Adolescent Self-Concept Scale

Age: 17 years  
Grade: Grade 11  
Gender: Male  
Weight: 121 kg  
Height: 1,77 m  
Body mass index: 39 (121/1,77 m<sup>2</sup>)  
BMI classification: Grade 2 obesity

### **• Draw-a-person (DAP)**

Participant C chose to draw an animation character instead of a human being, which might indicate that it is easier for him to avoid reality than to be confronted with his physical appearance. Another interpretation may be that the participant has an attitude of 'ignorance is bliss', in others words the weight problem disappears if he does not acknowledge it or think about it.

The expression on the face of the person in the sketch is determined, as well as focused, perhaps pointing to the fact that the participant knows what he wants out of life, that he is goal orientated and that he is resolute about achieving these goals. The ears are a missing feature, possibly signifying that he is ignorant of or prefers to shut out, negative comments in an effort to protect himself. Both the missing ears and the facial expression may also be non-significant since the drawing could be an imitation of an animation character.

The size of the person's head in the drawing is also noticeably larger in comparison with the rest of the figure's body. This could signify that the participant is of the opinion that if he is successful on an academic/intellectual level, it will compensate for his physical shortcomings. It may also reveal that as long as the participant experiences academic/intellectual accomplishment, it is acceptable for him to be overweight.

Participant C also mentions that the person in the sketch has been accepted for who he is by others, as well as that he has accepted himself and experiences contentment. This may indicate that he is resigned to the fact that he is overweight and has developed other areas in his life where he can experience success and fulfilment.

- **Three wishes**

<i>First wish</i>	<i>Second wish</i>	<i>Third wish</i>
Stop crime and rapists.	My dream that I want: I cook.	To end global warming.

The first wish indicates his need for crime to be stopped. This perhaps suggests that participant C is aware of problems outside himself or has an inherent desire for the world to be a better place where everybody is safe and gets along, which may be indicative of idealism.

Secondly, participant C wished for his dream – to be a chef – possibly suggesting that he has made up his mind about his career and future, as well as that he is focused and determined to reach his dream. It may also be deduced that working with food is a real passion and calling for him. Participant C also discloses that he has obtained a certain degree of self-knowledge and emotional maturity at this stage of his life.

There are a few possible interpretations of his last wish, which is for an end to global warming. If he focuses on a problem or problems 'outside' himself, he can avoid dealing with his personal weight issue, which might be an easier or more comfortable option for him. Alternatively, it may also point to unrealistic expectations of wanting everything to be fine and fixed. Then again, its meaning may also be that he is emotionally mature enough to realise that life does not evolve around him alone, but that there is a bigger picture.

- **Kinetic family drawing (KFD)**

The family in the picture is busy having a picnic together and the family members are taking part in separate activities. This perhaps points to the fact that it is a close-knit family and that the family members enjoy spending time together by doing fun activities.

It can be deduced that there could be a mother-daughter versus a father-son alliance since the mother and sister are playing a game alone, and the father and brothers are playing a different game. Another insinuation that could be made is that gender roles are clearly stipulated and upheld by the family. A further possible deduction is that there a closer bond between the mother and sister, and between the father and brothers. Confirming this latter suggestion is the placement of the mother and sister closest to one another.

A noteworthy aspect of the drawing is that participant C is the only family member asking for the ball to be passed to him, suggesting that he might not always feel included within his family circle – almost like an outsider to a certain extent. Another possibility to consider is that the participant feels he is not receiving enough attention from his family members and he is attempting to be noticed.

- **Incomplete sentence bank**

According to the incomplete sentence bank, the most important influences in participant C's life are the self, his peers and lastly, his school

A few themes were prominent during this part of the evaluation. Firstly, he has already started to consider his future occupation. The participant is quite adamant about his desire to become a chef. This may imply that he has a certain amount of self-knowledge and self-insight, and might even indicate emotional maturity. Participant C also has an optimistic expectation of the future, which may mean that he has a positive outlook on life and the world.

Participant C also mentioned the fact that he has a speech deficiency in the form of not being able to express himself well enough verbally. He struggles to put his thoughts into words. This reveals that he could be mature enough to accept his own shortcomings or that he is very sensitive about his inability to express himself properly.

Another repeated theme is the participant's ability to successfully help other people in need. This could reveal his need to be the 'hero', thus gaining social recognition as well

as acknowledgement. A different interpretation could be that he is not internally focused on his own way of life alone, but is also aware of what is going on around him and is sensitive to other individuals' needs.

Furthermore, participant C stressed the importance of his family, as well as quality relationships with family members. This perhaps reveals that he experiences love, support, warmth and acceptance within his family, providing him with a sense of belonging and acceptance.

One more theme is the role of friends and peers in the participant's life. He enjoys spending time with his friends, shares his thoughts with them and they support each other. This indicates that the quality of relationships is important to him, again creating an atmosphere of acceptance, support and belonging, as well as conveying the message that he is acceptable as a person.

The last theme discloses the fact that school and examinations cause tension for him. This could possibly point to the fact that he places a lot of value on academic success, which is necessary for him to be well on an emotional level. An additional deduction could be that he struggles scholastically to keep up with the work load and the rate of work. A further suggestion is that the participant is so focused on achieving his future goal of becoming a chef that he does not want anything to hamper this process, thus creating some tension and anxiety.

- **Metaphor**

Participant C chose a bee with honey for his metaphor, which might point to him having something constructive to offer to other people. Another interpretation could be that food plays a prominent role in his life.

This bee is also hard working and has a goal in life, which could reveal that the participant is both dedicated and motivated to achieve his goals. An alternative deduction could be that he knows what he wants from life and that he also is willing to work hard to achieve it.

Another trait of this bee is that it is calm but it is also capable of protecting itself. This probably suggests that emotionally he has a steady character and does not get upset easily. Though calm, he will protect himself if the situation requires it and he can get angry if necessary.

Lastly, this bee is not afraid of anything and has good luck. This could point to the fact that the participant is not scared to venture into the unknown and is willing to take risks. Having good luck may insinuate that participant C is content with his current situation, as well as that he has an optimistic attitude towards life and his future.

- **Adolescent Self-Concept Scale**

Self-concept score achieved:	High self-concept (Stanine-8)
Physical self:	Above average
Psychological self:	Above average
Familial self:	Above average
Social self:	Above average
Ethical self:	Above average
Self-critique:	Average

According to the Adolescent Self-Concept Scale, participant C achieved above-average scores in all the subscales except for self-critique. The high score for physical self may imply that he has accepted his physical appearance, even if he is obese. The psychological self reveals that he is a steady individual and in touch with himself on an emotional level. The familial self points to the fact that he feels secure and accepted in his family relations and that he has established good relationships with his family members. The participant experiences his social self as positive, indicating that he has established personal relationships with his peers, and also disclosing that he has a sense of belonging in his circle of friends. Regarding the ethical self, participant C sees himself as a person with specific norms and values, and he assigns meaning to situations/occurrences according to this set of values and norms.

- **Summary**

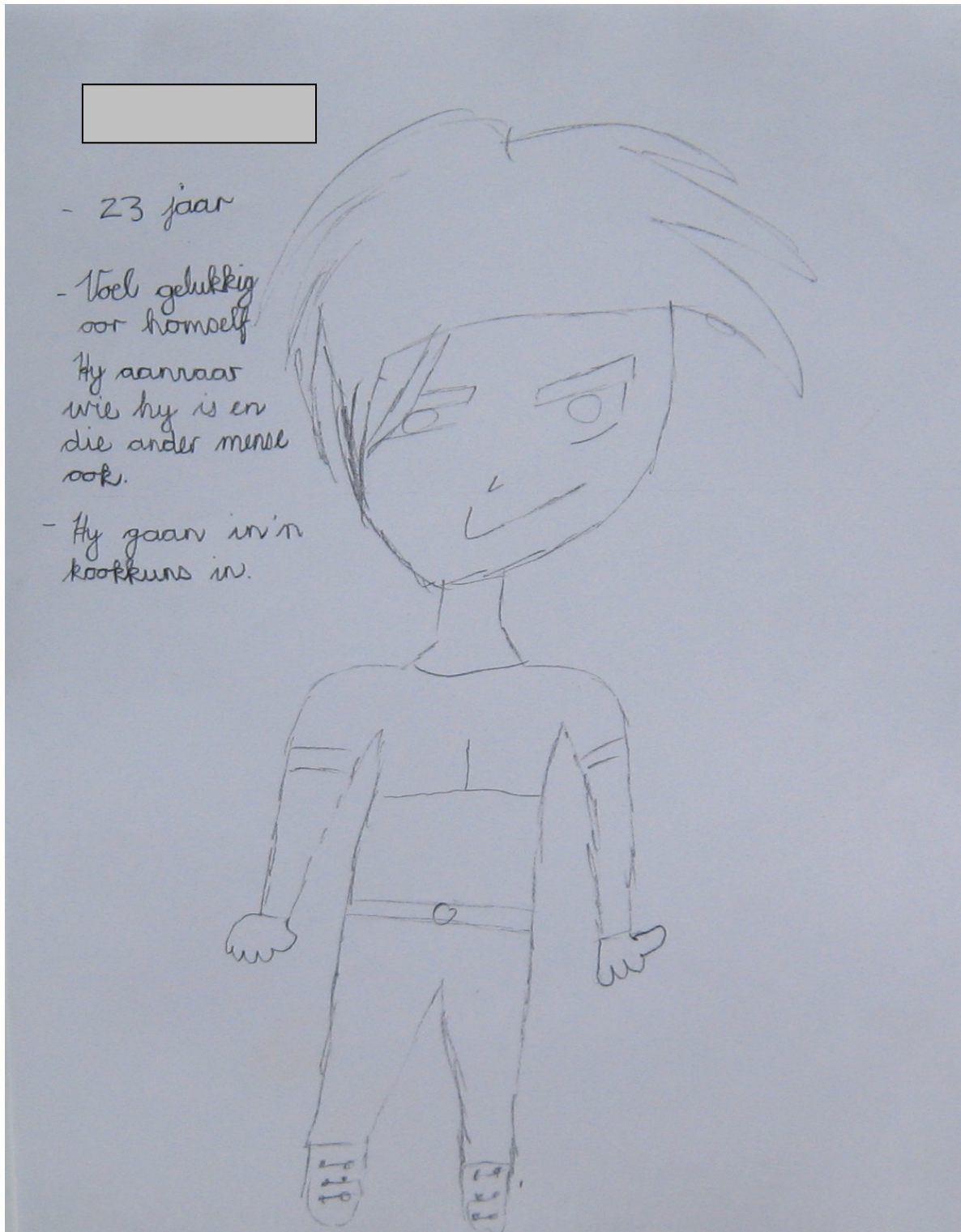
In conclusion, it may be deduced that participant C is goal orientated and knows what he wants to become one day, as well as that he is determined and motivated to reach these goals. The participant is well aware of his weight-related issues, but chooses to focus on other aspects of his life where he is able to experience success. The latter attitude may indicate a tendency of the participant to compensate for his obesity, for instance by focusing on intellectual abilities and achievements. This compensation may enable him to attain self-acceptance, as well as social acceptance from his peers. Social interaction with peers and friends is important to him, as is his ability to establish quality relationships with his friends. The quality of his family relationships also plays a very prominent role in his life. Participant C may gain a sense of personal value and belonging among his family

and friends. He has a need to be the hero or rescuer who looks after and out for other people, possibly because this may provide him with affirmative feedback and enable him to feel good about himself. The school environment and academic demands are a source of tension and stress to him since they open a window of opportunity for failure and the chance that he may let himself down. He has a positive outlook on life and is somewhat idealistic in wanting the world to be a better place. Lastly, participant C is aware of his own shortcomings, but has developed coping strategies to work around them and focuses on the things that he can do well. This enables him to counteract the impact that being obese might have on him on an emotional level.

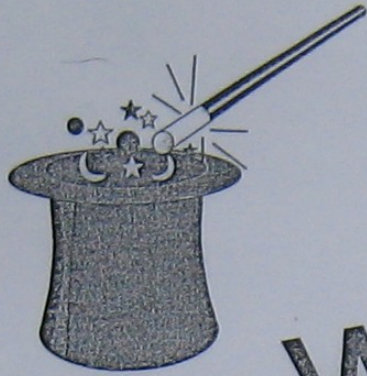


## Annexure E: Participant C – Media results

### Draw-a-person



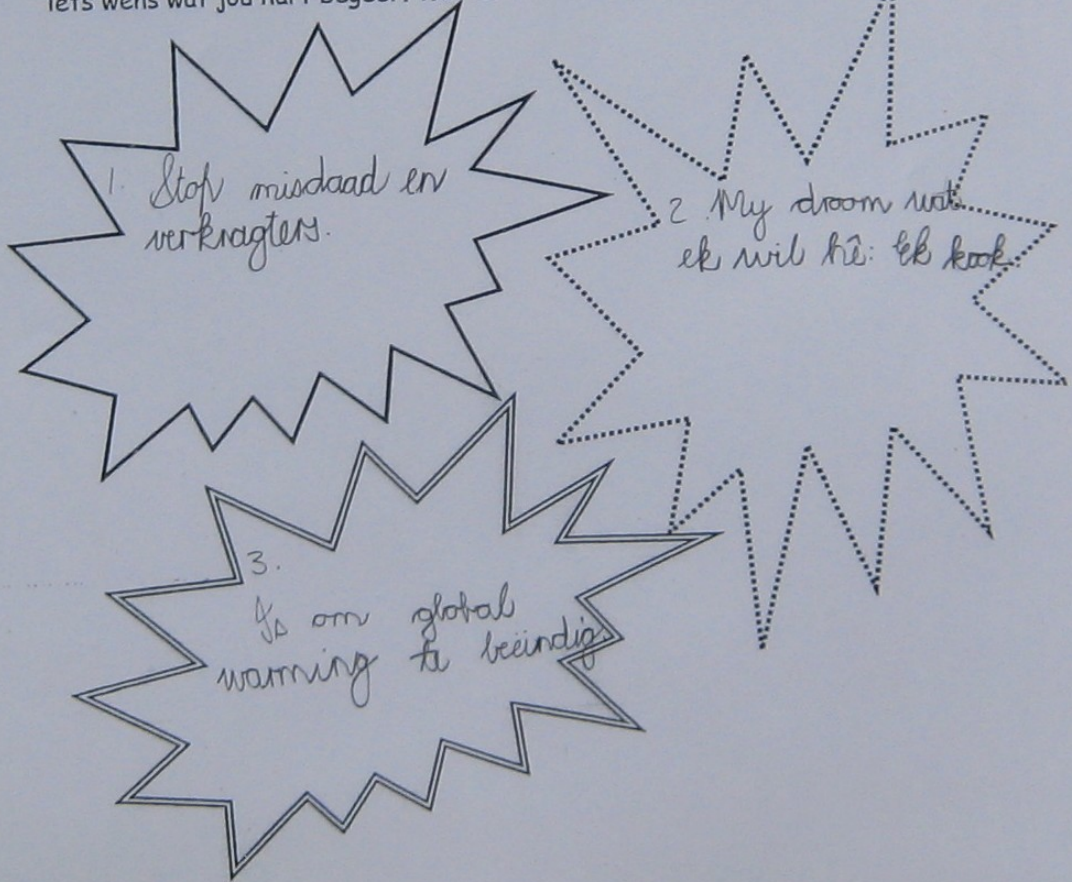
## Three wishes



# 3

# wense

Kom ons verbeeld ons dat 'n feetjie vir jou slegs 3 wense gee. Jy kan enige iets wens wat jou hart begeer. Watter drie wense sal dit wees?



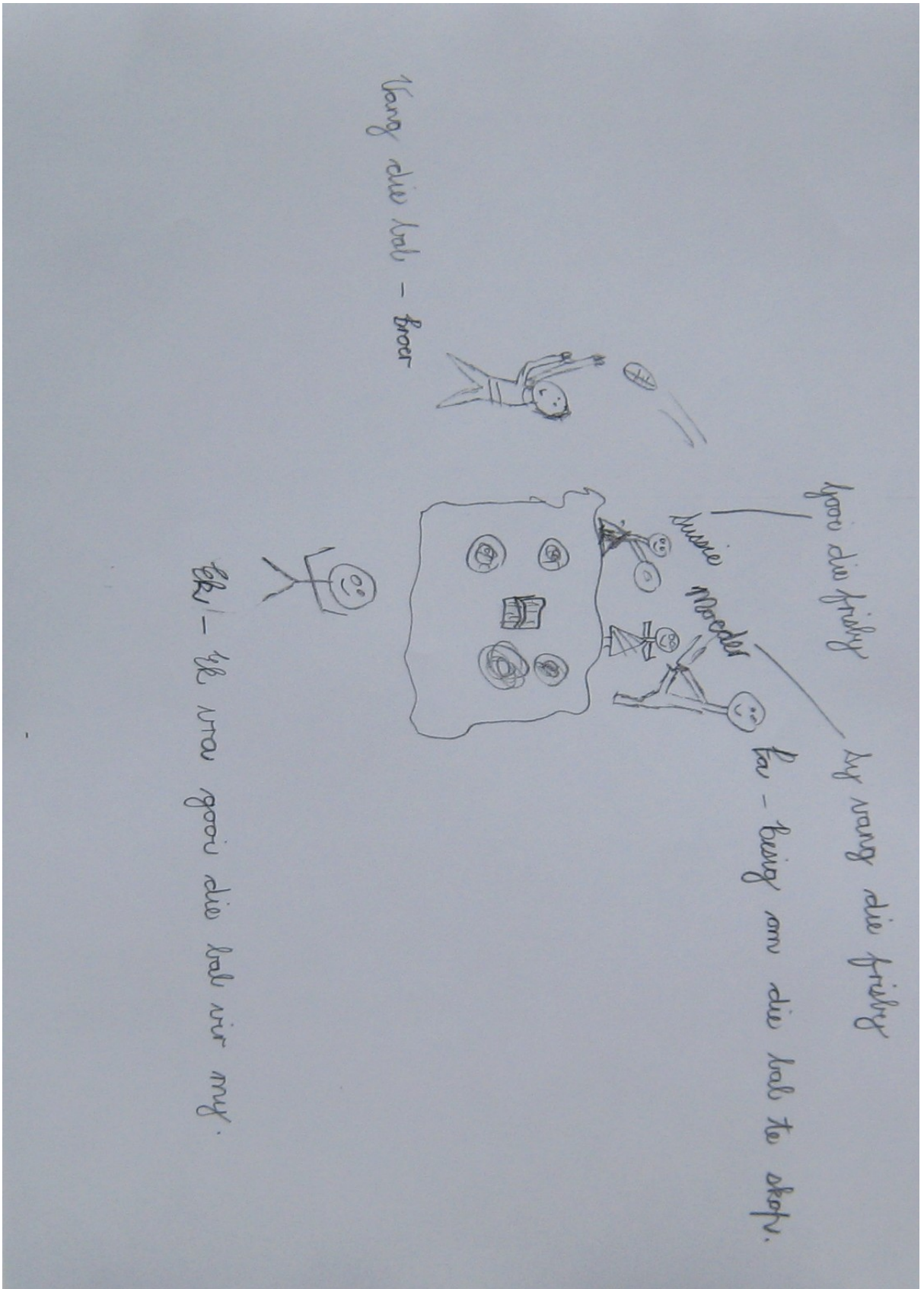
## Reason for each wish

Wens 1: Want elke uur is daar in mens  
wat doodgeskiet word of verkragting.  
Ek wil hê dit moet stop.

Wens 2: Want ek geniet dit en dit is  
wat ek eendag wil doen.

Wens 3: Om op te hou om die na-  
tuur dood te maak en nie  
gifstowwe meer te gebruik nie  
wat die aarde doodmaak nie.

Kinetic family drawing



Incomplete sentence bank score sheet

S C O R E	R E S P O N S E	C / P	Onvoltooide Sinne - Score Sheet		A F F E C T I V E	C O G N I T I V E	S C H O L E / T E A C H E R S	P A R E N T S	P E E R S	S E L F	E N V I R O N M E N T
			SENTENCE & RESOPONSE								
2	P <sub>1</sub>		1.Ek hou om te kook en om rugby te speel.		C					+	
1	P <sub>2</sub>		2.Die gelukkigste oomblik was toe my broer terug gekom het van London en toe ek my meriete vir gasvryheid gekry het.		A					+	
0	P <sub>3</sub>		3.Ek voel gelukkige, nooit onderdruk ek voel ek is nie bang vir werk nie.		C					+	
3	N		4.Snags in my bed dink ek aan die toekoms, beplan my toekoms vooruit.		C					+	
1	P <sub>2</sub>		5.Selfs my beste vriend(in) hy is altyd daar as ek hom nodig het. Hy help my uit met moeilike besluite.		C				+		
0	P <sub>3</sub>		6.Ek wil baie graag in 'n top hotel gaan werk.		C					+	
0	N		7.As ek dit eendag kan bekostig dan sal ek 'n private strandhuis hê oorsee.		C					+	
5	C <sub>2</sub>		8.Ek verdra nie party kinders en ek haat 'n negatiewe atmosfeer.		A				-		
2	P <sub>1</sub>		9.My vriende weet wat ek wil doen, hulle weet wie ek is en hoe ek is.		C				+		
0	P <sub>3</sub>		10.Ek is spyt Ek is nog nooit spyt nie.		C					+	
0	P <sub>3</sub>		11.Die beste Ek is die beste in cheffing (kook).		C					+	
3	N		12.Mense wat my nie verstaan nie probeer ek in ander woorde te verduidelik.		C				+		
5	C <sub>2</sub>		13.Ek vererg my as onnies my take verloor en as mens inchip in belangrike gesprekke.		A			-			
1	P <sub>2</sub>		14.'n Moeder is daar om jou te ondersteun jou uit te help en vir jou liefde te gee en jou te beskerm.		A			+			
4	C <sub>1</sub>		15.My grootste vrees is om in 'n leeu se oë te kyk of alleen met 'n leeu in 'n veld te loop.		C					-	
1	P <sub>2</sub>		16.Ek kon nooit lui wees in my lewe.		C					+	
3	N		17.Dit walg my as 'n ou sy been breek en die been so uitsteek.		C					-	
3	N		18.Toe ek 'n kind was ek was wild en baie aktief. Ek het gestoei.		C					+	

2	P <sub>1</sub>	19. Ek ly nie rêrig nie.		C				+		
0	N	20. Ek sal nooit vergeet nie dat my vriend se lewe gered het en 'n driejarige kind se lewe gered.	A				+			
5	C <sub>2</sub>	21. My senuwees word klaar as ons agter mekaar eksamen skryf.	A		-					
5	C <sub>2</sub>	22. My grootste bekommernis is om my ouers te verloor.	A			-				
3	N	23. My gedagtes dink ek wat se huiswerk ek het om te doen en wat het ek nodig.		C					+	
3	N	24. Die toekoms ek dink baie aan die toekoms. Beplan altyd vooruit.		C					+	
0	P <sub>3</sub>	25. Ek kan nie nee ek weet nie, glad nie.		C					+	
3	N	26. Ek wonder soms of alles 'n sukses sal wees.		C					-	
3	N	27. Mense wat nie van my hou nie steur ek my nie aan nie.	A					-		
3	N	28. Ek het geen tyd vir speletjies of games nie.		C					-	
2	P <sub>1</sub>	29. Ek voel 'n behoefte aan om goeie punte te kry.		C		-				
1	P <sub>2</sub>	30. Ek geniet my lewe wat ek het en saam met die mense wat ek ken.	A					+		
4	C <sub>1</sub>	31. Ek haat halwe werk wat nie gedoen is nie.	A			-				
0	P <sub>3</sub>	32. Ek is baie trots op my self waar ek tot vandag gekom het.	A						+	
0	P <sub>3</sub>	33. Die enigste struikelblok niks keer my nie nog niks het my ooit gekeer nie.		C					+	
3	N	34. Ek wens ek was die top chef dat ek my eie tv program het.		C					+	
1	P <sub>2</sub>	35. My vader is baie belangrik vir my. Hy help my met goed wat ek nie kan doen nie.		C		+				
5	C <sub>2</sub>	36. In die geheim hoor ek dat daar 'n sekere vriend is wat onder depressie ly en Denmar toe moes gaan.	A					-		
3	N	37. Die meeste meisies wat ek ken is onder twintig.		C				+		
2	P <sub>1</sub>	38. Ek verbeel my soms dat ek meer ander mense kan help wat in moeilike situasies is en terug in tyd kan gaan om dit reg te maak.		C					+	
1	P <sub>2</sub>	39. Ek het vas besluit <del>vas besluit</del> wat ek gaan doen en voluit daarvoor gaan.		C					+	
4	C <sub>1</sub>	40. Daar is niks wat my so ontstel as een van my vriendinne gemisbruik word deur hulle ouens.	A					-		
4	C <sub>1</sub>	41. Tot my spyt laat ek nooit goed gehad het, wat ek wou gehad het.		C					-	
3	N	42. Die meeste seuns is bo twintig en ander onder twintig.		C				+		
5	C <sub>2</sub>	43. My grootste gebrek as ek nie goed reg uitspreek nie.	A						-	
2	P <sub>1</sub>	44. Ek strew om hulpvaardig te wees.		C					+	
3	N	45. My sterkste begeerte is net kook dis al waarin ek belangstel.		C					+	
104		<b>TOTAL</b>				4	3	11	27	0

Score

↓  
③

↓  
②

↓  
①

∴ Well adjusted.

1. Self

2. Peers

## Metaphor

### ...ek as 'n voorwerp...

Beskryf jouself as 'n voorwerp. Dink goed na oor die voorwerp se eienskappe, en vergelyk dit met jou eie. Dink aan die eienskappe van die voorwerp en hoe dit dieselfde is as eienskappe wat jy het! As jy 'n prentjie in die tydskrif kry kan jy hom hier plak:

in by met heuning.



As daar heuning is daar lewe en  
in doel met jou lewe.  
Hierdie by is die mens en die blom is  
die lewe en die doel.  
Die by is hardwerkend.  
Die by is selfbeskermend en rustig.  
So hang vir niks en die by het  
goeie geluk (lucky).

Adolescent Self-Concept Scale score sheet

ASKS

NAAM:

DATUM:

OUDERDOM:

1. A		26. A		51. B		76. B	
2. B		27. B		52. B	o	77. A	
3. A		28. A		53. B		78. A	
4. B		29. B		54. B		79. B	o
5. A		30. B	o	55. A		80. A	
6. A		31. B		56. B		81. A	
7. A		32. A		57. A		82. A	
8. B		33. B		58. B		83. B	
9. B		34. A		59. B		84. A	
10. B		35. B		60. A		85. A	
11. B	o	36. A		61. B		86. B	
12. B	o	37. A		62. A		87. A	
13. A		38. B		63. B		88. B	
14. B		39. A		64. A	o	89. A	
15. A		40. B		65. A		90. A	
16. B		41. B	o	66. B		91. A	o
17. B		42. A		67. A		92. A	
18. B	o	43. A	o	68. A		93. B	o
19. A	o	44. B		69. B		94. B	
20. A		45. B		70. A		95. A	o
21. B		46. A		71. B		96. A	
22. A		47. B		72. A		97. B	
23. B		48. A		73. B		98. B	o
24. A		49. B		74. B		99. A	
25. B		50. A		75. B	o	100. A	

Hoë selfkonsep

Stanege 8

$\frac{100}{85}$

Fisieke self	12,6	2,7	14	Bo gemiddeld
Persoonlike self	12,6	3,1	17	Bo gemiddeld
Gesinself	14,3	2,8	18	Bo gemiddeld
Sosiale self	12,6	3,5	17	Bo gemiddeld
Waardeself	12,2	2,8	14	Gemiddeld
Self kritiek	6,8	2,1	5	



## **Annexure F: Participant D – Media results**

Age:	14 years
Grade:	Grade 9
Gender:	Male
Weight:	92 kg
Height:	1,69 m
Body mass index:	32 (92/1,69 m <sup>2</sup> )
BMI classification:	Grade 2 obesity

- **Summary of evaluation results**

According to participant D, the most important influences in his life are himself, his peers and thirdly his family. He achieved an average score on the Adolescent Self-Concept Scale, with above-average scores in the subscales for psychological self and ethical self. These latter two scores indicate that he has emotionally accepted himself and who he is, as well as that he has a set of well-developed values and norms.

Themes arising from the different evaluation media include the importance of social interaction and spending time with his friends and peers. He hopes that his life will be better when he is completely grown up – he makes a connection between happiness and being an adult. The participant does not like to get involved in conflict situations and tries to avoid them since they cause him to feel bad on an emotional level afterwards. He has a need to escape or to get away from things, implying that he is not satisfied with his current circumstances. Participant D may also feel a bit stuck or even trapped in his situation at the moment. He experiences both his parents as uninvolved in his life and would like them to show more active involvement in his activities and interests. He pretends that what other people have to say about him does not really matter to him but, in reality, these comments have an impact on him emotionally. The participant is not happy with the way that others treat him, probably suggesting that he is not really accepted and that he is experiencing rejection. One more aspect to take note of is the fact that even though he portrays that nothing bothers him, it is only a mask he is wearing since he is a sensitive, gentle soul on the inside.

The researcher has reason to deduce that participant D may possibly be suffering from depression or a distimic episode and therefore she conveyed this possibility to him during a feedback meeting. The researcher then recommended to the participant that he should

receive counselling from an educational psychologist and referred him to one in his home town. The researcher also requested the participant's permission to inform his parents about the conclusion, which he agreed to. The researcher arranged a feedback meeting with both parents and the participant to share the information gained from the evaluation.

## **Annexure G: Participant E – Media results**

Age:	16 years
Grade:	Grade 10
Gender:	Female
Weight:	79 kg
Height:	1,58 m
Body mass index:	32 (79/1,58 m <sup>2</sup> )
BMI classification:	Grade 2 obesity

- **Summary of evaluation results**

According to participant E, the most important influences in her life are herself, secondly her peers and lastly, her school environment. She achieved a low score on the self-concept scale, as well as an above-average score for familial self, which may suggest that she experiences herself positively in connection with her family relationships.

Themes arising from the different evaluation media include that social interaction with her peers seems to be important to her, as well as establishing quality relationships with her friends. The participant might also feel inadequate or inferior with regard to her peers, which could probably be caused by her being obese. Family and the quality of family relationships also appear to be extremely important to her, perhaps pointing to the fact that she has the need to experience acceptance, fitting in, as well as a sense of belonging. It also appears as if the participant desires to inflict pain on others in an effort to avenge her own hurt feelings. This might indicate that she experiences people trampling over her and that she has had enough of it, as well as wanting it to stop. It could also be indicative of emotional immaturity. Participant E experiences stress caused by academic pressure and a desire to do well on a scholastic level. This suggests that she might be struggling to keep up with the work load and work rate at school, or even that she fears that she will not succeed in this way and may fail at the end of the year. One last interpretation could be that she places too much pressure on herself to perform well academically. The participant has also started to think about her future and her future occupation, and has an unrealistic expectation that the future will be better than the present for her. It appears that she is a determined young lady and possibly even a bit stubborn since she will see to it that she gets what she wants.

The researcher noticed halfway through the evaluation process that participant E became restless and rushed. She rushed her family drawing, as well as the Adolescent Self-

Concept Scale, giving the impression that she just wanted the evaluation to be over and done with. She continuously asked when the evaluation was going to be completed. The latter attitude might reveal that the participant was in revolt against the tasks or even that her ability to persevere is limited. The researcher gave the participant a 15-minute break at this stage and continued the evaluation after the break.