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CHAPTER 1: OVERVIEW

1.1 Statement of the problem

Overweight and obesity are considered to be global epidemics and major contributors to some of the leading causes of death, including cardiovascular disease, diabetes, musculoskeletal disease, and some types of cancer (World Health Organization, 2015a). Globally, 42.8% of women and 23.2% of men are classified as obese. South Africa is rated as having the third highest incidence of obesity in the world, with 61% of the population classified as overweight or obese. Worldwide, the incidence of obesity has doubled since 1980, and it remains a major health challenge to both the developed and developing world (World Health Organization, 2015a).

Predisposing factors to obesity are bio-psychosocial, and include genetic vulnerability, familial eating and behaviour towards food, as well as psychological variables, such as self-esteem, body image disturbance, and predisposing life events (Collins & Bentz, 2009; Pérusse, Rankinen, Zuberi, Chagnon, Weisnagel, Argyropoulos, & Bouchard, 2005; Wansink, 2004). Victimisation and interpersonal relationship difficulties have also been identified as contributing to both the development and reinforcement of the problem. The complexity of predisposing risk factors presents many challenges to the treatment of overweight and obesity.

Reducing the incidence of overweight and obesity through the provision of effective treatment has proven to be an ever increasing challenge for health professionals. Current approaches range from physiological interventions – such as diet modification, exercise programmes, pharmacological treatments, and bariatric surgery – to psychological interventions – such as behaviour modification (Lebow, 1981), cognitive-behavioural modification (Corsini & Wedding, 1989), transactional analysis (Bruno, 1978), and nutrition education and motivation (Zucker & Gomberg, 1986). Although numerous interventions have been developed to prevent and treat

overweight and obesity, few demonstrate long-term success (Mann et al., 2007).

From a research perspective, attempts at constructing comprehensive theories and frameworks for aetiology and treatment of weight problems have typically involved multidisciplinary psycho-biological frameworks. In these multidisciplinary frameworks, the psychological contribution is predominantly comprised of cognitive behaviour modification strategies, and exercise.

Research into the efficacy of diets indicates that while people lose weight through dieting, 80% of dieters are unable to maintain their weight loss (Perri, McAdoo, McAllister, Lauer, Jordan, Yancey, & Nezu, 1987; Perri, Nezu, Patti, & McCann, 1989; Wilson, 1994). Participants in many research studies have been found to have regained the weight they had lost, and at the 12-18 month follow-up, some participants had gained even more weight than their initial, pre-diet, weight (Leach, 2006). Dieting patterns that involve cycling through frequent weight loss and regain cycles have a serious impact on escalating body image disturbance, self-esteem, anxiety, and depression (Foster, Sarwer, & Wadden, 1997). Research further reveals that diets are also indicated in the aetiology of obesity (Blaine, 2008; Stice, 2002). Many participants attribute the start of their weight problems as their engagement in their first diet, which is often characterised by the imposition of rigidly restrained eating patterns, resulting in inevitable loss of control and unrestrained, over-compensatory eating, with accompanying weight gain and concomitant psychological consequences.

Considering the potentially severe physical and psychological health risks associated with overweight and obesity, as well as the complex, interrelated bio-psychosocial causative factors, a critical need exists for the development of weight loss treatments that result in sustained weight loss.

This study derives its justification by addressing the problem of poor levels of treatment success in the maintenance of weight loss, through identifying and examining the theoretical constructs as well as the psychological and physiological processes that mediate long-term weight loss maintenance. It is expected that the insights and understandings derived from the current research may contribute theoretical constructs and strategies aimed at facilitating the development of an

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accessible approach to sustained weight loss and weight loss maintenance. Such an approach may be applied in a primary health care setting, and/or in a group or community setting, as a stand-alone programme or as a complementary programme in support of other weight loss programmes.

The current research examines the weight narratives of eight women who participated in an Integrative, Transactional Analysis, Non-Diet Programme (ITAND Programme), which I developed in 1989. The narratives involve the participants' relationship with food, their bodies, and their weight. By exploring the narratives I hope to discover the themes, meanings, and constructs that the participants perceive as having mediated lifelong (20-25 years) weight loss maintenance, without the use of diets. An examination of the psychological and behavioural processes that have enabled the participants to successfully maintain their weight loss will serve to identify the theoretical constructs of the ITAND Programme, which the participants perceive as essential for long-term weight loss maintenance. It is proposed that these theoretical constructs will contribute to the development of a theoretical framework, as well as constructs and strategies for the successful and permanent treatment of overweight and obesity.

1.2 Literature review

Obesity is a heterogeneous condition. Individual responses to standardised protocols leading to weight change are highly variable (Karelis, St-Pierre, Conus, Rabasa-Lhoret, & Poehlman, 2004). In real-life settings, physiological and psychological individual factors – some of which may be strongly influenced by genetics – interact with environmental factors in a complex manner. Individual responses to treatment interventions thus vary widely, both in the magnitude and the rate of weight changes. This has led to the development of an extensive range of treatments, which are aimed at containing the continuously escalating problem of overweight and obesity.

1.2.1 Obesity treatment interventions. Diets, in the form of prescriptive calorically restricted and restrained eating plans, are the most significantly utilised treatment for overweight and obesity. However, various studies (for example, Kruger, Galuska, Serdula, & Jones, 2004; Mann et al., 2007; Perri et al., 1987; Perri et al., 1989) on diets as a method for achieving permanent weight loss reveal that diets do not provide a successful treatment modality for overweight and obesity. In an analysis of

31 long-term studies on the efficacy of diets, results indicated that while dieters initially lost 5-10% of their weight while on a diet, most participants, after ending the diet, regained the weight that had been lost, and typically gained more weight than before embarking on the diet (Mann et al., 2007).

The length of the follow-up period is important in evaluating the efficacy of diets. In their critical review of the literature, Mann et al. (2007) refer to studies in which participants were monitored for a period of two years. In this study, 83% of participants regained more weight than they had lost. Another study reviewed by Mann et al. (2007) found that five years after their diet, 50% of dieters weighed more than 11 pounds above their starting weight.

Following their critical literature review on the efficacy of diets in 31 studies, Mann et al. (2007) concluded that participants would have benefited more by not going on the diet at all, as their weight would have remained much the same. Additionally, their bodies would not have been subjected to the physiological challenges caused by losing the weight and then regaining it (Mann et al., 2007).

Many research studies into diets as a treatment for overweight and obesity – for example, Kruger et al. (2004), Perri et al. (1987; 1989) – as well as the critical literature review of Mann et al. (2007), conclude that diets are ineffective since the benefits of dieting are unsustainable. Additionally, the potential for physical and psychological harm is sufficiently significant to caution against the use of diets as safe, effective treatments for overweight and obesity.

Recent studies on the efficacy of diets support the research by Stunkard and McLaren-Hume (1959), which was conducted over 50 years ago. This earlier research revealed that few patients adhered to diet treatment, and even when adhering to a diet, weight loss was not guaranteed. Of the small percentage of patients that successfully lost weight, few maintained their weight loss. In the decades following Stunkard and McLaren-Hume's (1959) research, various attempts were made to improve the efficacy of treatment programmes, including lengthening the course of treatment, emphasising the energy balance equation, and prescribing dietary and exercise goals for overweight patients (Chang, 2009). In the 1980s, diet treatment focused on a more aggressive approach – for example, the implementation of very low calorie diets, combined with pharmacological

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intervention. Behaviour modification for weight loss and maintenance also became more popular (Brownell & Wadden, 1986). Introducing behaviour modification programmes resulted in participants almost doubling their initial weight loss, compared to a dietary intervention alone. Aggressive intervention strategies – including diet, behaviour modification, and pharmacology – resulted in increasingly successful short-term weight loss. However, long-term maintenance of the weight loss was problematic (Brownell & Stunkard, 1981).

The 1990s saw the introduction of weight loss strategies based on moderate weight loss goals, which were accomplished through behaviour modification (Brownell & Wadden, 1991). This change in philosophy was a result of the following factors:

- Research has shown that even with moderate weight losses of 5-10%, many health outcomes, such as hypertension and diabetes, could be significantly improved (Blackburn, 1999; Goldstein, 1992).
- The “ideal” weight may not be easily obtainable for many people due to genetic and biological boundaries (Meyer & Stunkard, 1993; Wilson, 1994).
- Extreme changes in weight are not maintained, therefore a moderate approach to weight loss is more realistic and sustainable (Wadden, Foster, & Letizia, 1994).
- Height and weight indices are inappropriate and not sufficient criteria for evaluating overweight and obesity (Harrison, 1958).
- An attempt to lessen the societal pressures for being thin, especially for women (Brownell & Wadden, 1991).

It is widely recognised that diet violations are caused not only by environmental, physiological and cognitive factors, but also by the emotional state of the dieter (Herman & Polivy, 1980; Sjoberg & Persson, 1977). Herman and Polivy (1980) cite considerable evidence that dieting and bingeing occur simultaneously, and state that a large percentage of normal weight bingers report that they are dieters. They propose that successful dieting inevitably leads to bingeing because the dieter is in a chronic state of hunger. Furthermore, when the dieter’s weight falls below the physiologically dictated “set-point”, bingeing may represent the body’s attempt to

restore its weight to a normal level. The body's attempts to correct the physiological effects of dieting are considered to be threefold – firstly, there is an internal cue to eat as a result of chronic hunger, secondly, there is an external cue to eat due to increased palatability and appeal of food, and thirdly, the inhibitions are lowered owing to an inability to identify satiation (Herman & Polivy, 1980).

The dieting pattern of overweight people, involving cycles of frequent loss and regaining of weight (see Figure 1.1), has a serious impact on escalating body image disturbance, self-esteem, anxiety, and depression in the overweight person (Cargill, Clark, Pera, Niaura, & Abrams, 1999; Carpenter, Hasin, Allison, & Faith, 2000).

Many people attribute the start of their weight problems to their engagement in their first diet, in which the introduction of rigidly restrained eating led to an inevitable loss of control, and concomitant unrestrained, over-compensatory eating, and with accompanying weight gain and psychological consequences. Research reveals that psychological factors both foreshadow and follow overweight and obesity (Cargill et al., 1999; Carpenter et al., 2000).

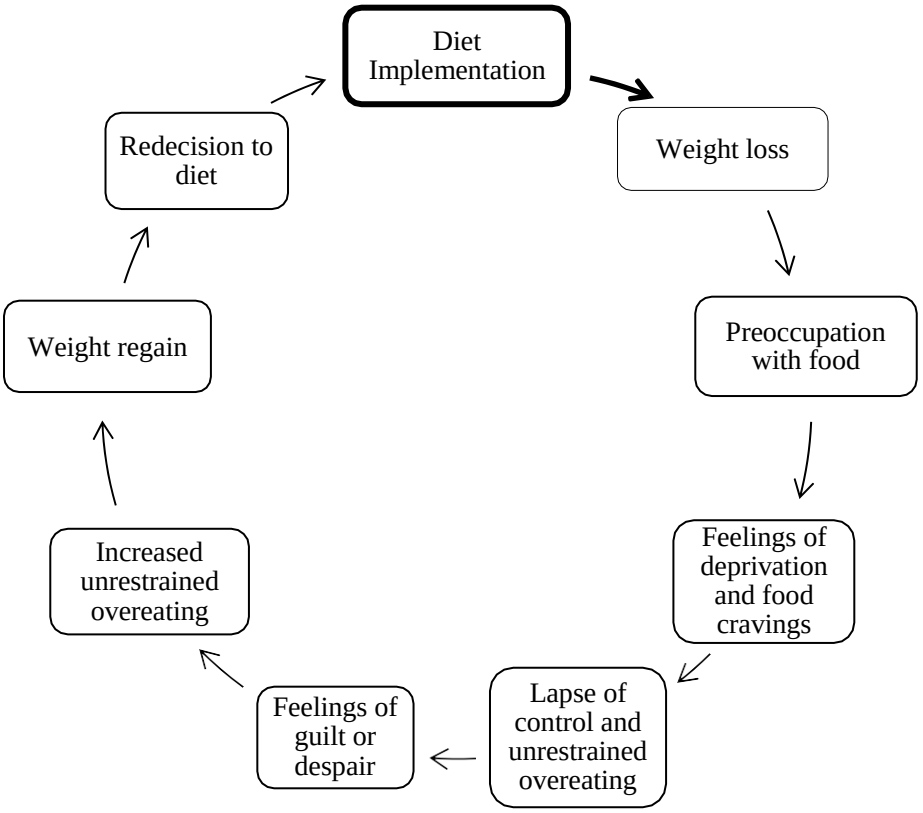

Figure 1.1. Diet destructive cycle

Behavioural Therapy (BT) is the most widely recommended complementary treatment for counteracting the high attrition and low long-term efficacy rates of traditional calorie restrictive diets. BT has been shown to increase success rates of weight loss attempts when combined with calorie restriction and exercise plans (Wing, 2002). When using BT, the attrition rate in intervention programmes decreases significantly, and participants lose approximately 8-10% of their body weight during the first 6 months of the treatment (Foster, Makris, & Bailer, 2005). BT enables the individual to develop skills for achieving a healthier weight, utilising a strict goal-oriented approach, while emphasising flexibility (Foster & McGuckin, 2002a; Wadden & Osei, 2002). Behaviour treatment regimes include various strategies, such as self-monitoring, self-control, problem-solving, pre-planning, and relapse prevention (Del Mar, Kenardy, O'Rourke, & Shaw, 2009; Wing, 2002).

BT is thought to be most beneficial to those who have been unsuccessful in losing weight through self-imposed or commercial weight loss programmes (Del Mar et al., 2009). Despite increased short-term success, Wadden and Osei (2002) describe weight regain as the "Achilles heel" of both behavioural and pharmacological interventions" (p. 244).

The addition of cognitive methods to BT is an attempt to improve programme success and to reduce the incidence of weight regain in long-term weight management (Del Mar et al., 2009). Cognitive Behavioural Therapy (CBT) interventions include problem-solving, stimulus control, cognitive restructuring, and self-monitoring of eating (Cooper & Fairburn, 2002; Wadden & Osei, 2002).

The non-dieting movement developed in response to the failure of diets as a treatment to achieve long-term weight loss, and to reduce their harmful physical and psychological side-effects. The non-dieting paradigm is based on the tenets that dieting is both harmful and ineffective (e.g. Bacon, Keim, Van Loan, Derricoate, Gale, Kazaks, & Stern, 2002; Higgins & Gray, 1999; Mann et al., 2007; Wadden & Osei, 2002; Wilson, 1994). The goals of non-dieting programmes are focused on educating participants about the dangers of dieting, educating participants on the biological basis of body weight, using internal cues for eating – such as hunger – rather than external cues, such as calorie count – to guide eating behaviour, improving self-esteem and body image, and increasing physical activity (Foster &

McGuckin, 2002b). Longitudinal follow-up studies of various non-dieting programmes indicate an increased maintenance of weight loss and an increase in physical activity following participation in these programmes. Randomised control studies that compared non-diet programmes to traditional dieting programmes found a significant decrease in mood and eating-related psychop athology (Tanco, Linden, & Earle, 1998), increased weight loss maintenance (Sbrocco, Nedegaard, Stone, & Lewis, 1999), and improved self-esteem (Faith, Fontaine, Cheskin, & Allison, 2000). Leach (2006) advocates the use of Transactional Analytical applications in treating overweight and obese patients in individual and group therapy. She reports having achieved significant success in the treatment of overweight and obese clients through applying the transactional analysis framework to understand and intervene in destructive eating patterns and psychological scripts, which are both the cause of and the continuance of overweight and obesity. However, in her application of transactional analysis, Leach (2006, p. 14) doubts "that it is ever possible for the long-term sufferer to be completely cured of the need to turn to food whenever under stress. She will, however, manage the process better and will be able to accept and tolerate the times when she reverts to using food again because she will have the tools to analyse and understand her own behaviour". Leach recommends that managing the relapse back to misusing food, within a framework of self-love and self-care, is required for long-term weight loss maintenance. A relapse, she says, needs to be "viewed by self as a brief relapse phase rather than a regression to old patterns of helpless and out of control behaviour around food" (Leach, 2006, p. 22).

1.2.2 The maintenance of weight loss. While a number of people manage to achieve initial weight loss, maintaining the weight loss over a period of time has proven to be more challenging, prompting the classification of obesity as "a chronic relapsing disease" (Orzano & Scott, 2004, p. 366). Current literature estimates that only 20-26% of people manage to maintain a weight loss of 10% of their baseline body weight for at least a one-year period (Befort, Thomas, Daley, Rhode, & Ahluwalia, 2008; McGuire, Wing, & Hill, 1999; Stevens, Truesdale, McClain, & Cai, 2006). A pattern of weight regain is evident in most people after six months of treatment/intervention cessation, irrespective of the type of intervention (exercise, diet, behavioural therapy, commercial programmes and pharmacological treatment) (Garcia Ulen, Huizinga, Beech, & Elasy, 2008).

Unsuccessful maintenance of weight is based on a variety of factors, including physiological, behavioural, environmental, and psychological elements. Pre-intervention predictors of unsuccessful weight maintenance includes older age (Hansen, Astrup, Toubro, Finer, Kopelman, Hilsted, & Goulder, 2001), a history of diet behaviour (Pasman, Saris, & Westerterp-Plantenga, 1999; Teixeira, Going, Houtkooper, Cussler, Metcalfe, Blew, & Lohman, 2004), a higher baseline weight (Byrne, Cooper, & Fairburn, 2004; Hansen et al., 2001; Lavery & Loewy, 1993), weight loss attempts for non-medical reasons (Gorin, Phelan, Hill, & Wing, 2004), binge-eating behaviour and dietary disinhibition (McGuire, Wing, & Hill, 1999; Niemeier, Phelan, Fava, & Wing, 2007), dichotomous thinking styles (Byrne, Cooper, & Fairburn, 2003; Byrne et al., 2004), personal reluctance to diet and exercise (Kruger, Blanck, & Gillespie, 2006, 2008), a lack of self-efficacy, motivation, unrealistic weight loss goals, and body-image issues (Byrne et al., 2003; Teixeira et al., 2004). Post-weight loss predictors of weight regain include a total loss exceeding 15% of the baseline body weight (McGuire, Wing, & Hill, 1999; Weiss, Galuska, Kettel Khan, Gillespie, & Serdula, 2007), early onset of weight regain (Poston, Ericsson, Linder, Nilsson, Goodrick, & Foreyt, 1999), and the subsequent lack of action to curb the regain (Lavery & Loewy, 1993), unsatisfactory initial weight loss (Teixeira et al., 2004), dietary disinhibition (McGuire, Wing, Klem, Lang, & Hill, 1999), eating as a coping mechanism and emotional eating (Gormally & Rardin, 1981; Kayman, Bruvold, & Stern, 1990; Lavery & Loewy, 1993), bingeing behaviour, consuming a high-fat, high-calorie, high-sugar diet, and a sedentary lifestyle with a large amount of time spent watching television (Weiss et al., 2007) (Weiss et al., 2007). Interestingly, continued weight loss attempts are also indicated in the increased probability of weight regain (Lavery & Loewy, 1993; Wadden & Frey, 1997).

Modest weight fluctuations are common with those who successfully maintain their weight loss post-treatment, but a gain greater than 2.6kg becomes difficult to recover from (McGuire, Wing, Klem, Lang, & Hill, 1999; Phelan, Hill, Lang, Dibello, & Wing, 2003). Continued effort and care is required during the initial years of weight loss. However, it is reported that after two years, weight loss maintenance requires less reliance on weight loss strategies. A time lapse greater than two years after the initial weight loss serves as a protective factor for subsequent regain of weight, and by five

years the chance of regaining at least 2.6kg is less than 27% (McGuire, Wing, Klem et al., 1999). Studies of the National Weight Control Registry (NWCR) identified the following behavioural strategies to be of great importance in weight management: frequent physical activity, and limiting the time spent watching television; a low-calorie, low-fat diet; regularly eating breakfast; a consistent eating pattern, regardless of the season or day of the week; avoiding eating for emotional reasons; frequent weighing sessions; and attending to minor weight regain before it becomes excessive (Niemeier et al., 2007; Raynor, Phelan, Hill, & Wing, 2006; Wing & Phelan, 2005). An additional strategy for maintained weight loss, identified by Dohm, Beattie, Aibel, and Striegel-Moore (2001), involves direct coping with stressful situations – as opposed to emotional avoidance or emotional eating – combined with positive help-seeking behaviour. Other studies suggest that a flexible approach to eating and food is important for weight maintenance – as opposed to a rigid restriction of certain food types (Westenhoefer, Von Falck, Stellfeldt, & Fintelmann, 2004).

1.2.3 Psychological factors inhibiting and mediating weight loss and maintenance. There is a complexity of psychological factors involved in weight loss and the maintenance of weight loss. However, a review of what is currently known about the experience of overweight and obesity, derived through qualitative research on the phenomenological perspectives of overweight and obese people, reveals a paucity of qualitative studies (Goodspeed & Boersma, 2005). These studies reveal the following themes in regard to the overweight or obese person's lived experience of their overweight condition, as well as of their attempts to lose weight:

- Replacing a relationship with food
- The "feel good factor", in regard to the consumption of certain types of food
- The feeling of "self-loathing" following the consumption of non-diet food
- Self-beliefs regarding a causal relationship between obesity and genetics, heredity, and metabolism
- The concept of "self-blame"

- The dichotomous thinking style accompanying being “in control” and “out of control” in regard to food, eating, and weight

These themes merit further investigation in order to facilitate the development of successful weight loss treatments. Treatments must address the issues of self-sabotage and internal conflict, as well as control and choice regarding food, self, and eating.

The ITAND Programme, on which the current research is based, represents a treatment model that addresses the identified weight loss inhibiting and mediating themes.

1.2.3.1 Weight loss goals. Realistic goal setting may be important in weight loss maintenance. Weight loss expectations include a desired weight, but also, increased self-confidence, assertiveness, attractiveness, appearance, and health (Ohsiek & Williams, 2011). Unrealistic weight loss expectations seem highly prevalent among those attempting to lose weight; however, this may greatly hamper their ability to maintain weight loss (Elfhag & Rossner, 2005). Individuals who successfully manage their weight in the long term have been found to have achieved a self-determined goal weight (Byrne et al., 2003; Jeffery, Wing, & Mayer, 1998; Marston & Criss, 1984). Additionally, individuals who had not necessarily achieved their weight loss goals, but still reported satisfaction with their achieved weight loss, improved appearance, health, and self-esteem, were also more successful in managing their weight (Byrne et al., 2003).

It has been hypothesised that failing to achieve satisfactory weight loss may undermine the individual’s belief in their ability to control their weight, causing them to give up on any weight loss attempts. A contradictory finding suggests that there is no negative relationship between unrealistic weight loss goals and the achievement of those goals, and in fact found a weak relationship between higher goal setting leading to lower body weight, and greater long-term weight management (Linde, Jeffery, Finch, Ng, & Rothman, 2004).

1.2.3.2 Dichotomous thinking styles. Rigid, “black-and-white” and “all-or-nothing” thinking styles have been associated with weight regain. People with a dichotomous thinking style perceive their failure to achieve unrealistic weight loss goals as a total

failure, and any weight loss that has been achieved is considered unsatisfactory. As a result of their disappointment with their weight loss achievement, the individual with a dichotomous thinking style is highly unlikely to remain motivated to maintain their weight loss (Byrne et al., 2003).

1.2.3.3 Coping styles. Stressful life events, as well as the perception of one's life as stressful, have been implicated in weight regain (Dubbert, 1984; Sarlio-Lähteenkorva, Rissanen, & Kaprio, 2000). Emotional eating, instead of directly coping with stress, could hamper attempts to regulate weight (Dohm et al., 2001). Several researchers (Gormally & Rardin, 1981; Grilo, Shiffman, & Wing, 1989; Westenhoefer et al., 2004) have stated that it is not the amount of stress in a person's life that serves as a precursor to weight regain, but rather their inability to cope with stress. Typically, people who regain weight tend to soothe negative emotions and stress through eating (Gormally & Rardin, 1981; Kayman, Bruvold, & Stern, 1990). By contrast, people who successfully maintain their weight have been found to manage their food cravings, and to use direct coping and corrective methods in a relapse situation (Dohm et al., 2001; Ferguson, Brink, Wood, & Koop, 1992).

1.2.3.4 Locus of control. Contradictory evidence exists regarding locus of control and weight maintenance (Elfhag & Rossner, 2005). While an internal locus of control has clearly been indicated in weight loss, there is little research available on the relationship between locus of control and weight maintenance. However, the available studies suggest that an internal locus of control plays a role in weight maintenance, and is attributable to the willingness of the individual to more readily accept full responsibility for their actions (Nir & Neumann, 1995). On the other hand, those who failed to take responsibility for their overweight or obesity, instead attributing their excess weight to an underlying medical cause, were less successful at losing weight and at maintaining the weight loss (Ogden, 2000).

1.2.3.5 Self-efficacy. Self-efficacy – in the context of weight loss, exercise, and the ability to manage emotions – is indicated in long-term weight maintenance (Jeffery, Bjornson-Benson, Rosenthal, Lindquist, Kurth, & Johnson, 1984; Rodin, Elias, Silberstein, & Wagner, 1988; Teixeira et al., 2004). People who successfully maintain their weight have been shown to have more confidence in their ability to

manage their weight compared to those who regained weight (DePue, Clark, Ruggiero, Medeiros, & Pera, 1995).

1.2.3.6 Body image. It has consistently been found that people who successfully maintain their weight loss have a more positive body image compared to those who regained their weight (Ohsiek & Williams, 2011). People who regained their weight tended to be preoccupied with their weight and appearance, and their self-worth is very much related to their body image. However, successful maintainers place less importance on appearance, and as a result have more positive feelings regarding their body image (Byrne et al., 2003).

1.2.4 Background to the research. It is evident from the review of the literature that both medicine and psychology have been unable to provide a solution to the challenge of long-term weight loss and maintenance.

In view of the escalating overweight and obesity pandemic, research that may contribute to advancing the treatment of overweight and obesity, and which may promote permanent maintenance of weight loss, is of critical importance. The current research – comprising a phenomenological inquiry with a 20-25 year maintenance of weight loss follow-up period following participation in an Integrative, Transactional Analysis, Non-Diet Programme – is positioned to lead to a greater understanding of the theoretical concepts, as well as of the psychological, physiological, and environmental processes that must occur in order to accomplish permanent weight loss.

In 1989, I developed the Integrative, Transactional Analysis, Non-Diet Programme (ITAND Programme), which addresses the poor efficacy of weight loss treatments in regard to weight loss maintenance and the destructive psychological patterns resulting from diets. The main aim of the ITAND Programme was to facilitate positive change in regard to the participants' relationships with food, their bodies, and their weight. This was to be achieved by addressing the psychological, physiological, and environmental factors that the research had emerged as essential for mediating weight loss processes, and thereby enabling the attainment and maintenance of weight loss.

The development of the ITAND Programme, which was commercially known as “Weight-Winners”, was based on the following three major factors in my own life, in relation to body image, weight, and diets:

1. My personal experience of losing and maintaining significant weight loss through stopping diets and freeing myself from destructive weight cycling.

2. My professional experience in assisting overweight and obese clients in a private, primary care clinical practice, between 1984 and 1989.

3. A synthesis of extensive research through my review of studies, from 1984 to 1989, which focused on the treatment of overweight and obesity.

In my personal journey and struggle with food, my body, and my weight – as well as in my professional work with overweight and obese patients in my private clinical practice – I observed that, from the theoretical perspective of transactional analysis, diets as a treatment for overweight and obesity resulted in a disruption of personality integration.

It became apparent to me that the psychological foundation of diets was theoretically flawed, and that this was the reason my patients continuously failed at every attempt to lose weight through dieting, and to maintain their weight loss. By applying Transactional Structural analysis to the “internal dialogues” of my patients, I discovered that the act of “willpower” – the predominant mediating psychological process enforced by diets – was implosive and destructive for my patients.

In Transactional Structural analysis, “willpower” involves the imposition of the “power of the will” of the Critical Parent ego state on the Child ego state (Bruno, 1978). My experience of working with the internal dialogues of my patients revealed that, as far as adhering to a diet is concerned, this dynamic always resulted in a power struggle, and a “win-lose” situation between the Critical Parent ego state and the Child ego state. I observed that my patients would lose weight on the diet while the Parent ego state maintained dominance over the Child ego state. Invariably, the imposition of this “willpower” led to resentment and defiance in the Child ego state. The outcome of this dynamic was that the Child ego state became rebellious, sabotaging the Parent ego state, and causing the patient to abandon the diet. This was followed by unrestrained, over-compensatory eating, attributable to the deprivation experienced

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through the imposition of the diet. The result was that the patient regained the weight lost in the initial stage of the diet, which had been dominated by the Parent ego state (Bruno, 1978).

I discovered for myself and my patients that the transformational process required for permanent weight loss could be facilitated only by giving up diets and applying transactional analysis constructs. In terms of transactional analysis, some of the mediating theoretical constructs and strategies necessitated the empowerment of the Adult ego state, the “updating” of the Parent ego state, and the “re-contracting” with the Child ego state.

In addition to transactional analysis, I found that constructs and concepts derived from cognitive-behaviour modification enabled and empowered the “Adult” ego state with the psychological and physiological processes that are essential for mediating and moderating permanent changes with regard to food, the body, and weight, and allow successful and permanent weight loss. These mechanisms include behaviour re-profiling based on the eating patterns of normal weight people, the application of mindfulness to eating and the concepts of positive psychology for motivation, nutrition education, and overcoming exercise resistance.

The Weight-Winners Programme – the commercial name of the ITAND Programme – is thus an integrative treatment for overweight and obesity, which adopts a non-diet approach, and is defined by transactional analysis. For purposes of this study, the Weight-Winners programme will be referred to as the ITAND Programme, which is the acronym for the Integrative, Transactional Analysis, Non- Diet Programme.

The ITAND Programme comprised 8 modules and extended over a period of eight weeks, with one session per week lasting two hours. Since the programme was systematised I was able to train a clinical associate team of psychologists and medical practitioners to run the programme. The programme was successful because it helped to free women from the destructive cycle of diets and guided them to develop a normal relationship with all food. This was accomplished through applying a Transactional Analysis framework, and constructs from integrative psychological, behavioural, and physiological methodologies. Participants in the ITAND Programme lost significant amounts of weight and experienced positive changes in their relationship to food as well as to their bodies.

From 1990 to 1993, my team of professional associates and I guided thousands of women through the ITAND Programme. I stopped running the programme in 1993 following the sudden tragic and untimely death of my husband. I was then 35 years of age, with three young sons who required my support to deal with the devastating loss of their father.

Since ending the programme, many women have approached me for assistance with their difficult relationships with food, their bodies, and their weight. They have specifically requested the programme because they have known a relative, a friend, or a colleague who had significantly benefited through participation in the programme. Additionally, I have received several commercial propositions to re-introduce the programme. I have not reintroduced the programme because in the years following the termination of the programme I developed a fulfilling career in a corporate wellness business within Investec, a leading investment bank. However, I have always cherished the ideal of using my experience in the field of weight management, as well as my ITAND Programme, to contribute to the understanding of this global problem.

Through an inquiry into the long-term weight loss narratives of women who participated in the ITAND Programme 20-25 years ago, I hope to contribute to the weight loss paradigm an understanding of the theoretical concepts as well as the psychological and physiological processes that are found to mediate permanent weight loss maintenance. The themes and constructs emerging from these narratives have the potential to make a meaningful contribution to our understanding of overweight and obesity, as well as to contribute to the development of successful treatments for long-term weight loss maintenance.

Figure 1.2 represents a diagrammatic reference to my unique application of Transactional Analysis theory in assisting my patients to achieve sustained weight loss while simultaneously maintaining personality integration and improvement in their relationship with food, eating, their bodies, and their weight. Transactional analysis provided the theoretical framework for the ITAND approach and is the basis for this study. The application of transactional analysis utilised in the ITAND Programme will thus be explored through an analysis of women’s narratives with food, their bodies, and long-term maintenance of weight loss.

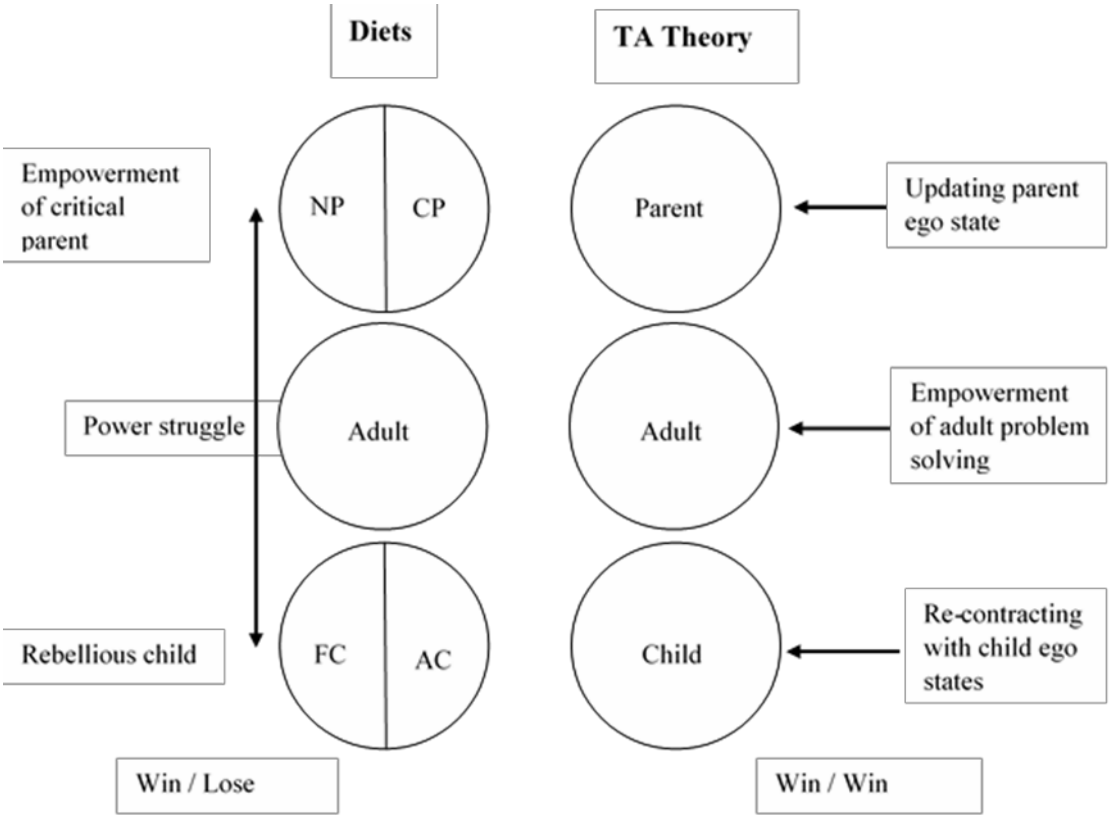

Figure 1.2. ITAND application of transactional analysis

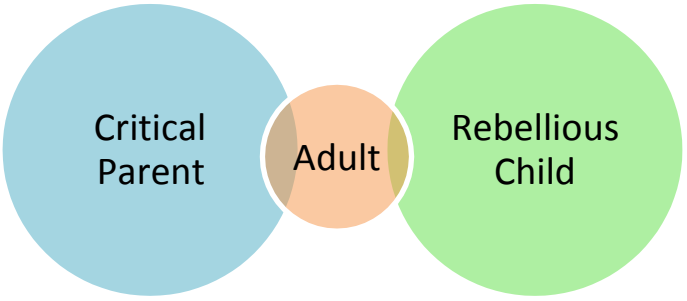

Figure 1.3. The power dynamic outcome of diets

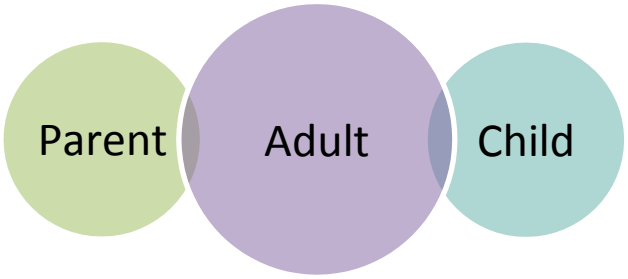

Figure 1.4. Transactional analysis aim of the ITAND Programme

1.2.5 Rationale. The rationale for this study takes cognisance of the following:

- The global epidemic of overweight and obesity (World Health Organization, 2015a)
- The severe medical and psychological health risks associated with overweight and obesity (Apfelbaum, Vague, Ziegler, Hanotin, Thomas, & Leutenegger, 1999; Douketis, Macie, Thabane, & Williamson, 2005)
- The poor long-term efficacy of current treatment protocols regarding to facilitating the long-term maintenance of weight loss (Mann et al., 2007; Wing, 2002)
- The absence of a unifying theoretical framework for the successful treatment of overweight and obesity (Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003; Orleans, 2000)

Previous research in the field of public health expressed the need for future research to improve the understanding of what motivates behaviour change (Marcus, Williams, Dubbert, Sallis, King, Yancey, & Claytor, 2006). An imperative exists to broaden the understanding of the process of weight loss, and especially weight loss maintenance (Hoole, 2014). In this regard, specific attention should be given to the mediators and barriers to weight loss maintenance, as perceived by those who engage in the weight loss (Hindle & Carpenter, 2011; Rothman, 2000).

A full investigation of weight loss maintenance is crucial, since those who have regained weight after initial weight loss attribute the failure to maintain their weight loss to the lack of research focus around weight loss maintenance strategies and experiences (Hindle & Carpenter, 2011).

In 1989, as outlined in the background to this study, I developed and implemented, in South Africa, a unique, Integrative, Transactional Analysis, Non-Diet Programme; the ITAND Programme was aimed at assisting women to accomplish positive change in their relationships with food and their bodies, and thus to facilitate a process of weight loss that would be sustained on a permanent basis. The efficacy of the programme for facilitating positive change in the journey of women – in regard to their relationship with food, body issues, and weight – was revealed through the experiences of the women who participated in the programme, as well as the accounts of my team of professional associates who facilitated the implementation of the programme. These observations validated the unifying theoretical framework, as well as the mediating, integrative weight loss constructs that defined the ITAND Programme.

Almost 25 years have passed since the development and implementation of the ITAND Programme. Owing to the successful experience of participants in the programme, I believe an examination of these experiences will contribute significantly to an understanding of the strategies and processes necessary for the accomplishment of permanent weight loss maintenance.

This study investigates the long-term weight loss maintenance of a group of participants, over a period of 20-25 years after their participation in the ITAND Programme. As such, it is globally the longest study of weight loss maintenance in all of published research in the field of weight loss research.

This study will be accomplished through the application of a qualitative research methodology to an examination of the weight maintenance narratives of eight women who participated in the ITAND Programme and maintained their weight loss for a minimum period of 20-25 years. The intended outcome is that this study may potentially contribute uniquely to an identification of the theoretical constructs and psychological processes that mediate lifelong/permanent weight loss maintenance.

1.2.6 Aim and research questions. This study aims to address the problem of the low efficacy in the maintenance of weight loss. This will be achieved through examining the narratives of eight formerly overweight and obese women, who successfully maintained significant weight loss for a period of 20-25 years following their participation in the ITAND Programme. Through analysing these narratives, the study aims to provide an understanding towards the development of a theoretical framework as well as constructs for mediating lifelong (20-25 years) maintenance of weight loss, and thereby contributing uniquely to the field of treatments for long-term weight maintenance.

This study also aims to examine the non-diet-based strategies that are perceived by the participants as directing positive change in their relationship to food, their bodies, and their weight, and thereby enabling the lifetime maintenance of weight loss.

The research questions are the following:

1. What are the meanings, constructs, and strategies, derived from the ITAND Programme, which participants perceived as enabling their attainment of weight loss as well as the long-term maintenance of weight loss?

2. Which psychological, behavioural, and physiological processes are perceived as mediating lifelong weight loss?

3. Which cognitive-behavioural strategies and skills are perceived to mediate the maintenance of lifelong weight loss?

1.2.7 Method and design. This study utilised a qualitative research methodology, specifically, Interpretative Phenomenological Analysis (IPA) and narrative analysis. The personal narratives of eight participants was collected and analysed. The participants were women who had achieved lifetime weight loss maintenance (20-25 years), following their participation in the ITAND Programme.

The selection of both IPA and narrative analysis allows for a multilevel examination of the subject matter. Both IPA and narrative analysis are concerned with the “lived experience”, or personal experience, of the participant. Narrative allows an understanding of how participants make meaning out of their experiences, in terms of how they make their experiences meaningful and coherent, and how this

contributes to their sense of identity (Crossley, 2000; Labov & Waletzky, 1997). Narrative adds a sense of temporality to the participants' accounts of how their past experiences with their weight and the ITAND Programme has shaped their current identity (Labov & Waletzky, 1997). IPA allows for "giving voice" both to the participants' experiences, within the context of the ITAND Programme, and to other psychological contexts related to weight.

Data for this study was acquired through requesting the eight women participants to write their narratives regarding their "weight stories", and to include a description of their relationship with food, their bodies, and their weight. The aim of the study was explained to the participants, and they were thereafter invited to write their narratives using unstructured free text. I conducted follow-up telephonic interviews based on their written narratives to provide a further opportunity for inquiry and an exploration of processes identified in the narrative.

Since the interviews focused on each participant's specific story – as opposed to a generic version of their experiences – there was no defined interview schedule. Instead, the interview questions were based on each individual narrative, and semi-structured in order to facilitate the progression of the discussion regarding each participant's personal written narrative (Chase, 2011).

1.2.7.1 Sampling method. This study utilised purposive sampling. I identified participants for this study in collaboration with associate psychologists who had facilitated the ITAND Programme. Candidates included those who had maintained significant weight loss for more than 20 years following participation in the ITAND Programme.

I approached ten candidates telephonically to request their participation, and offered an explanation of the purpose of the study. Eight candidates agreed to participate. I explained that for the purpose of my research, which aimed to explore and examine concepts from the ITAND Programme, and which they had perceived as having made meaningful contribution to their long-term maintenance of weight loss, I would require that they free-write a narrative of their journey with food, weight, and their bodies.

The narrative would cover the period before their participation in the programme, their time during the programme, and in the 20-25 years following their participation in the programme.

I explained that the narrative process would require a follow-up telephonic interview, which would provide an opportunity to further explore and probe identified themes, as well as to clarify any ambiguities in the narrative.

1.2.7.2 Inclusion criteria. The following inclusion criteria were applicable for the sample:

- Age, 40-67 years old
- Female
- Overweight (also self-identified as such) and/or obese at the time of enrolment in the programme
- No diagnosed metabolic disease at the time of enrolment in the programme; participants were screened for such conditions at the commencement of the ITAND Programme
- Significant weight loss, maintained for a period of between 20 and 25 years following completion of the programme

1.2.8 Possible contribution of the proposed study. Considering the deficit of long-term weight loss maintenance research, and the fact that few constructs and strategies for weight loss maintenance have been identified to enable treatment, this study intends to contribute to our understanding in the field of weight loss maintenance. This outcome is to be achieved through uncovering, examining, and illuminating the constructs and processes necessary for achieving lifelong weight loss maintenance.

This research could contribute to the development of weight management theory through examining women's perceptions of the theoretical constructs of an integrative, multidisciplinary theoretical approach, defined by transactional analysis, as a requirement for achieving lifelong weight loss maintenance. The understandings, insights, theoretical concepts, constructs, and strategies emerging

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from this research have the potential to provide a unique treatment for weight loss and weight loss maintenance, and to serve as a complementary intervention for improving the efficacy of existing treatments for weight loss and long-term weight loss maintenance.

1.2.9 Ethical considerations. The participants are not considered to be a vulnerable population, and no adverse effects were anticipated in the writing of their narratives or through their participation in an interview. However, each participant was offered access, at no cost, to the services of a clinical or counselling psychologist, should they experience distress and require referral. If I were to encounter an interview during which the participant experienced difficulty, the participant would be debriefed and made aware that the service of the psychologist was available to them.

A medical doctor was made available to the participants in the event that they experienced any adverse health effects. The interview would be paused at any sign of a participant's distress, and the participant would be given the opportunity to end the interview.

When the participants were initially approached for their narratives, they received an informed consent form (see Appendix A). The consent form describes the aims and objectives of the study, and outlines the requirements for participation; they were required to return a typed narrative, and to participate in a follow-up telephonic interview (Brinkman & Kvale, 2008; Burman, 1994).

The consent form informed the participants of their right to withdraw from the study at any point during the writing of the narrative or at the interview stage. Participants were informed of any risks and/or benefits of their participation, although no direct risks or benefits were anticipated as a result of their participation in this study.

All participants were invited to bill at their professional rate for time invested in participating in this study. This would be determined by either their hourly consulting rate, or by calculating their hourly working rate.

Issues of confidentiality were explained. Participants were informed that any identifying features from their narratives and interview transcripts will be removed, and that their names will be replaced with pseudonyms (Brinkman & Kvale, 2008).

The consent form detailed who will have access to the transcripts and interviews – in this case, it is the researcher, research assistants, and supervisors.

I obtained my right to publish extracts of the interviews and the narratives from the participants. Recordings of the interviews and the transcripts were kept in a password-protected file. A written agreement was signed by me and by each participant (see Appendix B).

The interview opened with a short briefing. The participant's rights were reiterated and clarified.

The use of an audio recording device was also discussed, and verbal permission was obtained for its use (Burman, 1994). Each participant was debriefed at the end of their interview. Finally, the participants were provided an opportunity to express any feelings or concerns, and were informed that they could request access to transcripts and to the analysis (Brinkman & Kvale, 2008).

1.3 Conclusion

This study is focused on an inquiry into the weight loss maintenance narratives of eight women regarding their relationship with food, their bodies, and weight. These women had participated in the ITAND Programme, which I had developed in 1989. Through an examination and analysis of the narratives, I hope to uncover phenomenological experiences, as well as the processes and constructs that these women perceive as having mediated their weight loss, and subsequent lifetime maintenance of this weight loss.

I trust that the knowledge and insights gained through this inquiry will contribute to informing a much needed paradigm for enabling the attainment of lifetime positive changes in relation to food, body image, and weight loss maintenance.

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CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Overweight and obesity are considered an escalating global epidemic, and constitute one of the world's most visible yet most neglected public health problems (World Health Organization, 2003a; 2000). The World Health Organization began raising the alarm in the 1990s by spearheading public awareness campaigns to sensitise policy makers, the private sector, medical professionals, and the public at large, to the crisis. Having found obesity to be predominantly a social and environmental disease, the World Health Organization implemented strategies to analyse and identify the main political, socio-economic, cultural, and physical factors that promote obesogenic environments, so as to enable the development of large-scale interventions to contain the overweight and obesity epidemic (World Health Organization & Organization for Economic Co-operation & Development, 2014).

In an attempt to explore the extensive field of overweight and obesity, this literature review begins by examining the demographics of the scope of the overweight and obesity epidemic. A definition of obesity is provided, and an examination of its consequences. The research into the causes and treatment interventions for overweight and obesity is explored, followed by an extensive examination of research on the maintenance of weight loss, using the studies reviewed with regard to treatment interventions. Finally the review examines the constructs and processes that have been identified in the research as enabling the long-term maintenance of weight loss, which directly relates to the focus of the current research.

2.2 Defining overweight and obesity

The World Health Organization (2015a) defines overweight and obesity as abnormal or excessive fat accumulation that may impair health. Obesity is further defined as an imbalance between energy intake and expenditure, causing surplus energy to transmute into fat cells, which then enlarge or increase (Goedecke, Jennings, & Lambert, 2006).

For the past 30 years, obesity has been predominately defined and diagnosed using BMI (Body Mass Index) (Brown, 1991; Maes, Neale, & Eaves, 1997; Romero-Corral, Somers, Sierra-Johnson, Thomas, Collazo-Clavell, Korinek, & Lopez-Jimenez, 2008; Smith & Hawks, 2006). BMI uses a simple calculation based on the ratio of the person's height and weight (BMI = kg/m2). A BMI of 18.5 kg/m² and below is classified as underweight, a BMI between 18.5 and 24.9 kg/m² is classified as normal, a BMI between 25 and 29.9 kg/m² is classified as overweight, and a BMI of 30 kg/m² or above is classified as obese (Poirier, 2007).

The "obesity" category is divided into three levels: grade 1 obesity refers to a BMI between 30 and 34.9 kg/m², grade 2 obesity refers to a BMI of between 35.0 and 39.9 kg/m², and grade 3 obesity refers to a BMI of 40 kg/m² and higher (Poirier, 2007). BMI remains the most widely used classification of obesity (Poirier, Giles, Bray, Hong, Stern, Pi-Sunyer, & Eckel, 2006). BMI has been used consistently in epidemiological research, and its use has also been encouraged in clinical practice to assist weight loss and control (Romero-Corral et al., 2008; Seidell, Kahn, Williamson, Lissner, & Valdez, 2001).

BMI is not considered to be the only measure to define obesity because an important factor in the diagnosis, namely abdominal obesity, cannot be measured using BMI (Harvard T. H. Chan School of Public Health, 2015). In addition, BMI does not successfully discriminate between lean muscle and fat (Snijder, Van Dam, Visser, & Seidell, 2006). This is especially applicable to men, the elderly, and people of intermediate ranges of body weight. In males, BMI correlates more closely with lean muscle than with body fat. BMI was found to be unable to identify 50% of the people who were classified as obese through body fat percentage measures (Gomez-Ambrosi, Silva, Galofre, Escalada, Santos, Gil, & Fruhbeck, 2011; Romero-Corral et al., 2008). BMI is therefore considered to demonstrate low sensitivity to body fat, which is a high correlate of obesity (Gomez-Ambrosi et al., 2011; Romero-Corral et al., 2008).

An alternate diagnosis of obesity to BMI is reached through the measurement of waist circumference and body fat percentage (Brown, 1991; Phillips, Tierney, Perez-Martinez, Defoort, Blaak, Gjelstad, & Roche, 2013). Weight circumference is one of the simplest and most often used measures of abdominal obesity (Harvard T. H.

Chan School of Public Health, 2015). Abdominal obesity in women is defined as a waist size of 89 cm or more, and in men as a waist size of 102 cm or more (Harvard T. H. Chan School of Public Health, 2015). Although waist circumference does not consider whole body fat distribution when compared to the traditional measure of obesity (BMI), weight circumference provides more accurate predictions of several cardiovascular diseases, hypertension, coronary artery disease, congestive heart failure, stroke, gallbladder disease, type II diabetes, and metabolic syndrome (Guh, Zhang, Bansback, Amarsi, Birmingham, & Anis, 2009).

The American Council on Exercise defines a body fat percentage of more than 32% for women and 25% for men, as indicative of obesity (Bryant & Green, 2010). A body fat percentage range of between 25–31% for women and 18–24% for men is considered normal.

Body fat percentage is measured using skin callipers, bio-electrical impedance hydrostatic weighing, dilution techniques, dual-energy X-ray absorptiometry (DXA), and air displacement plethysmography (Snijder et al., 2006). Magnetic Resonance Imaging (MRI) and Computerised (or computed) Tomography (CT) scans are also used to measure body fat.

Body fat percentage has been found to be a better determinant of pre-diabetes and type II diabetes mellitus than the use of BMI (Gomez-Ambrosi et al., 2011). However, BMI is often used for large studies (Snijder et al., 2006), due to the cost and time needed to conduct body fat measurements as well as CT and MRI scans.

The use of body fat percentages to diagnose obesity requires a consideration of the distribution of fat in defined areas of the body (Brown, 1991). The distribution of fat around the centre, or trunk, of the body, has been closely correlated with serious chronic diseases, such as cardiovascular disease. However, fat distributed peripherally – in the hips and limbs – is not associated with these medical risks. It is thus recommended to accommodate for these distinctions of distribution when measuring body fat.

People who do not meet the defined criteria for overweight and/or obesity – as defined by BMI, body fat percentage, and abdominal circumference – may self-identify as being overweight and/or obese. Since obesity is considered an illness that

is embedded within a societal discourse, self-identification should also be recognised in research (Conrad & Barker, 2010). Self-identification of overweight and obesity is based on the notion that people know what constitutes “normal” weight (Conrad & Barker, 2010). By the age of three, children already demonstrate knowledge and use of the societal discourse that “thin is good and fat is bad” (Cramer & Steinwert, 1998).

Davies and Furnham (1986) found that ten times more people self-identify as being overweight than meet any diagnostic criteria for overweight. Fifty per cent of people who self-identify as overweight wanted to decrease their weight and alter their body shape, and had considered the methods by which to achieve this (Davies & Furnham, 1986). Cramer and Steinwert (1998) found that people who self-identified as being overweight demonstrated a stronger stigmatism of overweight and obesity than those who were not overweight. This increased stigmatisation could further contribute to the desire to attempt to lose weight (Cramer & Steinwert, 1998).

Since people who self-identify as being overweight or obese are likely to attempt to lose weight, even though they do not meet the diagnostic criteria for overweight or obesity, it is relevant to include these people in research on overweight and obesity.

In order to critically examine research on both the causes and related treatment interventions of overweight and obesity, it is important to consider the debate concerning the definition of obesity. There is little consensus on the definition of obesity, and all measurements have predictive significance regarding health risks. It is thus necessary to consider BMI, waist circumference, and body fat percentage, when diagnosing overweight and obesity, and also to pay attention to the self-identification of overweight and obesity.

For the purposes of the current study, obesity has been defined by the participants’ subjective experience of being overweight and requiring intervention, and in relation to BMI.

Participants were eligible to be included in this study if their BMI was ≥ 25. While most people are familiar with BMI, it is recognised that individuals may define themselves in different and more meaningful terms (McBride, 1988). This study

focuses on these definitions as part of a wider exploration of how people discuss and feel about their body weight.

2.3 Demographics of the overweight and obesity epidemic

Since 1980, the incidence of global obesity has doubled, and this increase is predicted to continue (Ng, Fleming, Robinson, Thomson, Graetz, Margono, & Gakidou, 2014; Phillips et al., 2013; World Health Organization, 2015a). The increase is reflected across all age, race, and gender categories (Wright & Aronne, 2010). The World Health Organization reports that in 2014, more than 1.9 billion people over the age of 18 were overweight (World Health Organization, 2015a). Of this figure, over 600 million people were obese. These figures approximate the prevalence rates reported by other researchers (Goedecke et al., 2006; Lancet, 2006). Thirty eight per cent of adults over the age of 18 were considered to be overweight, and 13% were classified as obese (World Health Organization, 2015a). In 2014, 11% of men and 15% of women were obese, and 38% of men and 40% of women were overweight (World Health Organization, 2015a). Ten per cent of children have also been found to be obese (Lancet, 2006).

While overweight and obesity are commonly associated with developed countries, they are an increasingly emerging problem across all economic levels and age groups in developing countries, such as South Africa (Goedecke et al., 2006; Popkin, 1994; Puoane, Steyn, Bradshaw, Laubscher, Fourie, Lambert, & Mbananga, 2002). A study by Ng et al. (2014) on the global, regional, and national prevalence of overweight and obesity in children and adults between 1980 and 2013 revealed that the highest rate of obesity and overweight among adults in sub-Saharan Africa is found in South African women (42%), while the combined rate of both overweight and obesity is 69.3%. South African men showed a 39% overall prevelance rate with a 14% obesity rate (Ng et al. 2014).

In South Africa, black women were found to have the highest prevalence of overweight and obesity, with 58.5% being overweight or obese compared to 49.2% of white women (Goedecke et al., 2006; Kruger, Venter, Vorster, & Margetts, 2002; Mollentze, Moore, Steyn, Joubert, Steyn, Oosthuizen, & Weich, 1995). Urban women were found to have a higher prevalence of obesity than women from rural areas (Goedecke et al., 2006). The prevalence of obesity in South African males

indicates that white men have the highest prevalence of overweight and obesity, with a prevalence of 54.5%, compared to black men, who have a prevalence of 25%. Men from urban areas were found to have significantly higher Body Mass Index (BMI) scores than younger men and men from rural areas (Goedecke et al., 2006).

Chopra, Galbraith, and Darnton-Hill (2002) claim that the rate of obesity in South Africa is expected to increase. It is not only likely that the prevalence of obesity is increasing; it has been argued that it is underestimated. A cross-sectional study by Gomez-Ambrosi et al. (2012) reveals that the prevalence of overweight and obesity, defined as excess body fat by Gomez-Ambrosi et al., may be underestimated due to the traditional reliance on BMI in classifying obesity. This is particularly relevant in the case of overweight people. The underestimation is further attributable to the tendency for people with high levels of obesity to under-report (Kruger et al., 2002).

In view of the alarming overweight and obesity pandemic, the development of treatment intervention protocols has become urgent, and research into new and innovative approaches to treatment is of critical importance. The current study may be positioned as contributing to this research by exploring the perceived mediators facilitating weight loss and maintenance, as promoted by the ITAND Programme.

2.4 Health risks and consequences associated with overweight and obesity

Overweight and obesity have been found to be comorbid with a variety of diseases and health risks, some of which can cause death or disability (Guh et al., 2009; Haslam & James, 2005; Poirier et al., 2006). Overweight and obesity increase the risk of developing chronic conditions, including non-insulin-dependent diabetes mellitus, coronary heart disease, hypertension, hyperlipidaemia, osteoarthritis, and almost all cancers (Burton, Foster, Hirsch, & Van Itallie, 1985; Guh et al., 2009; World Health Organization, 1997), and have been found to be comorbid with osteoarthritis and strokes (Burton et al., 1985). Overweight and obesity are also leading causes of atherosclerosis, sleep disorders, non-alcoholic steato-hepatitis, and arthritis (Cossrow & Falkner, 2004).

Guh et al. (2009) conducted a systematic review of the incidence of comorbidities related to overweight and obesity. Their review used both BMI and weight circumference measures of obesity. Guh et al. (2009) identified 18 comorbidities of

overweight and obesity, including type II diabetes, breast cancer, endometrial cancer, ovarian cancer, colorectal cancer, oesophageal cancer, pancreatic cancer, prostate cancer, kidney cancer, hypertension, coronary artery disease, congestive heart failure, pulmonary embolism, stroke, asthma, gallbladder disease, osteoarthritis, and chronic back pain (Guh et al., 2009).

Excess adiposity (excessive accumulation of fat) both characterises, and is at times used as a synonym for, obesity (Lancet, 2006; Pi-Sunyer, 2002); it is also a significant causal factor in the development of insulin resistance, otherwise known as MetS (Phillips et al., 2013). Overweight and obesity are major causes of insulin resistance because adipose tissue has greater resistance to insulin action than muscle tissue. Insulin resistance, overweight, and obesity are considered significant contributors to cardiovascular disease (Cossrow & Falkner, 2004). MetS is also comorbid with dyslipidaemia and hypertension, both of which increase the risk of developing type II diabetes mellitus, and cardiovascular disease (Cossrow & Falkner, 2004; Moller & Kaufman, 2005).

Overweight and obesity have been demonstrated as being comorbid with difficulties concerning psychological wellbeing (Goedecke et al., 2006; Kruger et al., 2002). The comorbidity of depression and obesity has been established in numerous research studies (Blaine, 2008; Goedecke et al., 2006; Luppino, De Wit, Bouvy, Stijnen, Cuijpers, Penninx, & Zitman, 2010; Onyike, Crum, Lee, Lyketsos, & Eaton, 2003). In a systematic review of overweight, obesity, and depression, Luppino et al. (2010) report that overweight and obesity increase the risk of depression. The association between obesity and depression may in part be due to the experience of social isolation, and, in children, social difficulties with peers, which is found to be correlated with obesity (Stunkard & Burt, 1967). Women who do not meet cultural standards of thinness are not only prone to depression, but are also more likely to suppress anger and to engage in anger avoidance behaviour (Gortmaker, Must, Perrin, Sobol, & Dietz, 1993).

Overweight and obese people are often aware of the negative views held by society concerning obesity and obese individuals – the view that obese people are “weak-willed” and “unmotivated”. Overweight and obese people may internalise these views, placing themselves at risk of anxiety and mood disorders, and substance

abuse (Collins & Bentz, 2009). The internalisation of these societal discourses increases the risk of overweight and obese people eating in response to feelings of failure and guilt.

Obesity is correlated with an increased risk of conditions such as bipolar disorder, panic disorder, and agoraphobia (Simon, Von Korff, Saunders, Miglioretti, Crane, Van Belle, & Kessler, 2006). Binge-eating disorder was found to be associated with both axis I and axis II psychiatric disorders (Yanovski, Nelson, Dubbert, & Spitzer, 1993). Approximately 40% of people who self-identify as being obese meet the criteria for binge-eating disorder (Yanovski et al., 1993). Overweight and obese people often face stigmatisation and discrimination, resulting in compromised psychological wellbeing (Wardle & Cooke, 2005). Specific aspects of psychological functioning may also increase the risk of developing obesity (Neymotin & Nemzer, 2014). It should be noted that the association between obesity and psychological disorders such as depression seems to be bidirectional (Lazzeretti, Rotella, Pala, & Rotella, 2015).

In view of the alarming scope and depth of the obesity epidemic, as well as the associated serious physiological and psychological health consequences, it is crucial to examine the causal factors endemic to overweight and obesity.

2.5 Causes of obesity

Obesity is a complex disease. A great number of factors play a role in its pathogenesis. At its most basic, obesity is caused by the regular intake of excess calories relative to expended calories. The body stores these excess calories as body fat, resulting in excess weight gain (World Health Organization, 2015a). Therefore, obesity is considered the consequence of a consistent imbalance between energy intake – the amount of food consumed – and energy expenditure – physical activity. Obesity is also influenced by biological and environmental factors (Del Mar et al., 2009; Kleiser, Rosario, Mensink, Prinz-Langenohl, & Kurth, 2009). Causal factors include genetics, and neurobiological, biological, environmental, behavioural, dieting, psychological, social, and environmental and lifestyle factors, as well as the interaction between these factors.

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2.5.1 Genetic factors. A recent review of genetic studies of obesity found that over 600 genetic markers, genes, and chromosomal regions have been associated with obesity (Pérusse et al., 2005). Research has revealed inconsistent results, indicating that between 30-80% of weight problems are attributable to genetic factors (Harvey & Withers, 2008). Family studies demonstrate that obesity is correlated with family genealogy (Maes et al., 1997; Sørensen, Rasmussen, & Magnusson, 2007). Twin and adoption studies have found that the BMIs of monozygotic twins are more similar than those of dizygotic twins (Maes et al., 1997; Sørensen et al., 2007; Wansink & Kim, 2005). However, this correlation has been shown to decrease gradually with age, which may be attributable to environmental and lifestyle influences. This phenomenon is less clear for dizygotic twins.

While some studies maintain that genetic factors play a large role in the development of overweight and obesity, no consensus has been reached concerning the true extent of the role of genetics in overweight and obesity (Harvey & Withers, 2008; Maes et al., 1997). A systematic review by Silventoinen, Rokholm, Kaprio, and Sørensen (2010) indicates that both genetic and environmental factors contribute to increased BMI in children.

2.5.2 Neurological and biological causes. Research into the relationship between obesity and neurobiology has significantly increased in recent years (Harvey & Withers, 2008). Numerous neurotransmitters, neural pathways, and hormones have been identified as significant contributors to the regulation of weight and energy intake (Harvey & Withers, 2008). For example, neuropeptides at the hypothalamic level are essential for the regulation of energy expenditure, feeding behaviour, and neuroendocrine function (Grill & Kaplan, 2002).

Suriel (2013) proposes that people who are naturally thin – that is, people who have always been thin and are able to maintain a healthy weight without strict dietary and exercise regimes – experience increased levels of dopamine when eating, compared to obese people. Due to the role of dopamine in pleasure and reward, Suriel (2013) concludes that overweight and obese people experience less pleasure when eating, and therefore need to consume more food in order to experience pleasure. MRI studies reveal that overweight and obese people concurrently experience similar levels of reward, when presented with highly desired foods, as those of people

addicted to drugs who are presented with images of the substance to which they are addicted (Suriel, 2013).

Suriel (2013) found that there are physiological differences between people who are naturally thin and overweight people. Naturally thin people are found to eat only in response to hunger, and are not preoccupied with food. This lack of obsession with food means that the neurotransmitters that respond to the constant anticipation of food are not released in naturally thin people.

Serotonin has been identified as contributing to the development of obesity, Since low serotonin levels are closely linked to depression, depression and obesity are considered to share a common pathophysiology (Rosmond, 2004). Depression has been found to be predictive of developing obesity (Luppino et al., 2010) and is associated with an 18% increased risk of being obese (De Wit et al., 2010). Depression and obesity have been found to increase cardiovascular disease. Stunkard, Faith and Allison (2003) discovered that major depression among adolescents predicted a greater body mass index in adult life than in adolescents who had not been depressed.

Obesity was found to be positively correlated with major depression among women, but inversely related to depression among men (Stunkard et al., 2003). Gender was also found by Luppino et al. (2010) to be a moderating variable. Rosmond (2004) proposes that obesity and depression may represent different manifestations of the same neurobiological disease process. However, it is not clear whether depression or obesity is the first causal factor. It is considered possible that the psychological implications of perceiving oneself as overweight or obese could lead to social isolation, unhappiness, and stigmatisation (Rogge, Greenwald, & Golden, 2004), all of which may contribute to the development of depression. Depression, in turn, then exacerbates overweight and obesity. This explanation offers an alternative to the neurobiological explanation.

Gender is also considered a causal factor in the development of overweight and obesity (Brown, 1991; Del Mar et al., 2009). Men typically have a higher total body mass than women, whereas women have more subcutaneous fat, measured by skinfold thickness. Women also have much more peripheral fat in the legs and hips than men (Kissebah, Freedman, & Peiris, 1989).

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Parity has been highly correlated with overweight and obesity in women (Arroyo, Avila-Rosas, Fernandez, Casanueva, & Galvan, 1995; Coitinho, Sichieri, & D'Aquino Benício, 2001; Ölin & Rössner, 1996; Weng, Bastian, Taylor Jr, Moser, & Ostbye, 2004). The Health and Retirement study by Weng et al. found that for each additional birth, women face a 7% increase in the risk of obesity (Weng et al., 2004). However, since a 4% increase in risk of obesity was also found in men, it is plausible that the increased risk of developing overweight and obesity after childbirth could also be attributable to lifestyle changes for both men and women (Weng et al., 2004). The Stockholm Pregnancy and Weight Development Study found that women who retained more weight postpartum demonstrated a larger increase in reported lifestyle changes, such as changes in diet, exercise, and meal patterns, than women who retained less postpartum weight (Rössner & Öhlin, 1995). This suggests that postpartum weight gain influences lifestyle changes that contribute to overweight and obesity. Research also indicates that the BMI of women prior to pregnancy (Coitinho et al., 2001), being of a young age at menarche, the time period between menarche and first birth, maternal age, and high gestational weight gain, are considered important in determining the risk of becoming overweight after pregnancy (Gunderson, Abrams, & Selvin, 2000).

Brain physiology and biochemistry have also been found to contribute to the development of overweight and of obesity by causing the problematic behaviours associated with obesity. The inability to modify these problematic behaviours, and to reduce the intake of dietary fat and sugar when individuals are consciously aware of the medical benefits of reducing these substances, has been attributed to brain physiology and biochemistry (Wurtman & Wurtman, 1987, as cited in Brown, 1991).

2.5.3 Environmental factors. Research into the causal factors of overweight and obesity provides support for the concept of an obesogenic environment, which can be organised into the eating environment, and the food environment (Wansink, 2004). The eating environment is the ambient factors associated with eating, but which are independent of food, such as social and cultural factors, the social climate, the effort needed to obtain food, the social interactions that occur, and distractions that may be present (Wansink, 2004). The food environment refers to factors that directly relate to the way the food is provided or presented. This includes factors

such as salience, structure, package or portion size, excess shopping and storage of food, and the way food is served (Wansink, 2004; Wansink & Kim, 2005).

During childhood the environment plays a substantial role in food preferences, eating, physical exercise patterns, and levels of activity (Breen, Plomin, & Wardle, 2006; Silventoinen et al., 2010). During early adulthood, food preferences as well as eating and physical exercise behaviours become solely determined by additive genetic and specific environmental factors (Silventoinen et al., 2010). It is important to note that although genetic factors have a strong effect on childhood obesity, obesity cannot be explained independently of behaviour. In fact, Silventoinen et al. (2010) state that genetic effects can be understood as the consequence of health behaviour.

Modes of parenting play a critical role in the development of the food preferences and energy intake of children (Scaglioni, Salvioni, & Galimberti, 2008). Research indicates that certain child-feeding practices, such as exerting excessive control over what and how much children eat, may contribute to childhood overweight (Johnson & Birch, 1994; Scaglioni et al., 2008). Parents who are more controlling of their children's food intake often have children who show less ability to self-regulate energy intake (Johnson & Birch, 1994). A study by Neumark-Sztainer, Story, Perry and Casey (1999), which examined adolescents' perceptions of factors influencing their food choices and eating behaviours, found that adolescents cite parental influence as a significant factor.

A correlation between breastfeeding and overweight and obesity is also well established (Stolzer, 2011). Breastfeeding significantly reduces childhood, adolescent, and adult overweight and obesity (Kramer, 1981; Lucas, Boyes, Bloom, & Aynsley-Green, 1981). Nutritional intake in infancy is not only highly correlated with later predisposition to obesity, but also comorbid with diseases such as high blood pressure, heart disease, and type II diabetes (Morley, Dwyer, Black, & Fleisher, 2002; Waterland & Garza, 1999). Bottle-fed infants are more likely to become overweight or obese than breastfed infants (Bogen, Hanusa, & Whitaker, 2004).

Environmental factors affect not only food choice, but also the volume of food that is consumed (Wansink, 2004). A study by Wansink and Kim (2005) found that even

when foods are not appetising or appealing, presenting them in large packages and containers can lead to overeating. This indicates that the influence of portion and packaging size on the volume of food consumed is stronger than whether foods are desirable to eat.

2.5.3.1 Social. Bodies of research demonstrate that obesity is socially influenced, with particular social groups at increased risk of becoming obese (Ball, Mishra, & Crawford, 2003). Brown (1991, p. 35) proposes four facts that demonstrate the social distribution of obesity:

- Gender differences in the prevalence, and total percentage and site distribution of body fat
- The increase of obesity in certain ethnic groups
- The increase in obesity associated with economic modernisation
- The powerful and complex relationship between social class and obesity

Numerous other social factors have also been documented as contributing to the development of obesity, including migration, marital status, employment, background, family status, and housing situation (Ball et al., 2003).

Poor socioeconomic status in families has been found to increase the risk of obesity in children (Kleiser et al., 2009; Parsons, Power, Logan, & Summerbelt, 1999). Crespo, Ainsworth, Keteyian, Heath and Smit (1999) report that lower social class is associated with lower levels of recreational physical activity. Kleiser et al. (2009) report that when compared to people of medium or high socioeconomic status, obesity occurred more often among people of low socioeconomic status, even when these people participated in healthy, favourable behaviours. People who are of a low social class have also been found to be less likely to consume a healthy or low-fat diet (Baghurst, Record, Baghurst, Syrette, Crawford, & Worsley, 1990; Smith & Owen, 1992). Even after controlling for diet, dieting behaviours and exercise, social class remains a significant predictor of obesity, as classified through BMI (Wamala, Wolk, & Orth-Gomér, 1997). In a study by Stunkard et al. (2003), socioeconomic status was found to be associated with obesity only in women.

A study by Ball et al. (2003) found interactions between gender and several social factors in predicting obesity. It was found that, among males, those living in rental properties and in properties with fewer bedrooms had higher BMI scores. Married men with dependants also revealed higher BMI scores. Among women, those who were employed on a part-time basis or in lower occupations had higher BMI scores. These women had an average of 0.99 BMI units more than women who were employed on a full-time basis (Ball et al., 2003).

A positive correlation has been demonstrated between overweight and obesity on the one hand, and the following factors on the other: maternal smoking during pregnancy; high weight gain during pregnancy – of mothers with prior normal weight; high birth weight; and overweight parents (Kleiser et al., 2009). The risk of obesity for children with two overweight parents is 11 times greater. The odds ratio of children with one overweight parent is still higher than for any other variable (Kleiser et al., 2009). While this relationship between child obesity and parental overweight is established, the causes have been attributed to genetic, environmental, and behavioural factors.

Urbanisation, with the accompanying acculturation and economic modernisation, has been argued to contribute to the development of obesity. Brown (1991) states that this is elucidated by the complete absence of evidence that obesity exists among traditional hunting and gathering populations. People from urban areas indicated a higher fat intake than those living in rural areas, resulting in increased obesity rates (Kruger et al., 2002). Bourne, Langehoven, Steyn, Jooste, Nesamvuni and Laubscher (2015) found that African people residing in urban areas prefer refined carbohydrate foods, meat, and foods containing high levels of fat, compared to people living in rural areas.

Level of education has also been found to be associated with overweight and obesity (Puoane et al., 2002; World Health Organization, 2005). A study by Puoane et al. (2002) established that low educational status was related to higher BMI scores in black South African women. However, the opposite was found with men, where it was found that men with more than eight years of schooling demonstrated significantly higher BMIs than those with less or no schooling. This research

indicates that level of education interacts with gender to play a role in the development of obesity in South Africa.

Kumanyika (2008) argues that no discussion of environmental influences on obesity would be complete without a discussion of culture. Overweight and obesity are caused by the interplay between genetic and cultural factors (Brown, 1991; Del Mar et al., 2009). People may participate in culturally determined behaviours and beliefs that predispose them to develop obesity. The rapidity with which obesity has become a leading health problem in the context of modernisation emphasises the crucial role of cultural behaviours in the causation of obesity (Brown, 1991). The rate at which obesity has emerged as a primary health concern disqualifies changes in gene frequencies as a primary cause of obesity.

Culture and economic factors intersect in their influence on obesity. This is because modernisation is accompanied by various cultural changes, including changes in dietary patterns. Increased modernisation and urbanisation are correlated with a decreased intake of fibre, and an increased consumption of both fat and sugar (Brown, 1991), accompanied by a reduced expenditure of energy.

Other cultural practices and beliefs that could contribute to overweight and obesity include food sharing, as a device for marking family ties and demonstrating community cohesiveness (Stack, 1976), differentiating symbolic meanings of fatness, perceived ideal body types (Kumanyika, 2008), and perceived risks of food shortages (Brown, 1991). The perceived ideal body type can contribute to overweight and obesity when people feel that they do not conform to it (Stice, 2002). This may lead to body dissatisfaction, which in turn may promote dieting. Dieting increases the risk of pathological eating behaviours, such as binge-eating disorder (Crisp, 1983). Previous or current food shortages or economic deprivation may lead to the fostering of overeating when food is accessible (Kumanyika, 2008). Foods that are expensive and previously unavailable may become highly valued and indulged in, such as meat, and foods containing high sugar and fat. The rewards experienced when consuming these foods may further reinforce their consumption (Kumanyika, 2008). Culture also shapes other discourses of food, including how it relates to health, and which foods are beneficial or harmful (Kumanyika, 2008).

The culture surrounding food and holiday periods contributes to overconsumption, and thus increased weight (Del Mar et al., 2009; Wansink, 2004). The holiday eating environment encourages overconsumption through social events characterised by meals of long duration. Socialisation with familiar people over meals to celebrate holidays typically extends the time taken to complete the meal (Wansink, 2004). Meals shared with familiar, friendly people are more relaxing and enjoyable, and inevitably lead to consuming more food as the period spent engaged in a setting where food is presented last longer than a typical meal setting on other days. De Castro and Brewer (1992) found that when people eat in large groups, the meals they consume are 75% larger than meals they consume on their own. The distraction caused by socialisation also reduces people's ability and motivation to monitor consumption (Wansink, 2004). All of these environmental factors contribute to the development of overweight and obesity, but are not solely responsible for the problem.

2.5.4 Behavioural causes. Behaviour theory proposes that excessive eating leading to overweight and obesity is a learnt habit, which is strongly conditioned to a variety of internal and external cues (Leon, 1977). According to behavioural approaches, obesity can be accounted for by considering eating behaviours, levels of physical activity, and other weight-related behaviours (Ball et al., 2003; Rennie, Johnson, & Jebb, 2005).

2.5.4.1 Sedentary lifestyle. There is an inverse linear relationship between sedentary lifestyle and the current pandemic of obesity (De León, Rodríguez-Pérez, Rodríguez-Benjumeda, Anía-Lafuente, Brito-Díaz, Muros de Fuentes, & Aguirre-Jaime, 2007; Lee, 2010; Marcus et al., 2006). The World Health Organization (2015b) reports that 31% of adults – of which 28% were men, and 34% were women – were insufficiently active in 2008. In South Africa, the lack of physical activity was found to be a significant contributing factor to obesity (Kruger et al., 2002). The present high levels are partially due to insufficient participation in physical activity during leisure time, and an increase in sedentary behaviour during occupational and domestic activities (World Health Organization, 2003b).

Sedentary lifestyle has been defined in numerous ways. People are said to lead sedentary lifestyles if they engage in less than 25-30 minutes of physical activity in

active leisure per day (De León et al., 2007; World Health Organization, 2003b). Lee (2010) defines a sedentary lifestyle as engaging in no leisure-time physical activity – exercise, sports, and physically active hobbies – in a two-week period.

Physical activities include, for example, walking to work, climbing stairs, gardening, dancing, and a variety of leisure and recreational sports. Sedentary behaviour has been defined as sitting or reclining activities that involve expending less than 1.5 metabolic equivalents (METs) (De León et al., 2007).

The World Health Organization (2015b) provides several reasons for the global increase in sedentary lifestyle and physical inactivity. They state that the physical and social environment of cities has a major impact on the extent of physical activity. For example, a lack of parks, poor air quality, crowding, crime, a lack of sport and recreational facilities, and pavements, make physical activity more difficult (World Health Organization, 2015b).

An increase in the use of “passive” modes of transport for extended lengths of time has also been associated with declining physical activity levels. A study by Lowry, Wechsler, Galuska, Fulton, and Kann (2002) found that 43% of students watch more than two hours of television during the week. Generally, more hours spent viewing television was found to be associated with being sedentary, and in turn, with increased overweight and obesity; there were however some cultural differences. It was also associated with a decrease in the amount of fruit and vegetables eaten (Lowry et al., 2002).

2.5.4.2 Nutrition. Dietary intake and nutritional factors, such as food energy and macronutrient intakes, are found to be a contributing factor to the high prevalence of obesity (Popkin & Gordon-Larsen, 2004; Wansink & Kim, 2005). Poor nutrition in the modern lifestyle significantly contributes to overweight and obesity (Popkin & Gordon-Larsen, 2004).

Developing countries have acculturated and adopted Western diets, and now too show trends of increased obesity (Popkin & Gordon-Larsen, 2004). Popkin and Gordon-Larsen (2004) state that there has been a rapid increase in the global consumption of edible oil, animal-sourced food – meat, dairy, and eggs – and caloric sweetener – sugar – all of which have contributed to the profound increase in

obesity. Diets with a high energy density, high consumption of sugar-sweetened beverages, and large portion sizes, have also been postulated as some of the numerous behavioural risk factors that increase obesity (Rennie et al., 2005; Wansink & Kim, 2005). Undernutrition during early life has been associated with obesity, as well as with other comorbid chronic diseases (Sichieri, Siqueira, & Moura, 2000).

Nutrition labels, such as “low fat”, have also been found to increase the development of overweight and obesity (Wansink & Chandon, 2006). Wansink and Chandon (2006) state that low-fat nutrition labels increase food intake by causing people to believe that they can increase their serving size of low fat foods. Low-fat nutrition labels reduce feelings of guilt, leading to the consumption of excessive portions, and thus reinforces overconsumption (Wansink & Chandon, 2006).

2.5.4.3 Smoking. The cessation of smoking may cause weight gain, but the effect of stopping smoking is both moderate and temporary in most cases (Sucharda, 2010). A meta-analysis of the lipid profile of people who stop smoking found that stopping smoking increases serum levels of high-density lipoprotein cholesterol (HDL-C), but not of total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), and triglycerides (TG) (Ino, 2010). Maternal smoking and smoking in families have been shown to increase the risk of overweight and obesity in children and MetS (Ino, 2010; Sucharda, 2010).

2.5.4.4 Sleep. The obesity epidemic has been paralleled by a trend of reduced sleep duration (Beccuti & Pannain, 2011). Ample evidence suggests that short sleep duration and poor sleep quality are risk factors for the development of obesity (Beccuti & Pannain, 2011; Cappuccio, Taggart, Kandala, & Currie, 2008; Markwald, 2013; Patel, Blackwell, Redline, Ancoli-Israel, Cauley, Hillier, & Taylor, 2008). Markwald (2013) conducted a study in which participants were only allowed to sleep five hours a night. In this experimental group the participants gained an average of one kilogram. The control group, who were left to sleep nine hours a night, had little trouble maintaining their weight (Markwald, 2013).

A meta-analysis by Cappuccio et al. (2008) found that cross-sectional studies from around the world demonstrate a consistent increased risk of obesity in both children and adults among those who sleep for short periods. Patel et al. (2008), in response

to a lack of data on older adult participants in studies on the relationship between a lack of sleep and overweight and obesity, investigated whether the relationship between sleep deprivation and weight gain in elderly people resembled that of young adults. Their results indicated that it did. It should be noted that causal inference is difficult due to a lack of controls for important confounders (Cappuccio et al., 2008). Even so, decreased hours of sleep seem to be related to overweight and obesity. Sleep is an important modulator of neuroendocrine function and glucose metabolism (Beccuti & Pannain, 2011). It is thus considered a contributor to overweight and obesity because a lack of sleep results in metabolic and endocrine changes. These changes may include decreased glucose tolerance, decreased insulin sensitivity, increased evening concentrations of cortisol, increased levels of ghrelin, and decreased levels of leptin. All of these changes result in increased hunger and appetite (Beccuti & Pannain, 2011).

2.5.4.5 Mindless eating. It has been demonstrated that environmental factors trigger the behaviour of eating without conscious awareness in a process referred to as “mindless eating”. Mindless eating refers to cues to start and to stop eating (for example, Wansink, 2007; Wansink & Sobal, 2007). Wansink (2007) suggests that, while people state that their eating cues depend on how good something tastes and how hungry they are, environmental eating cues are stronger indicators of how much a person will eat.

While much research has focused on food choice decisions (what a person eats), there has been less research on decisions surrounding how much a person eats (Wansink & Sobal, 2007). The environment can have an impact on the amount of food eaten, which can be triggered by factors such as plate size, the ambience of the room, the variety of food, and the perceived time of day (Ogden, Coop, Cousins, Crump, Field, Hughes, & Woodger, 2013; Wansink, 2007; Wansink & Sobal, 2007). Another factor in overeating is the effect of distraction while eating, such as watching TV, and social interaction.

Wansink and Sobal (2007) propose two causes for environmental overeating. The first is that consumption norms are dictated by a person’s environment. Portion sizes, delivered according to restaurant standards, and food packaging that suggests a normal and reasonable serving, have both been shown to influence a person’s

eating habits. Decisions based on these subtle environmental cues may be relatively unconscious and automatic (Wansink & Sobal, 2007). Secondly, environmental cues may lead to mindlessly ignoring internal cues of satiety, which should serve as an indicator of when to stop eating. Mindless eating presents a barrier to weight loss, as well as to weight loss maintenance.

2.5.4.6 Eating behaviours. The eating behaviours of overweight and obese people differ significantly from the eating behaviours of naturally thin people (Daily, 2014). Naturally thin people often leave food on their plate, and do not feel compelled to eat all their food for the mere sake of finishing it; they cease to eat in response to fullness rather than environmental cues. Naturally thin people do not eat in response to emotions, or use food as a coping mechanism. Food is only used to satisfy hunger (Daily, 2014). There are no foods that are perceived as being off-limits by naturally thin people; they do not classify food as "good" or "bad".

The classification of certain foods as "bad" may influence an "all-or-nothing" mentality. An "all-or-nothing" mentality occurs when people eat a type of food that they have prohibited themselves, and because they have eaten food that is not allowed they believe they have failed completely. This may evoke binge-eating of the restricted food (Daily, 2014). Naturally thin people do not engage in "all-or-nothing" thinking. The lack of restriction in terms of what can be eaten prevents feelings of deprivation, and therefore the desire to overindulge in food. Naturally thin people also drink large amounts of water throughout the day. This not only contributes to overall health but also serves to make them feel fuller (Daily, 2014). The behaviours engaged in by naturally thin people serve to protect them from overweight and obesity.

2.5.4.7 Dieting. The behaviour of dieting is also considered to contribute to the development of overweight and obesity (Blaine, 2008; Stice, 2002). A study by Blaine (2008) concluded that people who engaged in dieting behaviours often participated in overeating when experiencing negative affect and depression. The contrary was true for non-dieting people. Therefore, the behaviour of dieting is argued to be a moderator of the relationship between depression, and overweight and obesity (Blaine, 2008).

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Dieting behaviour teaches the body to store fat when food is consumed in order to compensate for the reduction of calories (Tribole & Resch, 2003). Chronic dieting also decreases the rate of weight loss with each succeeding diet. It decreases metabolism in order to ensure efficient use of energy, and increases cravings and binges. Studies have found that after dieting, both humans and rats prefer foods that are high in fat and sugar (Tribole & Resch, 2003). Dieting also often causes stress and lower self-esteem, both of which may trigger binge-eating.

The neurobiology of people is significantly altered by dieting, which contributes to overweight and obesity. Suriel (2013, p. 11) attributes such weight increases to the “famine brain”. The famine brain is said to result from historical circumstances resembling dieting behaviour. Due to food scarcities experienced historically, people often consumed as much food as possible when food was available. This resulted in the development of the neural reward system, which operates when large amounts of food are consumed (Suriel, 2013).

When people engage in dieting behaviour by restricting calories, the body registers that less food is consumed than is needed to maintain the body. In response, the neurochemical systems of the body activate the imperative to eat (Suriel, 2013). The neurobiological system is only able to detect when too little is consumed, and not when too much is consumed (Suriel, 2013). For this reason, when people restrict their intake, the level of the hormone leptin, which is responsible for indicating satiety, is reduced, and the hormone ghrelin, which causes hunger, is released. This process occurs in order to maintain homeostasis, and attempts to combat the reduction in intake and the brain’s identification of a possible shortage in response to dieting (Suriel, 2013). This has been referred to in the literature as the set-point theory (Riess, 2002).

2.5.4.8 Weight cycling. Weight cycling, the continual cycle of weight loss and gain, is associated with weight loss induced by dieting, and is prevalent mostly among obese and overweight people. Weight cycling may be considered a contributor to overweight and obesity, and has been argued to be more detrimental to health than the maintenance of an existing overweight status (Colditz, Willett, Stampfer, London, Segal, & Speizer, 1990; Foster et al., 1997; Haus, Hoerr, Mavis, & Robison, 1994; Lissner, Odell, D'Agostino, Stokes III, Kreger, Belanger, & Brownell, 1991; Rodin,

Radke-Sharpe, Rebuffe-Scrive, & Greenwood, 1990). Weight cycling applies not only to people who are overweight or obese, but also to people who are of normal weight, especially young women, who are unhappy with their appearance (Montani, Viecelli, Prévot, & Dulloo, 2006). Due to the prevalence of dieting, weight cycling is assumed to be common (Montani et al., 2006).

The proposed detrimental effects of weight cycling are considered to be lowered metabolic rate and negative change in body composition, increased morbidity and mortality, and adverse psychological and behavioural effects (Foster et al., 1997).

Weight cycling is associated with a decreased resting energy expenditure, increased body fat, or decreased weight loss. Literature on morbidity and mortality is less clear, although some studies (albeit having some methodological concerns) have connected weight cycling to coronary disease (Foster et al., 1997; Montani et al., 2006). People of normal weight who engage in weight cycling have been found to be more likely to present with insulin resistance, a higher percentage of visceral fat, and dyslipidaemia. All of these factors lead to an increase in cardiovascular disease risk factors such as high blood pressure, sympathetic nervous system activity, increase in lipids, and disturbance of glucose levels (Montani et al., 2006).

Weight cycling has also been demonstrated to result in psychologically adverse consequences, including binge-eating, lowered self-esteem, self-efficacy regarding weight control, and lowered mood (Foster et al., 1997).

2.5.5 Psychological causes. Psychological difficulties can not only foreshadow the development of overweight or obesity, but can also contribute to ongoing difficulty in weight loss maintenance (Collins & Bentz, 2009). Psychological and emotional factors, such as anxiety, fear, stress, emotional disturbance, and personality traits, have been demonstrated to disturb eating behaviour, thereby causing overweight and obesity (Collins & Bentz, 2009; Goedecke et al., 2006; Lazzeretti et al., 2015; Leon & Roth, 1977).

Research by Schachter (1971a; 1971b) found that the eating behaviour of overweight and obese people is influenced significantly more by external environmental cues and emotional regulators than a physiological state of hunger. He therefore proposes that the reliance on external factors contributes to overweight

and obesity (Schachter, 1971a). In other words, an external locus of control contributes to obesity.

Research indicates that overweight and obese people eat in an attempt to alleviate emotional disturbance, including feelings of anxiety, fear, stress, and anger (Collins & Bentz, 2009; Fulwiler, Brewer, Sinnott, & Loucks, 2015; Leon & Roth, 1977). This was affirmed in a study by McKenna (1972), which found that under high-anxiety conditions, obese subjects ate significantly more food than in low-anxiety conditions. Participants of normal weight displayed the opposite, eating less in high-anxiety conditions. Therefore, anxiety-provoking situations can be said to contribute to overeating in people who are already overweight or obese. Many overweight and obese people seem to experience a perpetual cycle of mood disturbance, overeating, and weight gain (Collins & Bentz, 2009). The guilt resulting from overeating may reactivate the cycle.

High levels of stress are also associated with an increased risk of overweight and obesity (Collins & Bentz, 2009; Fulwiler et al., 2015; Goedecke et al., 2006). A novel theory by Dallman, Pecoraro, Akana, La Fleur, Gomez, Houshyar and Manalo, (2003) proposes that there is a relationship between chronic stress, comfort food, and weight gain. They argue that people who are stressed or depressed have a decreased cerebrospinal corticotrophin-releasing factor, catecholamine concentrations, and hypothalamo-pituitary-adrenal activity, and may therefore overeat to reduce the activity in the chronic stress response network (Dallman et al., 2003). Psychosocial stress – including general life stress and work stress – has also been strongly associated with the biology of overweight and obese people, but epidemiological studies have produced inconsistent results (Overgaard, Gyntelberg, & Heitmann, 2004; Wardle, Chida, Gibson, Whitaker, & Steptoe, 2011).

A meta-analysis by Wardle et al. (2011), in which 14 cohorts were evaluated and collated, revealed that psychosocial stressors are risk factors for weight gain. Stress was found to be associated with increasing adiposity (Wardle et al., 2011). The experience of stress has the potential to overwhelm the body’s ability to maintain homeostasis (Sherwood, 2015). Stress may invoke metabolic changes that lead directly to abdominal adiposity (Dallman, La Fleur, Pecoraro, Gomez, Houshyar, &

Akana, 2004). It may also affect food choice, both by reducing time for food preparation and by increasing comfort eating (Wardle & Gibson, 2002).

When experiencing stress, overweight and obese people often indulge in comfort foods (Wansink, Cheney, & Chan, 2003). Comfort foods are those that when consumed evoke a psychologically comfortable and pleasurable state in a person (Wansink et al., 2003). Eating particular comfort foods may result in the release of opiates, causing feelings of satisfaction and elevated mood (Le Magnen, 1985). Not eating a particular opiate-related comfort food can cause people to experience uncomfortable or distracting cravings (Wansink et al., 2003).

An association between exposure to psychological trauma during childhood and the development of an elevated risk of adult obesity has been demonstrated (Gunstad, Paul, Spitznagel, Cohen, Williams, Kohn, & Gordon, 2006). Early life-stressors such as a history of being bullied, rejected, or emotionally abused, in particular, predict adult obesity. People who experience physical or sexual abuse during childhood have an increased likelihood of becoming overweight and obese (Gustafson & Sarwer, 2004; Jia, Li, Leserman, Hu, & Drossman, 2004). Exposure to multiple or repeated trauma further increases the risk of becoming obese or overweight (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, & Marks, 1998).

The severity of abuse has been shown to influence the level of risk for the development of overweight and obesity; however, even less severe trauma can contribute to the development of overweight and obesity in adulthood (D'Argenio, Mazzi, Pecchioli, Di Lorenzo, Siracusano, & Troisi, 2009). D'Argenio et al. (2009) argue that it is not psychological trauma in itself that contributes to obesity, but the psychological maladaptive response to the trauma.

Cognitive scripts are considered to constitute a psychological factor leading to overweight and obesity. Scripts are defined as conceptual representations of stereotyped event sequences that involve expectations about the sequence and the occurrence of events (Abelson, 1981). When people experience events frequently, they are said to develop “cognitive scripts”, also known as mental schemas, for these experiences (Musher-Eizenman, Marx, & Taylor, 2015).

Musher-Eizenman et al. (2015) theorise that because children eat more calories, and eat more frequently today than in the past, it is probable that children perceive the consumption of food as relatively normal and appropriate across a greater variety of contexts and situations than children did in the past. An event that commonly occurs during a specific situation or context is more likely to be represented in an individual's event script for that situation or context. Food scripts provide vital sequential information about food-related events. This information is used to simplify decision-making and to guide behaviour in food-related contexts (Bisogni, Jastran, & Blake, 2011).

Musher-Eizenman et al. (2015) investigated whether young children include eating in their cognitive scripts for various events, and whether food-related scripts are associated with body mass index percentile. They found that over 22% of the activities in the children's scripts involved food, and that the number of food-related activities reported was positively correlated with the children's BMI percentile (Musher-Eizenman et al., 2015). Once a script is formed it influences behaviour, and in children, context can activate scripts (Dalton, Bernhardt, Gibson, Sargent, Beach, Adachi-Mejia, & Heatherton, 2005). Because scripts influence future behaviour and are influenced by past behaviour, it is crucial to understand the food-related content of children's scripts. A higher prevalence of food in children's event scripts may increase the risk of overweight and obesity, as it indicates that consumption occurs frequently (Musher-Eizenman et al., 2015).

Research has investigated the association between personality traits and overweight or obesity (Lazzeretti et al., 2015). However, few studies have been able to identify a distinct personality style that is associated specifically with obese people (Wadden & Stunkard, 1985). This suggests that the overweight and obese population is heterogenic (Friedman & Brownell, 1995), and that particular personality traits could be related to specific behavioural correlates of obesity. Alexithymic personality traits, which are defined as a difficulty in describing feelings to others and sharing personality experiences, are personality traits often observed in obese people (Lazzeretti et al., 2015).

Higher levels of neuroticism and reduced levels of extraversion have been related to a higher weight status among women (Faith, Flint, Fairburn, Goodwin, & Allison,

2001). High levels of neuroticism are thought to increase emotional eating and disinhibition, thereby contributing to overweight and obesity (Provencher, Bégin, Tremblay, Mongeau, Corneau, Dodin, Lemieux, 2008).

Low levels of conscientiousness are determinant of low cognitive dietary restraint, and low levels of agreeableness predict susceptibility to hunger and therefore increased risk of obesity (Jokela, Hintsanen, Hakulinen, Batty, Nabi, Singh-Manoux, & Kivimäki, 2013; Provencher et al., 2008).

Increased levels of novelty-seeking have also been linked to overweight and obesity (Elfhag & Morey, 2008; Sullivan, Cloninger, Przybeck, & Klein, 2007). It is proposed that this is due to the relationship between novelty-seeking and a stronger drive toward overeating in obese people (Sullivan et al., 2007).

Taking cognisance of the vast number of people who suffer from overweight and obesity, the serious consequences thereof, the numerous causal factors and the complex interplay between them, it is crucial to examine how overweight and obesity are being treated.

2.6 Treatment of obesity

2.6.1 Diets. Diets with the aim of inducing weight loss can be defined as “temporary eating programmes designed to make one lose weight. They consist of eating less than needed to sustain weight, usually specifying both the type and the quantity of food” (Kano, 1990, p. 9). Diets in the form of caloric-restricted eating plans are considered to have been the predominant treatment for obesity for the past several decades. The prevalence of diets has increased over the last 50 years (Williamson, Serdula, Anda, Levy, & Byers, 1992). During the 1950s and 1960s, 14% of women and 7% of men reported that they attempted to lose weight. By the late 1980s, this figure increased to an estimated 40% of women and 25% of men (Williamson et al., 1992). In a survey conducted in the mid-1990s in the US, which had over 100 000 participants over the age of 18, this number further increased to 44% among women and 29% among men (Serdula, Mokdad, Williamson, Galuska, Mendlein, & Heath, 1999).

A telephonic study conducted after the year 2000 in the US showed a slight decrease in the prevalence of diet attempts, with 24% of men and 37% of women

attempting to lose weight (Kruger et al., 2004). A more recent study has shown that between 60-80% of young students have engaged in a diet in the year in which the study was done (Fonseca, Matos, Guerra, & Pedro, 2009). However, the increased prevalence of dieting has not significantly curtailed the overweight and obesity pandemic and the prevalence of overweight and obesity continues to rise.

The prevalence of dieting has been shown to increase as the BMI of an individual increases (Kruger et al., 2004). Kruger et al. (2004) found that among men, 6% of those with a normal BMI, 28% of those categorised as overweight, and 50% of those categorised as obese engaged in dieting. Among women, 24% with a normal BMI, 49% of those classified as overweight, and 58% of women classified as obese were attempting to lose weight.

Although higher BMI scores correlate with an increased prevalence of people attempting to lose weight, those within a normal BMI range also engaged in dieting. Those who participated in the study indicated that the top three strategies for weight loss were eating fewer calories, eating less fat, and taking more exercise (Kruger et al., 2004).

It is currently estimated that there are more than 40 000 commercial diets available, and that in the US alone, people spend an estimated $33 billion annually on weight loss products (Kruger et al., 2004). Despite this proliferation of commercially available diets, and the amount spent on weight loss products, obesity is becoming increasingly prevalent (Kruger et al., 2004) .

2.6.1.1 Efficacy of diets. Caloric-restricted diets as treatments for overweight and obesity have been shown to be effective in the short term, but in the long term have demonstrated little effectiveness (e.g. Bennett, 1986; Garner & Wooley, 1991; Wadden, 1993; Wilson, 1994). Diets typically resulted in a 5-10% short-term reduction in weight (Perri & Fuller, 1995).

Numerous studies found that after the cessation of weight loss interventions, around 80% of the participants who took part in studies returned to their baseline weight (e.g. Perri et al., 1987; Perri et al., 1989; Wilson, 1994). Most participants not only regained all the weight they had lost, but regained more than they had initially lost (e.g. Mann et al., 2007; Swanson & Dinello, 1970).

It is argued that weight regain after being on a diet is inevitable, and that it is merely the rate of weight regain that is debatable (Garner & Wooley, 1991). It is likely that the efficacy of diets may in fact be lower than indicated in the research owing to the high attrition rates of participants in the research (Rapoport, Clark, & Wardle, 2000).

Anderson, Konz, Frederich and Wood (2001) performed a meta-analysis of studies conducted in the US on weight loss maintenance after a two-year follow-up. Of the studies included, most had used observational designs. The meta-analysis found that no randomised controlled studies on weight loss and weight loss maintenance were available. The average intervention length was between 8 and 30 weeks; the initial body weight for the women participants ranged from 74 to 121 kg, and for men it ranged from 100 to 148 kg. Initial weight loss after completing the programme was between 3.5 and 37.9 kg for women and 6.2 and 44.2 kg for men. Of the 29 studies included, only nine provided a structured maintenance programme (Anderson et al., 2001).

The studies utilised for this meta-analysis distinguished between two types of diet: very low-energy diets (VLEDs), and hypoenergetic balanced diets (HBDs). VLEDs were associated with greater long-term maintenance than HBDs. VLEDs resulted in weight loss maintenance of 7.1 kg and HBDs in 2.0 kg. The percentage weight loss maintenance of VLEDs was 29% and for HBDs it was 17%. VLEDs resulted in 6.6% reduced weight, and HBDs in 2.1% reduced weight (Anderson et al., 2001, p. 579). Men and women did not significantly differ in terms of weight loss maintenance. Six of the 29 studies reported that groups who engaged in more exercise achieved significantly greater weight loss maintenance in the two-year follow-up period than groups who exercised less (Anderson et al., 2001).

Anderson et al. (2001) conclude that participants who are obese managed to maintain a mean weight loss of 3 kg, or 3.2% of their initial body weight, after a five-year follow-up. However, they do note that only approximately 50% of the participants had weight loss maintenance of 5%, and approximately 30% of the participants had weight loss maintenance of 10% after the five-year follow-up. This was reduced to 25% in year seven. They note that while there have been improvements in weight loss maintenance, there needs to be more research into

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methods that facilitate long-term lifestyle adjustments to assist participants in the maintenance of weight loss.

The meta-analysis by Anderson et al. (2001) reveals that, in general, there are very few long-term randomised studies conducted with regard to weight loss maintenance studies. The power of long-term randomised studies is that they allow for causal inferences to be drawn and for the examination of people who have not dieted prior to the study – thus, people without a history of dieting. Studies that have done this have found that people who have not dieted before have also regained weight over time (e.g. Burke, Bild, Hilner, Folsom, Wagensknecht, & Sidney, 1996; Shah, Hannan, & Jeffery, 1991). However, it should be noted that the studies included in the review have some caveats. Firstly, the fact that overweight and obese people who have been assigned to the control group may be unwilling to remain in a state of not dieting for an extended period of time, poses a problem in the evaluation of weight loss maintenance. Secondly, the “long-term” studies reviewed by Anderson et al. (2001) do not follow up people for much longer than two years after the initial treatment, thereby concealing the likely drop in the effect of diets in the achievement of weight loss maintenance.

A study examining the effects of starvation for an average of 38 days for weight loss in 25 obese patients revealed that none of the participants managed to sustain their weight loss, although some had partial success (Swanson & Dinello, 1970). Of the participants, 23% gained back more weight than they had initially lost within the first two years following the study. The percentage of participants who regained more weight than initially lost through diets increased significantly as the time passed. Of participants who were followed for more than two years, 83% gained back more than they had lost (Swanson & Dinello, 1970). In long-term studies (4-5 years), weight regain trajectories continued to increase (e.g. Hensrud, Weinsier, Darnell, & Hunter, 1994; Kramer, Jeffery, Forster, & Snell, 1989).

Despite the proven lack of efficacy of diets as a treatment for obesity, their prevalence is continually increasing (Williamson et al., 1992). Mann et al. (2007) maintain that additional to the fact that diets do not result in weight loss, there is also no consistent evidence that diets result in significant health benefits. When health benefits were noted in the research, it is difficult to establish that diets were the

cause of this marked improvement, as opposed to other lifestyle changes. The failure of diets to achieve long-term weight loss maintenance and increasing health benefits is considered a major shortcoming because short-term weight loss fails to provide a cure for obesity (Mann et al., 2007). Therefore, it is advocated that short-term weight loss should not be the primary indicator of a successful weight loss intervention, but that it should instead be the maintenance of weight loss – this remains a challenge in the treatment of overweight and obesity (Rapoport et al., 2000).

Due to the high rates of weight regain in current treatment methods, Glenny, O'meara, Melville, Sheldon and Wilson (1997) recommend that all treatment programmes should be complemented by a maintenance programme that focuses on the attainment of long-term and sustained weight loss. However, Mann et al. (2007) call for the abandonment of diets altogether.

2.6.1.2 Barriers to weight loss maintenance after dieting. Numerous factors prevent people from maintaining their weight loss after dieting. Some of these factors stem from the dieting process itself. Dietary disinhibition, encouraged by diets as a treatment for overweight and obesity, and unsatisfactory initial weight loss subsequent to a diet, contribute significantly to an inability to achieve long-term weight loss maintenance. This is attributed to the physiological and psychological consequences of engaging in such inhibition (McGuire, Wing, & Hill, 1999; Niemeier et al., 2007; Teixeira et al., 2004).

Diets, and the accompanying hunger, lead to physiological changes in the brain. These changes cause food to become more salient to the dieting individual, who therefore pays more attention to it, and it makes food seem more appealing (Stice, Burger, & Yokum, 2013).

Hunger-induced physiological changes in the brain also reduce activity in the pre-frontal cortex (the region of the brain responsible for decision-making and impulse control). Consequently the impulse to consume food becomes more difficult to resist.

The loss of fat due to dieting also affects the endocrine system. Adipose tissue plays an essential role in the production of hormones that inform the body of hunger and satiety. When people lose weight, the levels of hormones, such as leptin, peptide TT,

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and cholecystokinin, which are associated with feelings of satiety, decrease (Kershaw & Flier, 2004). Dieting also promotes the increase of hormones that promote feelings of hunger, such as ghrelin, gastric inhibitory polypeptide, and pancreatic polypeptide (Kershaw & Flier, 2004; Sumithran, Prendergast, Delbridge, Purcell, Shulkes, Kriketos, & Proietto, 2011). In addition to the changes in the frontal lobe and endocrine system, the restriction of calories causes the metabolism to adjust in order to compensate for perceived starvation (Sumithran et al., 2011). The body's metabolism slows down in order to conserve energy, which causes fat to be stored, and, therefore, hinders further weight loss (Sumithran et al., 2011).

Starvation also causes psychological changes, and often results in an obsession with food (Keys, Brožek, Henschel, Mickelsen, & Taylor, 1950). These psychological changes are manifestations of the physiological changes in the brain. In the seminal research by Keys et al. (1950), 36 male participants volunteered to be starved for research purposes. It was found that prior to being starved, the participants had a diverse array of interests and were willing to be acquainted with each other. However, during the starvation, participants lost interest in all other activities and became solely preoccupied with food. This study confirms that a significant decrease in the intake of calories promoted through dieting serves as a hindrance to weight loss maintenance (Keys et al., 1950). In essence, dieting itself is an obstacle to weight loss maintenance.

Another difficulty faced by people who seek to lose weight through diets is the fact that diets cause the body stress (Greeno & Wing, 1994). Human physiology is geared to deal with sudden, stressful events that resolve quickly, by excreting cortisol aimed at mobilising glucose for the body to use. Excess glucose is converted into adipose tissue (Peeke & Chrousos, 1995). Diets themselves cause the body stress and therefore contribute to the release of excess glucose and the formation of fat. In addition to this, stress leads to eating more food, and sleeping and exercising less, all of which contribute to weight gain (Greeno & Wing, 1994). Research shows that a history of dieting, and continued weight loss attempts, also predict weight regain (Lavery & Loewy, 1993; Pasman et al., 1999; Teixeira et al., 2004; Wadden & Frey, 1997). In light of this and the above-mentioned research, it is evident that diets themselves pose one of the most significant barriers to weight loss maintenance.

2.6.1.3 Adverse consequences of dieting. Diets are not only ineffective as a treatment for overweight and obesity, but are also harmful. Studies have documented the adverse consequences of frequent dieting, including cardiovascular and all-cause mortality (Blair, Shaten, Brownell, Collins, & Lissner, 1993; Lissner et al., 1991), and pathological changes in affect and cognition (Brownell & Rodin, 1994; Foreyt, Goodrick, & Gotto, 1971; Friedman & Brownell, 1995; Polivy & Herman, 1992). There may also be a relationship between dieting and the development of binge-eating practices (Howard & Porzelius, 1999; Telch & Agras, 1993).

The inability to sustain weight loss in the long term has further negative health consequences. The loss and regain of weight may cause potential rebounding negative impacts on health indicators such as blood pressure, cholesterol levels, disease incidence, and mortality (Foster et al., 1997; Mann et al., 2007; Montani et al., 2006). Therefore, while diets may be successful in the short term they are futile as a treatment for obesity because long-term weight loss maintenance is not realistically achievable through diets.

Taking cognisance of the research, it is apparent that diets as an intervention are problematic in terms of both their destructive side-effects and their inability to facilitate long-term weight loss maintenance. Owing to the high probability of the overweight or obese person regaining more weight than they lose by dieting, diets are considered to be more problematic than no dietary intervention at all (Mann et al., 2007). Mann et al. also state that further study of existing diets or the formulation of new diets will yield no valuable outcomes for the treatment of overweight and obesity.

2.6.2 Exercise. Research has demonstrated that exercise as a treatment for obesity is more beneficial than diets alone, and adding it to interventions increased the efficacy of diets in the maintenance stage (Glenny et al., 1997; Paez & Kravitz, 2002). Researchers consider exercise to be one of the most important factors in sustained weight loss (e.g. Klem, Wing, McQuire, Seagle, & Hill, 1997; Mann et al., 2007). Physical exercise not only helps prevent overweight and obesity and facilitates short-term weight loss, but has also been shown to be a significant predictor of long-term weight loss maintenance (Elfhag & Rossner, 2005). Exercise facilitates maintenance by both direct energy expenditure and by promoting a

healthier and more active lifestyle. Physical exercise also promotes other aspects of wellbeing, which can lead to positive behaviour changes that influence weight loss maintenance. Elfhag and Rossner (2005) found that the move from a sedentary lifestyle and having self-efficacy related to exercise was a positive predictor for weight loss maintenance, while perceived resistance to exercise and poor compliance with exercise was related to later relapse (Elfhag & Rossner, 2005).

A study by Sims (1976) required people with no history of obesity to attempt to gain weight and then try to maintain the higher weight. Sims (1976) found that in order for participants to increase their weight by 20% they had to consume over 10 000 calories per day for 4 to 6 months. However, it was exceptionally difficult for these participants to maintain the higher weight. The participants in this study were prisoners with few opportunities to take part in physical exercise. When this study was replicated among the general population with participants who were free to exercise while attempting to consume more than 10 000 calories per day, participants found it difficult to gain enough weight to be classified as obese (Sims, 1976). This study indicates how exercise operates as a buffer to weight gain to some degree.

A systematic review by Fogelholm and Kukkonen-Harjula (2000) found that most studies included in the review demonstrated an inverse relationship between weight gain and exercise. Weight thus decreases as the engagement in exercise increases. Fogelholm and Kukkonen-Harjula (2000) reported that research on exercise and weight loss maintenance found the probability of maintaining weight loss was higher when individuals engaged in increased exercise. Observational studies included in their review found that an actual increase in energy expenditure of approximately 6 300-8 400 kJ/week (1 500-2 000 kcal/week) due to physical activity was associated with the improved weight maintenance (Fogelholm & Kukkonen-Harjula, 2000). It should be noted that the relationship between weight loss and exercise as observed in this review was more inconsistent than the findings of other researchers on this topic (Curioni & Lourenc, 2005). This complex relationship between weight loss and weight maintenance, and overweight and obesity, could be affected by a number of factors, including the amount of physical exercise needed, the type of exercise, participants' adherence to the increased physical activity, the magnitude and technique of prior weight loss, the participant's gender, and the measurement

techniques used in the studies (Fogelholm & Kukkonen-Harjula, 2000). While these studies suggest some relationship between exercise, weight loss, and weight loss maintenance, this relationship was often found to be inconsistent.

Exercise has been demonstrated to result in numerous positive health outcomes, including decreased mortality and increased mental health, and lowering the health risks of conditions such as cardiovascular disease, type II diabetes, and hypertension (Shaw, Gennat, O'Rourke, & De Mar, 2009; U.S Department of Health and Human Service, 2008).

A review by Shaw et al. (2009) examined primary outcomes of exercise, including weight loss, morbidity and mortality, quality of life, and the effect of exercise on serum lipids, serum glucose, systolic and diastolic blood pressure. Their conclusions support the use of exercise as a weight loss intervention. It was found that increasing exercise intensity increased the magnitude of weight loss. Exercise was found to reduce the risk of cardiovascular disease, even without accompanying loss of weight. Exercise also resulted in an improved plasma lipoprotein status, and reduced diastolic blood pressure (Shaw et al., 2009). Shaw et al. (2009) conclude that exercise can reduce the body weight of overweight and obese individuals, and that it holds numerous other health benefits.

Researchers consider exercise to be one of the most important factors related to weight loss and weight loss maintenance. However, although engaging in exercise increases the magnitude of weight loss and results in better health outcomes, it still does not provide a complete solution to the obesity pandemic, and weight regain is still prevalent after weight loss.

2.6.3 Comparison of diet, exercise and combined diet and exercise interventions. A combination of diet and exercise is used to address the low success rate of diets on their own. Most studies look at diet-only or an exercise-with-diet combination (for a review, see Avenell, Brown, McGee, Campbell, Broom, Jung, & Smith, 2004). Miller, Koceja, and Hamilton (1997) did a meta-analysis of 25 years (1969-1994) of the research on weight loss interventions focusing on diets and exercise programmes. Their review included studies that had investigated either a diet-only intervention (D), an exercise-only intervention (E), or a diet-plus-exercise intervention (DE).

Exercise programmes in the studies they included were limited to aerobic exercise only, while the diet interventions required a reduced energy intake. This limited the studies they included to those that did not take into account the effect of possible extraneous variables on weight loss (variables other than reduced energy consumption or energy expenditure) (Miller et al., 1997).

The meta-analysis performed by Miller et al. (1997) showed that results for the participant group in the exercise-only (E) programme were fundamentally different to those for participant groups in the diet (D) and the diet-and-exercise (DE) programmes. The D and DE programmes tended to be more successful with regard to body changes. Results showed greater weight loss and reduction in fat percentage, and lowered BMI, when compared with participants in the E programme. The E programme achieved 20-60% of the success of D and DE programmes.

A one-year follow-up of all of the programmes showed no significant difference in terms of weight loss maintenance. The one-year follow-up showed that the E group had maintained 70% of their weight loss, while the D and DE groups had maintained 73%. The meta-analysis states that there is little significant difference between the E, D, and DE programmes with regard to weight loss maintenance. However, Miller et al. (1997) state that the E programme was the least effective in terms of body compositional change.

Miller et al. (1997) criticise the narrow focus of the research. There is little variance in the studies for each of the programme types for variables of age, initial body weight, BMI, and body fat percentage. This suggests that most of the research focuses on the same subset of people – those who are morbidly obese, and around 40 years old. Another critique of the research was that the E programme was conducted on a completely different subset of people than the D and DE programmes. It is thus important to remain cognisant of the potential dangers of interpreting comparative differences between programme types.

Their analysis showed that the D and DE programmes were the most effective short-term weight loss management strategies. Participants in the D programme lost an average of between 10 and 12 kg, while those in the DE programme lost an average of 9 kg. However, at the stage of their meta-analysis, there was little information on the maintenance of the weight loss in diet, exercise, and exercise-and-diet

intervention programmes. The 16 studies of D and DE programmes with a three to four-year follow-up showed a 6-7 kg reduction in weight.

Skender, Goodrick, Del Junco, Reeves, Darnell, Gotto and Foreyt (1996) performed a study similar to those included in the review by Miller et al. (1997). They found that a year after intervention (diet, exercise, and a combination of diet and exercise) no significant differences were noted among the participant groups. The diet-only group lost 6.8 kg, the exercise-only group lost 2.9 kg, and the combination group lost 8.9 kg. In the second year, the diet-only group regained weight, reaching 0.9 kg above baseline; the combination group regained to 2.2 kg below baseline; and the exercise-only group regained to 2.7 kg below baseline (Skender et al., 1996). The results of Skender et al. (1996) demonstrate that dieting alone is associated with weight loss, followed by regain after treatment ends, whereas exercise alone produced smaller weight losses but better maintenance.

More recently, Curioni and Lourenc (2005) conducted a meta-analysis of randomised control trials, examining the efficacy of obesity treatments that utilised both diet and exercise, with a specific focus on long-term weight loss maintenance. They found that programmes using both exercise and diet as an intervention to overweight and obesity produced better results than treatments using diets alone. The results applied both directly after the intervention and after a one-year follow-up. The combined programme also resulted in positive health outcomes, such as reduced risk of cardiovascular disease, improvement of glycaemic control and hyperglycaemia in people with diabetes, and improvements in total cholesterol (decreases in LDL cholesterol and triglyceride levels and increase of HDL-cholesterol concentrations). However, following the one-year maintenance period, 50% the participants experienced weight regain. This demonstrated that adding exercise to diets does not necessarily improve long-term weight maintenance (Curioni & Lourenc, 2005). Greater initial weight loss was demonstrated to be the most difficult to maintain.

The meta-analysis concluded that a combination of diet and exercise leads to very successful short-term weight loss, and improved health outcomes for participants. Additionally, they cautioned that this weight loss is not sustainable, and attribute this to participants returning to their former behavioural patterns.

These studies demonstrate somewhat inconsistent results. However, they suggest that diets, and diet-and-exercise combination interventions, are more successful for short-term weight loss than exercise-only interventions. Furthermore, they reveal that all three interventions result in similar weight loss maintenance, but that exercise only produces slightly better weight maintenance outcomes.

2.6.4 Surgical interventions. Some researchers argue that surgical interventions have greater success than non-surgical interventions in the treatment of obesity, and that bariatric surgery is therefore an effective treatment for overweight and obesity (Buchwald, Avidor, Braunwald, Jensen, Pories, Fahrbach, & Schoelles, 2004; Colquitt, Pickett, Loveman, & Frampton, 2014; McTigue, Harris, Hemphill, Lux, Sutton, Bunton, & Lohr, 2003).

A meta-analysis by McTigue et al. (2003) posits that surgical interventions provide the most substantial weight loss (10–59 kg) as well as weight loss maintenance. Bariatric interventions include the adjustable gastric band (AGB), gastric bypass (GB), sleeve gastronomy (SG), biliopancreatic diversion, and duodenojejunal bypass procedures.

Colquitt et al. (2014) compared studies of different surgery types and discuss the efficacy of the interventions when compared with each other. This comparative analysis showed that Biliopancreatic diversion with duodenal switch resulted in greater weight loss than GB. When compared with the AGB, GB was more effective for achieving greater weight loss over five years. A comparison of GB and SG found little significant difference in weight loss, comorbidities, and complications.

Surgical intervention is reported to be the most successful treatment of obesity, in terms of weight loss. However, it is only suitable for morbidly obese people. Surgery also a high risk of severe complications and is unaffordable for most people (McTigue et al., 2003).

There are two types of complications associated with bariatric surgery: those directly related to the surgery procedure, such as leaks and obstructions, and those related to comorbidities of obesity, such as, deep vein thrombosis, pulmonary embolism, cardiac events, and respiratory insufficiency (Assalia, 2009). The study by Colquitt et al. (2014) showed that GB required longer hospitalisation and risked numerous

longer-term complications. Five per cent of the GB group 5 reported severe complications, compared to 1% of the SG groups (Colquitt et al., 2014). AGB required a greater recuperation time when the band was removed (Colquitt et al., 2014). Duodenojejunal bypass with SG showed similar results to GS when examining health outcomes in the 12-month follow-up.

To be eligible for bariatric surgery, candidates require a BMI of close to 40, need to present with no coexisting medical problems, and should not be associated with excessive risk for the procedure (Mechanick, Youdim, Jones, Garvey, Hurley, McMahon, & Shikora, 2013). Thus, although research (Mechanick et al., 2013) advocates bariatric surgery as the most successful treatment for morbid obesity, it is not a viable treatment for the majority of overweight and obese people.

2.6.5 Psychological and behavioural interventions. This section provides an overview of the psychological, cognitive, and behavioural interventions that have been applied in the treatment of overweight and obesity.

2.6.5.1 Behavioural therapy (BT). Behavioural Therapy (BT), as a treatment for overweight and obesity, was developed on the premise that overweight and obesity are a result of maladaptive eating and exercise patterns, and that these could be addressed through the application of learning principles (Foster et al., 2005). Behavioural Therapy was developed to counteract the low long-term success and high attrition rates of diets. Behavioural interventions focusing on diet and exercise are deemed to be the most effective treatment for obesity (Lee, 2010; Miller, Gutschall, & Holloman, 2009). These interventions usually require 16-24 treatment sessions, over a six-month period. Such interventions are typically delivered by a multidisciplinary team, consisting of nutritionists, behavioural therapists, and exercise physiologists. The goal of behavioural interventions is to encourage healthier food choices and increased exercise. Participants are given a calorie budget of 1200-1500 calories a day, which produce an energy deficit of between 500 and 1000 calories a day. These ratios may vary, depending on the participant's baseline weight. The weight loss goal is between 0.5 kg and 1 kg per week. Participants are also encouraged to expend at least 1000 calories per week through exercise (Lee, 2010; Miller et al., 2009; Tate, Wing, & Winett, 2001).

Behavioural interventions encourage self-monitoring of food intake and activity levels (Lee, 2010). Participants are required to keep daily records of the time they eat, the type and amount of food eaten, and the amount of exercise done. Behavioural Therapy teaches techniques to modify eating and exercise habits, and to manipulate the home and work environments so that cues encouraging exercise are increased, and cues associated with eating are reduced. The ability to self-monitor is a strong predictor of weight loss. Interventions usually consist of face-to-face sessions, which typically result in a weight loss of 10% over a six-month period (Miller et al., 2009; Tate et al., 2001).

The involvement of family support structures is an important aspect of behavioural interventions. Family-based behavioural interventions, which include parents or significant others in the treatment process, have over the past 30 years been shown to be effective in promoting weight control and healthy habit development (Wilfley, Kolko, & Kass, 2011).

Behavioural treatments of overweight and obesity are based on classical conditioning principles, which propose that eating is often induced by antecedent events that become inextricably linked to food intake (Stuart, 1967). Behavioural treatments aim to help the individual identify the cues that may induce inappropriate eating, and subsequently to facilitate the development of new responses to these cues (Foster et al., 2005; Wing, 2002). The treatment also aims to reinforce the adoption of positive behaviours in order to encourage a healthier lifestyle (Foster et al., 2005).

Behavioural Therapy facilitates lifestyle changes through the development of skills for achieving weight loss, and utilises a strict goal-oriented approach while emphasising flexibility (Foster & McGuckin, 2002a; Wadden & Osei, 2002; Wilfley et al., 2011). Behavioural Therapy is based on three main premises for the achievement of lifestyle change: it is goal-orientated, process-orientated, and focuses on making small (as opposed to large) changes (Foster et al., 2005). Behavioural Therapy seeks to set specific goals, such as going to the gym three times a week, extending the period between meals by five minutes, or reducing the number of self-critical thoughts. Secondly, the process orientation premise involves focusing treatment on actions – that is, thinking directed at how to make practical

changes, rather than merely thinking about what aspects require change (Foster et al., 2005). The emphasis is thus on problem-solving, and on an examination of factors that may hinder or help the attainment of the set goals. The third and final premise involves focusing on small changes, and is based on the learning principle of successive approximation. This theory emphasises making incremental steps to achieve a distant goal, thereby creating a foundation of small successes on which the individual can build (Foster et al., 2005).

Behavioural treatment emphasises a requirement to identify the behaviour that has led to overeating. Through examining the chain of events that results in the overeating behaviour, Behavioural Therapy aims to identify where the modification should occur to prevent overeating (Foster et al., 2005).

Behavioural treatments teach various strategies, such as self-monitoring of food, weight, and activity levels, self-control, problem-solving, pre-planning, and relapse prevention (Wilfley et al., 2011; Wing, 2002). Other components include controlling cues associated with eating, stimulus control (restricting the home environment to encourage healthy eating behaviours), nutrition education, physical activity, slowing down meal times, and cognitive restricting (Foster et al., 2005; Wilfley et al., 2011).

Self-monitoring and physical activity have been shown to be two of the most important aspects of behavioural treatment for overweight and obesity. Parents of overweight and obese children and adolescents are encouraged to set an example by monitoring and modifying their own eating behaviours (Wilfley et al., 2011), and to utilise a rewards-based system. Rewards for successfully achieving goals associated with exchanging unhealthy eating patterns with healthy eating and increased physical activity, should be interpersonal and help encourage healthy behaviours, such as family outings (Wilfley et al., 2011). Behavioural Therapy thus focuses mainly on correcting unhealthy eating patterns and encouraging activity (Summerfield, 2001; Wilfley et al., 2011).

A large number of clinical studies have been conducted on the effects of behavioural treatments on weight loss. These treatment studies are designed to consist initially of weekly group meetings for 3-6 months, followed by maintenance-focused, biweekly meetings for 6-12 months, culminating in monthly or bimonthly meetings for a final 1-24 months (for example, Foster et al., 2005; Wadden & Foster, 2000).

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Wing et al. (cited in Foster et al., 2005) reviewed studies examining behavioural treatments for weight loss, which were conducted between 1996 and 1999. These studies demonstrated an average short-term weight loss, during the treatment phase, of 10.6% or 9.6 kg, and 8.6% or 6 kg at the 18-month follow-up. Long-term efficacy of behavioural treatments has not been established (Wing et al. cited in Foster et al., 2005).

A combination of Behavioural Therapy with diet and exercise is shown to produce greater short-term success (Wing, 2002). In their systematic review, Glenny et al. (1997) argue that combined exercise and diet programmes, which exclude a behavioural modification programme, are as effective as diet alone. Overweight and obesity cannot simply be classified as dysfunctional eating behaviours. This is because overweight and obesity are also subject to other factors, such as genetic, metabolic, and hormonal influences. However, it is acknowledged that Behaviour Therapy provides a skill set that allows the achievement of a healthier lifestyle and weight (Foster et al., 2005). Furthermore, the healthier lifestyle promoted by therapy can improve health outcomes (Summerfield, 2001).

2.6.5.2 Cognitive-behavioural therapy (CBT). The addition of cognitive methods to behavioural therapy intends to improve programme success and to reduce the incidence of weight regain in long-term weight management (Del Mar et al., 2009). The Cognitive Behavioural Model of overweight and obesity (Cooper & Fairburn, 2002) advocates that, with regard to the treatment of overweight and obesity, the long-term failure of behavioural interventions is a result of the neglect of the role of cognitive factors that contribute to weight regain, as well as to the relative obscurity of the treatment goals (Simos, 2008). Essentially, Cognitive Behavioural Therapy (CBT) for overweight and obesity seeks to transform the cognitive processes that maintain healthy eating and exercise behaviours, and not just to transform these behaviours in the short term (Cooper & Fairburn, 2002).

CBT techniques include psycho-education, self-monitoring, the prescription of regular eating, enabling the identification of hunger and satiety signals, stimulus control strategies (such as avoiding eating while watching television or while driving), engaging in mindful eating, identification of cues for grazing (either physical, emotional, or situational), developing adaptive ways to meet emotional needs

(including finding alternative positive activities), encouraging behaviours incompatible with grazing (such as engaging in physical activities and identifying cognitions that promote and maintain grazing), cognitive strategies (such as challenging maladaptive thoughts, thought restructuring and chaining, and learning how to eat high-risk foods in a safe way) (Kalodner & Delucia, 1991). CBT techniques are thus aimed at preventing relapse.

CBT focuses on breaking negative behaviour and thought patterns. It is based on the assumption that cognition directly affects feelings and behaviours (Foster et al., 2005). For example, the negative thoughts that a dieter experiences when failing to comply with the restrictions of the diet they are engaged in, may result in feelings of worthlessness and failure, and lead to overeating. CBT aims to set realistic weight goals, to realistically monitor progress, and to correct negative thoughts resulting from a failure to meet predefined weight loss goals (Fabricatore, 2007; Foster et al., 2005).

CBT interventions include problem-solving, stimulus control, cognitive restructuring, and self-monitoring of weight, eating, and exercise (Cooper & Fairburn, 2002; Wadden & Osei, 2002; Wilfley et al., 2011). CBT does not only focus on weight loss, but targets lifestyle change through the introduction of psychological strategies (Rapoport et al., 2000). Research (Brownell & Jeffery, 1987; Wadden & Osei, 2002; Wilson, 1994) has shown that the use of CBT has resulted in a 5-20% reduction in the initial weight of participants. However, similar to the interventions previously discussed, participants slowly return to baseline weight within five years.

A review of meta-analyses by Hofmann, Asnaani, Vonk, Sawyer, and Fang (2012) found limited research on the efficacy of CBT interventions for overweight and obesity treatment. However, preliminary research indicates support for CBT approaches when compared to no treatment. Research also demonstrates equal efficacy of CBT and other psychosocial approaches to overweight and obesity (Hofmann et al., 2012).

A study on the efficacy of CBT for treating overweight and obesity, by Grilo, Masheb and Wilson (2005), reports that CBT demonstrates efficacy for the behavioural and psychological features of Binge-Eating Disorder – a condition that is often comorbid with obesity. However, the efficacy of CBT for obesity itself is moderate and

insignificant. The high response rates that have been found for CBT as a treatment for overweight and obesity (Hofmann et al., 2012) indicate that overweight and obese people are willing to comply with this approach.

CBT has been shown to be effective in alleviating general stress and anxiety, and in decreasing depression (Hofmann et al., 2012). The ability of CBT to treat these conditions strengthens its efficacy as a treatment for overweight and obesity. This is because stress, anxiety, and depression are all reported to contribute to the development of overweight and obesity (Dallman et al., 2003; Fulwiler et al., 2015; Goedecke et al., 2006; Luppino et al., 2010). Generally, evidence supporting the efficacy of CBT in treating overweight and obesity is strong, but scant (Hofmann et al., 2012).

2.6.5.3 Psychotherapy. It has been argued that counselling, as an intervention for overweight and obesity, provides sustained weight loss maintenance (McTigue et al., 2003). Counselling forms part of behavioural intervention treatments, and aims to provide the skills, motivation, and external support to change eating and exercise patterns. McTigue et al. (2003) found that counselling enabled overweight and obese participants to maintain modest weight loss (3-5 kg) for a sustained period of time. The meta-analysis suggests that a more intensive counselling programme, including behavioural therapy, would achieve more success, and enable participants to sustain greater weight loss. This finding is echoed by Tsai and Wadden (2009), whose meta-analysis reveals that the use of low- to moderate-intensity physician counselling for obesity alone does not result in clinically meaningful weight loss.

Self-help peer groups and therapy post-interventions have been shown to be effective methods of weight loss maintenance (Glenny et al., 1997). However, many participants regained weight once the maintenance programme ended. This is attributed to the abandonment of behavioural techniques taught within the therapeutic context, and the fact that extensive, long-term therapy is needed to sustain weight loss maintenance (Perri et al., 1987).

Counselling provides modest weight loss maintenance; of the available treatments for overweight and obesity, counselling provides the least harmful approach (McTigue et al., 2003). However, it is a time-consuming and resource-heavy

approach because it is typically only effective as a treatment when implemented on a long-term basis. It is thus unaffordable for many people (McTigue et al., 2003).

2.6.5.4 Socio-ecological model. The Socio-ecological Model (SEM) has been adopted as a treatment for overweight and obesity due to its focus on multiple factors impacting dietary behaviours (Townsend & Foster, 2013).

The SEM approach to overweight and obesity rests on two key concepts: the notion that behaviour affects and is affected by multiple levels of influence, and that individual behaviour shapes and is shaped by the social environment (reciprocal causation) (Townsend & Foster, 2013, p. 1101).

Multiple behavioural drivers make up the Socio-ecological Model, and are imperative to integrate into a treatment model. These include factors within the individual/family, peer/social, community, and organisational arenas (Robinson, 2008; Wilfley et al., 2011). The SEM premise is that weight management programmes cannot be successful if they exclude family members, peer groups, health care providers, and the community network of the individual (Wilfley et al., 2011). Social and physical environments include factors such as the levels of support and resources available to the individual to help them change to a healthier lifestyle and eating habits, and to maintain such changes.

The SEM Model is centred around examining the stimuli that may either hinder or encourage healthy eating behaviours (Wilfley et al., 2011). The results of such an examination are used as the foundation for positive behaviour change. Key areas examined in this treatment include interpersonal relationships and difficulties, and the accessibility and utilisation of healthy resources within the home, the peer network, and the community (Robinson, 2008; Wilfley et al., 2011).

This model enhances the individual's chance of success with their weight loss as it focuses on environmental factors influencing behaviour. The SEM aims to incorporate a supportive environment, which comprehensively deals with the multi-contextual problem of weight management (Wilfley et al., 2011). Robinson (2008) posits that the SEM, as a treatment for overweight and obesity, shows great promise because it is an integrative approach that acknowledges the multiple contributors to

the development of overweight and obesity. This model also shifts the sole responsibility for obesity from the individual to society at large.

2.6.5.5 Transtheoretical model. The Transtheoretical Model (TTM) is an integrative, biopsychosocial model that aims to help people undertake intentional behaviour change (Summerfield, 2001). The TTM seeks to integrate key constructs from a variety of different theories in order to create a comprehensive model that can be applied to various public health interventions. This model uses “stages of change” to integrate the various concepts and principles from each of the major psychotherapy and behavioural models. The stages of change include: (a) pre-contemplation; (b) contemplation; (c) preparation; (d) action; (e) maintenance; and (f) termination (see Prochaska, Redding, & Evers, 2013). The TTM views change as a process rather than a decision (Summerfield, 2001). TMM states that for change to occur, the individual must be ready and willing to change. Assessing the person’s readiness to change increases the likelihood that he or she will progress to the next stage of change and decreases the attrition from the treatment programme (Summerfield, 2001).

It is hypothesised that while people may know that they need to lose weight to improve their health, this knowledge in itself is not enough to trigger change. Weight loss therefore needs to occur when an individual is ready to make that change, for the weight loss to be maintained. A mentor, or change agent, allows the person in the early stage of change (SOC) a chance to discuss concerns and to gain nutritional information, and is therefore an important factor in weight management programmes (Summerfield, 2001).

The TTM considers individual readiness to change throughout all stages of change. At the first stage of TTM, pre-contemplation, there is no intention to make a change within the next six months (Summerfield, 2001). At this stage, the individual may not have the necessary information to make the change, or they may resist making a change due to previous failure and thus lack the confidence to make another attempt. The health belief model proposes that four strategies must be used to move from the inaction of the pre-contemplation stage to action. It is argued that an individual must consider his or her susceptibility to the health problem, the severity of the health problem, the benefits of health action, and their perceived barriers to

health action (Summerfield, 2001). Thus, strategies targeting the pre-contemplation stage aim to determine an individual's perceptions, and to provide feedback and information about the value of changing. This is called consciousness raising (Summerfield, 2001).

At the contemplation stage, the individual seriously considers change, and weighs the costs and benefits of engaging in change (Summerfield, 2001). Individuals begin to make small changes at the preparation stage, for example, selecting a salad as opposed to chips as a side order for a meal. At this stage, the individual is an excellent candidate for weight management programmes (Summerfield, 2001). Interventions introduced to the individual at this stage should focus on re-clarifying beliefs (self-re-evaluation), and on mobilising social support for change.

The action stage lasts approximately six months, and occurs when major changes are initiated (Summerfield, 2001). During the action stage, interventions must reinforce behaviours that encourage positive change, and build self-efficacy. Strategies at this stage include goal-setting, self-monitoring, modifying eating patterns, normalising eating, cognitive restricting, stress management, stimulus control, and building diet and activity skills (Summerfield, 2001). The sixth stage of change is maintenance, and involves applying the behaviours acquired during the action stage for at least the six months following the action stage in order for behaviour change to be sustained. This stage is concerned with preventing and coping with relapses in behaviour, and restricting detrimental environmental factors, when possible. Another weight maintenance strategy is continued participation in support groups (Summerfield, 2001). The final, ongoing phase is known as termination, which suggests that behaviour change is permanent.

Tuah, Amiel, Qureshi, Car, Kaur and Majeed (2011, p. 2) did a systematic review of the "effects of dietary interventions or physical activity interventions, or both, based on the TTM stages of change to produce sustainable (one year and longer) weight loss in overweight and obese adults". Their review examined three studies, which had a total of 2 971 participants. Participants were allocated to either a control group or an experimental group. The control trial intervention times for each study were 9 months, 12 months, and 24 months. The use of TTM stages of change, together with

either one or both of dietary or physical interventions, was shown to be more successful than interventions that excluded TTM stages of change.

The TTM stages of change intervention resulted in a mean difference between the control group and the intervention group, of 2.1 kg at 24 months, and 0.2 kg for the interventions that excluded TTM stages of change (Tuah et al., 2011). Interventions that included TTM also demonstrated positive outcomes concerning physical activity and dietary habits: increased participation in physical activity, reduced fat intake, and increased consumption of fruit and vegetables. However, studies included in the review did not report on important health outcomes, such as quality of life, morbidity, and economic costs. The conclusions reached in this review are therefore problematic. Furthermore, the reporting of the findings is incomplete; there are some methodological concerns, overreliance on self-reporting measures, and a lack of long-term measures to assess the sustainability of the studies. For this reason the review does not allow for any conclusive interpretations to be drawn (Tuah et al., 2011).

Johnson, Paiva, Cummins, Johnson, Dyment, Wright and Sherman (2008) investigated the benefits and efficacy of TTM-based models for the treatment of overweight and obesity. A sample of 1277 overweight or obese adults (with a BMI of 25-39) was randomly assigned to the control and TTM groups. Participants were given up to three weight management behaviours, which were assessed at 0, 3, 6, and 9 months. Significant treatments were healthy eating (47.5% vs. 34.3% of the participants) and exercise (44.9% vs. 38.1% of the participants), who progressed to the Action or Maintenance stage at 24 months. The groups' weight loss differed at 24 months. There was a greater weight loss for the intervention group who were able to progress to the Action and Maintenance stage. The author's conclusions are that TTM-based weight management interventions improved healthy eating, exercise, and the individual's ability to manage emotional distress, and demonstrated a decreased weight (Johnson et al., 2008).

2.6.6 Non-diet interventions. Critics of dieting, the predominant methodology for weight loss, advocate a paradigm shift in approaches to treat overweight and obesity (Bacon, Stern, Van Loan, & Keim, 2005; Higgins & Gray, 1999). The extensive criticism that has been levelled at the diet approach to weight loss (for example,

Bennett, 1959; Garner & Wooley, 1991; Mann et al., 2007; Wadden & Osei, 2002; Wilson, 1994) has resulted in the development of alternative, non-diet interventions (Smith & Hawks, 2006).

Non-diet approaches to overweight and obesity vary in their orientation to treatment. Some approaches advocate that weight loss may be an inappropriate first goal for obese and overweight people (Nauta & Jansen, 2001). Several non-diet approaches that maintain a focus on weight loss as a primary goal have also been developed. These approaches introduce the following concepts as strategies to achieve weight loss without dieting: normalising all food, hunger awareness training, mindful eating, and cognitive behavioural modification.

Treatment should focus on psychological wellbeing, the relationship with, and attitudes towards, the body and food, and restoring normal patterns of eating. Weight loss then becomes a secondary concern, or is a result of the emphasis on psychological wellbeing. Frustration has arisen about the lack of efficacy of traditional obesity treatments, the neglect of the psychosocial processes of obesity, non-diet programmes (for example, Transactional Analysis (TA) intuitive eating, and mindfulness), and weight acceptance paradigms (e.g. Health at Every Size) (Bacon et al., 2002; Rapoport et al., 2000).

Non-dieting programmes are focused on the following factors: educating participants about the dangers of dieting; educating participants on the biological basis of body weight; using internal cues to guide eating behaviour, such as hunger, as opposed to external cues, such as calorie count; improving self-esteem and body image; and increasing physical activity (Foster & McGuckin, 2002b).

Weight acceptance, as opposed to non-diet programmes, rejects the concept that fat is “bad”, questions the notion that overweight or obese people should change, and states that they can be fit and attractive in their current weight range. This framework encourages self-acceptance, and focuses on psychological wellbeing and improved body image (Brownell, 1993; Ciliska, 1990, 1998; Foreyt & Goodrick, 1993; Parham, 1996; Robison, 1997).

While the various paradigms may differ in their stance on weight loss as a programme goal, they overlap in certain areas. Similar to weight acceptance, the

non-diet paradigm rejects the dictates of a caloric-restriction diet in favour of adopting healthier eating and exercise patterns (Ciliska, 1998; Evans Young, 1995; Omichinski & Harrison, 1995; Parham, 1996; Polivy & Herman, 1992; Robison, 1997).

Results from non-randomised trials on non-diet programmes are promising. They show a marked increase in self-esteem and mood, as well as reduced eating-related psychopathology (Carrier, Steinhardt, & Bowman, 1994; Ciliska, 1998; Herman & Polivy, 1983; Mellin, Croughan-Minihane, & Dickey, 1997; Roughan, Seddon, & Vernon-Roberts, 1990).

A promising study by Tanco et al. (1998) showed that combining non-diet and behavioural weight loss treatments resulted in significant weight loss, decreased depression and anxiety, and an increased perception of self-control. This view is echoed in a review by Bacon et al. (2002), which found that non-diet programmes may be a promising alternative for chronic dieters. Additionally, non-diet approaches have a smaller attrition rate than traditional obesity treatments. This is important because if people cannot sustain the intervention or the weight loss, they are likely to give up any attempt at sustaining a healthy lifestyle (Bacon et al., 2002).

Longitudinal follow-up studies of various non-dieting programmes indicate an increased maintenance of weight loss and an increase in physical activity following participation in these programmes (Faith et al., 2000; Sbrocco et al., 1999; Tanco et al., 1998). Randomised control studies comparing non-diet programmes to traditional dieting programmes found a significant decrease in mood- and eating-related psychopathology (Tanco et al., 1998), increased weight loss maintenance (Sbrocco et al., 1999), and improved self-esteem (Faith et al., 2000).

Orbach (2006), an anti-diet advocate, argues that a serious public health emergency is underlying the so-called obesity crisis, and states that modern eating habits are afflicted with guilt, anxiety, confusion, and regret. Current public health policy is thus captive to the Obesity Crisis narrative, and risks perpetuating the problem rather than being part of the solution. This narrative demonises certain foods and particular sizes of people, thereby failing to address the widespread problematic relationship with food that is at fault.

2.6.6.1 Transactional Analysis (TA). According to the International Transactional Association, TA is “a theory of personality and a systematic psychotherapy for personal growth and personal change”. The theoretical framework of TA has been used to support non-diet weight loss interventions (Bruno, 1978; Leach, 2006). As a theory of personality, TA describes how people are structured psychologically. The ego state (Parent–Adult–Child) – TA’s best-known model – helps explain how people function, and how personality is expressed in behaviour (Bruno, 1978). This model states that a person manifests and experiences their personality through various thoughts, emotions, and behaviours.

The individual consistently uses three ego states – Parent, Adult, and Child. The Parent state describes how one behaves, thinks, and feels in a manner that is unconsciously governed by mimicking the actions of parental figures. The Adult state is the data-processing centre, which makes predictions about major emotions that could affect its operation. The goal of TA is to strengthen this Adult ego state. The Child state is one in which people behave, think, and feel, similar to the way they did in childhood (Bruno, 1978).

The ego states described by TA have subdivisions (Bruno, 1978). For example, the Parent can be nurturing (permissive, security-giving) or criticising, while the Child state can be more natural (free), or adapted to others. The ego states can be either functional or dysfunctional. TA explains that an individual’s final emotional state is the outcome of an inner dialogue between the different ego states – for example, depression may be caused by a continued, critical internal dialogue, between the Parent and the Child. The theory is that these dialogues are easy to identify, but that the ability to do so is suppressed by parents, in early childhood (Berne, 1975).

The primary goal of the Adult ego state is to process information, to see, to think, and to find solutions to problems (Bruno, 1978). This state plays an important role in losing weight (Bruno, 1978). It acts like a median between the Parent State and the Child State, and it makes decisions based on facts, rather than on pre-judged thoughts and beliefs, or childlike emotions.

The Child ego state is primarily emotional, and refers to thoughts and feelings, as well as all of the memories that have a strong association with emotion (Bruno, 1978). There are two aspects to the Child state: the Free Child (or Natural Child) ego

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state, and the Adapted Child ego state. The Free Child ego state is emotionally fluid, and consists of the spontaneous, expressive part of the personality. Together with the Adult state, the Free Child state is responsible for creativity. The Free Child state is also viewed as the true or authentic self, and is essential for the formation of intimate relationships. The theory states that the more detached an individual is from the Free Child state, the less able they will be to form intimate relationships (Bruno, 1978).

The Adapted Child is that aspect of the self that has adapted to, and been influenced by, the parental messages received while growing up (Bruno, 1978). A Rebellious Child ego state may emerge from the Adapted Child state as the result of an inability to comply with restrictive parental messages, providing the individual with an alternative to compliance (Bruno, 1978).

From a TA perspective, unhealthy transactions between the various ego states may lead to the development of overweight and obesity. Overeating and compulsive eating can be attributed to an overdeveloped Critical Parent (Bruno, 1978). Impulsive eaters develop out of an underdeveloped Parent state or a Permissive Parent state, which allows the Child state to have free range. Individuals rarely develop an eating problem when the Nurturing or Democratic Parent is well developed. The role of utilising TA as a treatment for overweight and obesity is therefore to empower the Adult. Bruno (1978) provides three mechanisms for reducing the power of a Critical or Permissive Parent: deleting the Parent, challenging the Parent, and ignoring the Parent. Deleting the Parent involves turning off destructive messages given by the Parent ego. Challenging the Parent involves asking the Adult to critically evaluate the messages given by the Parent. Not listening to the Parent recognises that an individual is no longer a Child and can therefore ignore the message of the Parent (Bruno, 1978).

A Stroke, another aspect of TA, is a “unit of human measurement”, as defined by Eric Berne, and can be a look, a smile, a spoken word, and/or a touch (Bruno, 1978, p. 64). Strokes present in two patterns, or forms – either positive, or negative – and can also be conditional or unconditional.

The type of stroking pattern (positive or negative) can influence the existential life position and define how an individual self-evaluates in relation to others (Bruno,

1978). Within the treatment of overweight and obesity, strokes satisfy recognition hunger; that is, a lack of affection may give rise to a desire for affection that translates into a pseudo-hunger. Eating becomes a way in which an individual is able to satisfy their need for affection (Bruno, 1978).

The inner Child may thus be a contributor to overeating (Bruno, 1978). Under certain circumstances, the Adapted Child may develop a pressing need for strokes (whether negative or positive) from the parent. The Child's need may develop when it is not sure that it deserves strokes, or when the next stroke will occur. Recognition hunger may develop when food is equated with attention; for example, when parents notice or praise how much or how fast a child eats. The person with an overdeveloped Adapted Child state is likely to turn to food when they are struggling emotionally.

The Rebellious Child is under-socialised if the Adapted Child is over-socialised (Bruno, 1978). The Rebellious Child eats without restraint and guilt.

The Natural Child falls between the Rebellious Child and the Adapted Child, and is the most functional in regard to food behaviours. The Natural Child is able to both choose to eat, and importantly, not to eat (Bruno, 1978). Bruno (1978) provides the following strategies for dealing with the Child: not putting the Child state down and moving into the Critical Parent, not slipping into the Child state, stroking the Child state when it acts in a responsible manner, remaining aware of the purpose of the Child state and then attempting to address the Child's needs, giving the Child a choice, and utilising the Adult to orient the Child to reality.

The concept of transactions is important in TA. TA is interested in how transactions between people unfold; that is, which ego state in one person is talking to which ego state in another (Bruno, 1978). Transactions have two primary states – straight (or complementary) transactions, or crossed transactions.

Straight transactions imply that both parties in a conversation are aware of their ego states (for example, Parent to Child) or are on the same ego state level (for example, Adult to Adult). Even though there may be disagreement, communication can be maintained (Bruno, 1978). Crossed transactions, however, imply a communication breakdown; for example person A is in Adult Ego state and addresses person B as

though they were also in Adult Ego state. However, person B responds in Free Child state, as though person A had addressed them in Critical Parent state (Bruno, 1978).

Bruno (1978) notes that all complementary transactions that are not Adult-to-Adult are fat-making transactions. Parent-to-Parent transactions result in judgemental statements that are usually supported by the other Parent, and the biased notion is fed back into the transaction. Child-to-Child transactions come from an emotional space; the other Child returns similar emotional content, which reinforces it. Although such transactions are not always harmful, they inhibit the Adult. In cases where the individual is trying to diet, they become fat-making transactions (Bruno, 1978).

Parent-to-Child transactions involve the Parent talking down to the Child. In this case, the Parent usually makes an evaluative and judgemental statement, requiring the Child to obey. Child-to-Parent transactions require the Child to seek permission from the authority of the Parent. Typically, those with a strong Adult state will not ask for advice about eating. Crossed transactions result in negative feelings and can thus also be considered fat-making transactions (Bruno, 1978).

Early life decisions help an individual make sense of and adapt to the world, and inform their unconscious life script (Bruno, 1978). However, the adaptive mechanisms from childhood may not serve the adult. Existential positions are based both on messages received from others and on the individual's own decisions. This influences how the individual perceives their own and others' existence, and their self-evaluation with regard to others (I'm okay, you're okay; I'm not okay, you're okay; I'm okay, you're not okay; I'm not okay, you're not okay) (Bruno, 1978).

People who hold an "I'm not okay, you're okay" life position tend to have lower self-esteem, believing that other people are perfect (Bruno, 1978). In this position, fat may be considered a significant flaw. This results in a poor body image and recognition hunger, which causes the individual to turn to food to satisfy their need for affection (Bruno, 1978). An "I'm okay, you're not okay" life position manifests in the egocentric individual, who views others as objects, and fails to recognise their subjective reality. Individual's holding this life position may not recognise overweight or obesity as a cause for concern. An "I'm not okay, you're not okay" life position is held by the individual who suffers from extreme feelings of inferiority and is unable to trust others (Bruno, 1978).

2.6.6.1.1 Studies using TA. Leach (2006) advocates the use of TA applications to treat overweight and obese patients in both individual and group therapy. She reports having achieved significant success in this regard. Her method involves teaching patients to apply a TA framework for understanding and intervening in destructive eating patterns and psychological scripts, which are both the cause and continuance of overweight and obesity. However, Leach (2006, p. 21) states that she is not certain "that it is ever possible for the long-term sufferer to be completely cured of the need to turn to food whenever under stress". She also argues that since TA aims to equip people with the tools to analyse and understand their own behaviour, they will learn to manage the process better and will be able to accept and tolerate the times they revert to misusing food to counter stress. Leach (2006) theorises that managing the relapse back to misusing food, within a framework of self-love and self-care, leads to successful long-term weight loss maintenance. Furthermore, relapses should be viewed by the "self" as a brief relapse phase rather than a regression to old patterns of helpless and out-of-control behaviour around food (Leach, 2006, p. 22).

Saito, Kimura, Tashima, Takao, Nakagawa, Baba and Sato (2009) aimed to discover the psychological factors assessed by ego states that contributed to or prevented weight loss maintenance. Their 6-month weight loss programme, which included counselling by clinical psychologists, found that the participants' A ego states – associated with self-monitoring – and their FC ego states – related to autonomy – were increased through their participation in the programme. While the optimistic and instinctive characteristics of the FC ego state were found to inhibit behaviour modification, the self-monitoring skill of the A ego state contributed to weight loss. The study demonstrated that TA, together with counselling, nutrition therapy, and exercise, is an important intervention for weight loss.

Bak-Sosnowska et al. (2014) performed a study aimed at analysing the ego states of obese people, in terms of TA. The purpose of the study was to determine the relationship between coping strategies, ego structure, global self-esteem, body self-esteem, and overweight. Contrary to Saito et al. (2009), Bak-Sosnowska et al. (2014) found that ego-states did not influence coping strategies for overweight. Body self-esteem and global self-esteem were also not significant contributors to coping mechanisms for

overweight. While self-esteem is associated with the spontaneous ego-Child and the ego-Adult, the participants' sense of sexual attractiveness is affected only by the spontaneous ego-Child. However, results show that TA is an important tool for increasing the effectiveness of weight loss strategies.

2.6.6.2 Mindfulness. Mindfulness is inspired by 2 600-year-old Buddhist traditions, and is defined as the awareness of the present moment in a way that is non-judgemental to the unfolding of experience (Brown, Ryan, & Creswell, 2007; Fulwiler et al., 2015; Kabat-Zinn, 2003). Mindfulness training (MT) emphasises non-reactive, non-judgemental awareness, which in turn promotes reduced reactivity to aversive experiences (Zeidan, Grant, Brown, McHaffie, & Coghill, 2012). In terms of weight loss, MT encourages the non-reactive and non-judgemental form of awareness in the face of stressors and negative or distressing thoughts, emotions, and sensations (Fulwiler et al., 2015). This reduced reactivity and greater self-efficacy are hypothesised to result in the reduction of impulsive eating and food craving, and to facilitate the cessation of unhealthy behaviours previously used to cope with stress and negative emotions (Fulwiler et al., 2015).

In a study by Dalen, Smith, Shelley, Sloan, Leahigh and Begay (2010), a six-week mindfulness-based training programme was created for the treatment of overweight and obesity. The Mindful Eating and Living (MEAL) programme involved a mindfulness meditation, group discussions, and group eating exercises. The daily meditation, paired with eating, aimed to assist people to assess their hunger and satiety indicators, the qualities of food that they craved, and emotional and cognitive states in relation to eating (Dalen et al., 2010). The study measured changes in weight or BMI, eating behaviours, and physical activity. Participants demonstrated increased mindfulness and cognitive restraints when around food, and decreases in weight, binge-eating, depression, physical symptoms, negative affect, and perceived stress. This study demonstrates the value of mindfulness as a significant intervention for overweight and obesity, and the related health and psychological consequences of obesity (Dalen et al., 2010).

A mindfulness-based programme was also developed by Lancioni, Singh, Singh, Winton, McAleavey, Adkins and Singh (2008), who maintain that matching individual needs with an effective programme creates a particular challenge for obesity

interventions. The programme includes physical activity, eating awareness, mindfulness to reduce rapid eating, the development of a self-control strategy through mindfulness, and helping the individual visualise and label hunger correctly. In a case study for this programme, an individual managed to reduce his weight significantly from 142 kg to 77 kg. Other improvements that were found were increased physical activity, reduced eating speed, and the selection of healthier foods to eat. The mindfulness-based intervention also resulted in fewer negative health outcomes, fewer mobility problems, and less physical discomfort. This case study followed the participant for 12 months, and discovered that his lifestyle remained enhanced (Lancioni et al., 2008).

In essence, the non-reactive approach of mindfulness to food and eating has been found to be globally beneficial, both in terms of the reduction of weight and the improvement of health. It is therefore a promising approach for the treatment of overweight and obesity.

2.6.6.3 Intuitive eating. The intuitive eating approach emphasises eating in response to internal cues of physiological hunger and satiety, rather than the cognitive monitoring of food and calorie intake (Kratina, 2003; Tylka, 2006). Intuitive eating emphasises the individual's understanding of, and connection with, their own body (Tylka, 2006). Scholars argue that there are three fundamental elements that characterise intuitive eating (Tylka, 2006, p. 226). They state that it involves the unconditional permission to eat when hungry and to eat any food that is desired, eating due to physiological need rather than emotional factors, and reliance on internal hunger and satiety cues to determine when and how much to eat. These three factors are argued to work in conjunction and all are deemed essential (Tribole & Resch, 1996).

The first element, the unconditional permission to eat when hungry and to eat any food that is desired, encourages people not to ignore physiological needs, as well as to refrain from classifying foods as acceptable or unacceptable (Tribole & Resch, 1996). People who place restrictions on their eating in terms of what they may consume, how much and when, based on external criteria rather than internal physiological drives, have been found to feel deprived and thus become preoccupied with food (Polivy & Herman, 1999; Tribole & Resch, 1996). People who restrict their

diets are more likely to eat even when not hungry, tend to consume more food, and in general have a higher body mass than those who do not restrict their diets (Bacon et al., 2005; Faith, Scanlon, Birch, Francis, & Sherry, 2004).

Research (Tylka, 2006) indicates that people who practise the second element of intuitive eating, namely eating due to physiological need rather than emotional factors, tend to eat less when anxious than when they are calm (Tylka, 2006). The opposite is seen in people who restrict their diets. This second element closely coincides with the first element since people who restrict their diets are also more likely to increase the amount of food consumed when experiencing negative affect. When people who restrict their diets breach their restrictions, their eating often becomes disinhibited, which further contributes to eating in response to emotional cues rather than physiological need (Tylka, 2006).

People who practise intuitive eating rely on internal hunger and satiety to direct their eating behaviour (Tribole & Resch, 1996; Tylka, 2006). These internal cues are said to be innate but are often replaced by external societal cultures of eating and diet. The internal regulation of children is also repeatedly altered by their caregivers, who believe that children are unable to effectively regulate their own intake (Birch, Fisher, & Davison, 2003). Consequently, these caregivers contribute to a diminished reliance on internal cues as they teach external rules for eating behaviour, which leads to overeating and the consumption of food in the absence of hunger. This type of socialisation has also been found to be associated with weight gain, the development of dietary restraint, and eating in response to emotions such as boredom and sadness, and in the presence of situation factors (including the mere presence of food) (Birch et al., 2003; Carper, Fisher, & Birch, 2000).

Intuitive eating approaches often promote the notion that people can be healthy at every size, rather than the necessity for weight loss (Bacon et al., 2005; Tribole & Resch, 2003). Therefore, these approaches encourage people to cease to aim to reduce their size. They further contradict diet-based approaches by advocating a decrease in restraint through reliance on intuitive regulation of food intake instead of endorsing an increase in restraint of the intake of food (Bacon et al., 2005). Numerous benefits have been attributed to the intuitive eating approach. Bacon et al. (2005) found that while people who participated in both dieting and intuitive eating

demonstrated significant decreases in depression, only people in the “every size” intuitive eating group maintained this decrease after two years. The intuitive eating group demonstrated increased self-esteem after a two-year period, whereas dieters revealed a significantly decreased self-esteem (Bacon et al., 2005). This increase of self- and body-esteem has been confirmed by other studies (Hawks, Madanat, Smith, & De la Cruz, 2008). The intuitive eating group also displayed continued successful restraint of eating behaviours (through introspective awareness) after the two-year period, as opposed to the diet group who were unable to maintain restraint. This finding also mirrored the discrepancies in the ability to maintain weight loss between the two groups. The dieting group showed initial weight loss but then gradually regained weight. This phenomenon was not evident in the intuitive eating group (Bacon et al., 2005).

Intuitive eating has been found to reduce a preoccupation with food that is often reinforced by diets and interferes with weight loss (Tylka, 2006). It has been found to be significantly correlated with lower BMI, lower triglyceride levels, higher levels of high-density lipoproteins, and lower cardiovascular risk (Barton & Furrer, 2003). An association has also been shown between intuitive eating and an increased experience of pleasure in the selection and consumption of food, having a more diverse diet, and eating breakfast (Smith & Hawks, 2006). The relationship between breakfast and reduced fat intake and snacking (hence increased healthy weight management) has also been established (Schlundt, Hill, Sbrocco, Pope-Cordle, & Sharp, 1992). Lastly, there is an association between intuitive eating and greater body appreciation (Avalos & Tylka, 2006).

There are also several psychological benefits of intuitive eating (Tribole & Resch, 2003). A study by Tylka and Wilcox (2006) revealed that two of the core principles of intuitive eating, namely eating due to physiological hunger rather than emotional reasons, and the reliance on internal satiety and hunger cues to determine when and how much to eat, increase psychological wellbeing. These principles increase optimism, psychological hardiness (an indication of resilience), positive affect, social problem-solving, and proactive coping (Tylka & Wilcox, 2006). Intuitive eating has also been shown to hold positive results as an eating disorder intervention (Tylka & Wilcox, 2006; Young, 2010).

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The intuitive eating approach has been deemed dangerous by some health care practitioners because they fear that the “health at every size” aspect may result in indiscriminate eating and increased obesity (Kratina, 2003; Tribole & Resch, 2003). However, studies by Bacon et al. (2005) and Smith and Hawks (2006) suggest that this fear is unsubstantiated. There is also a fear that people will be likely to consume diets that are lacking sufficient nutrition, and are high in fat, sugar, and refined foods, if allowed to eat in accordance with personal cravings and desires (Gast & Hawks, 2000; Smith & Hawks, 2006). However, Smith and Hawks (2006) not only found no correlation between intuitive eating and decreased nutritional diets, but found that it may be associated with healthier eating behaviours.

2.6.7 Weight acceptance programmes. The Health at Every Size approach (HAES), which is discussed as a weight acceptance programme, endorses the concept that an appropriate, healthy weight for an individual cannot be determined by the numbers on a scale, or by calculating BMI or body fat percentages (Robison, 2005). A “healthy weight” should rather be defined as the weight at which an individual eats according to internally directed signals of hunger, appetite and satiety, and participates in reasonable and sustainable levels of physical activity. The HAES approach does not deny that not all people are currently at a weight that is the healthiest for their circumstances (Robison, 2005). The HAES approach presupposes, however, that a movement toward a healthier lifestyle will over time inevitably produce a healthy weight, as removing the emphasis on weight does not necessarily cause health and medical risks to be ignored (Robison, 2005). It is therefore “health-centred” as opposed to “weight-centred” (Provencher, Bégin, Tremblay, Mongeau, Corneau, Dodin, & Lemieux, 2009).

The basic conceptual framework of the HAES programme includes the acceptance of diversity in body shape and size, the ineffectiveness of dieting for weight loss, the importance of eating in response to internal body cues, and the critical contribution of social, emotional, spiritual, and physical factors to health and happiness (Robison, 2005). Research suggests that HAES interventions reduce tendencies to overeat (Bacon et al., 2002; Provencher, Bégin, Tremblay, Mongeau, Boivin, & Lemieux, 2007; Rapoport et al., 2000), and improve psychological functioning (Bacon et al., 2002; Ciliska, 1998).

2.7 Weight loss maintenance

Preventing overweight and obesity presents a complex public health challenge despite there being numerous interventions in place across the world. Modest weight loss can significantly reduce health risks, but few people engage in weight loss activities (Gupta, 2014). Many studies have investigated short-term weight loss maintenance. However, few have explored the factors mediating long-term weight loss maintenance, and hence the purpose of this study.

According to reviews, a successful weight maintainer has predictable cognitive and behavioural patterns, which include engaging in an active lifestyle, filling leisure time with activities that require muscular activity, self-regulatory eating and exercise behaviours, such as monitoring caloric intake and portion size, controlling their eating, maintaining a flexible approach to food, regulating emotions, and effectively managing stress (Elfhag & Rossner, 2005; Reilly, Mawn, Susta, Staines, Browne, & Sweeney, 2015; Wing, 2002).

Following successful weight loss, weight maintenance proves to be an ongoing challenge in the overweight and obesity epidemic. It is thus imperative to understand the psychological factors that mediate weight loss maintenance in order to identify the behaviours and mind-sets that are essential to maintaining a lower body weight. However, limited research has been carried out on the psychological processes associated with the inability to maintain weight loss. The available research also does not always capture the nuances that can only be described by the individuals who have maintained weight loss (Barnes, Goodrick, Pavlik, Markesino, Laws, & Taylor, 2007; Byrne, Cooper, & Fairburn, 2003; Reyes, Oliver, Klotz, Lagrotte, Van der Veur, Virus, & Foster, 2012).

Studies examining psychological factors have also been limited in both design and scope, and the findings have been inconsistent (Byrne et al., 2003). Studies typically focus on the individual's failure to continue with their weight control behaviours, while neglecting the psychological factors underpinning their ability to persist with these behaviours (Byrne et al., 2003).

The National Weight Control Registry (NWCR), with over 10 000 members, is the largest database of people who have successfully maintained their weight loss (Wing & Phelan, 2005). Inclusion criteria include achieving a weight loss of ≥ 13.6 kg and maintaining it for more than a year. The following behavioural and psychological

factors were identified as contributing to these successes: high levels of physical activity and limiting time spent watching television; consuming a low-calorie, low-fat diet; regularly eating breakfast; a consistent eating pattern, regardless of the season or day of the week; avoiding eating for emotional reasons; frequent weighing sessions; and immediately attending to minor weight regain (Niemeier et al., 2007; Raynor et al., 2006; Wing & Phelan, 2005). Additionally, Dohm et al. (2001) identified additional strategies required for maintaining weight loss, including direct coping with stressful situations – as opposed to avoidance or emotional eating – combined with positive help-seeking behaviour. It is also suggested that a flexible approach to eating and food is important for maintenance, as opposed to a rigid restriction of certain food types (Hindle & Carpenter, 2011; Westenhoefer et al., 2004).

These behaviours do not fully reflect the cognitive and emotional aspects of weight loss. For this reason, this study examines the facilitators and barriers to weight loss and weight loss maintenance. It has as its subjects a group of women who participated in the ITAND Programme, and who maintained their weight loss for 17-22 years. The study aims to capture insights into the participants' perceptions of sustaining lifelong weight loss. The following major themes are evident across the literature: (1) body image, self-esteem, and self-empowerment; (2) intuitive eating; (3) initial weight loss and weight loss maintenance; (4) weight loss goals; (5) life events and coping styles; (6) planning; (7) nutrition education; (8) dietary intake and eating patterns; (9) physical exercise; (10) locus of control; (11) self-efficacy; (12) self-monitoring; (13) depression and psychiatric disorders; (14) total lifestyle change; (15) social support and personal accountability; (16) executive functioning; (17) gender; and (18) primary vs. secondary weight maintainers.

2.7.1 Body image, self-esteem, and self-empowerment. Sarlio-Lähteenkorva (2000) argues that successful weight loss maintenance is dependent on the experience of self-empowerment, and of being in control of life and food. In this study, the transformation from obese to reduced-obese was linked to a change in identity and social roles – for example, coordinating health groups and becoming a role model for others – in which the participants shifted away from identifying as obese (Hindle & Carpenter, 2011; Sarlio-Lähteenkorva et al., 2000).

The participants experienced personal accomplishment as a result of reducing their body size. Feeling in control of their behaviour and food allowed the participants to redefine their identity through having control of their bodies (Sarlio-Lähteenkorva, 2000). It was necessary to make permanent behaviour changes in order to reconstruct their previous identities as obese or overweight people. This is because the body often serves to define the self. A redefinition and re-evaluation of the former overweight and obese identity is thus required (Sarlio-Lähteenkorva, 2000).

In the research by Berry (2004), participants created new roles and goals for themselves by becoming a role model for others; in this case, by starting weight loss and exercise groups, or by facilitating already existing weight loss programmes.

It has consistently been found that people who successfully maintain weight loss have a more positive body image than those who regain their weight (Lazzeretti et al., 2015; Ohsiek & Williams, 2011). People who regain their weight tend to be preoccupied with their weight and appearance, and their self-worth is closely associated with their body image (Byrne et al., 2003; Sarlio-Lähteenkorva et al., 2000). Successful maintainers, however, place less importance on appearance and as a result have more positive feelings about their body image (Byrne et al., 2003).

Weight loss maintenance had to be viewed as a means of achieving something valuable (Sarlio-Lähteenkorva, 2000). Weight loss, in itself, was not considered to be valuable. Instead, the slimmer body was seen as a vehicle for a healthier lifestyle, improved functioning, and greater self-esteem. Women also wished to remain slim due to societal pressure, and wanting to fit in. Objectification of women and stigmatising of obesity were considered powerful motivators for weight loss maintenance (Sarlio-Lähteenkorva et al., 2000). Successful weight loss maintenance was considered to be self-empowering.

2.7.2 Intuitive eating. Byrne et al. (2003) found that people who maintain weight do not engage in dichotomous or all-or-nothing thinking. Their approach to food is flexible, and they avoid banning any types of food from their diet so that they prevent feeling deprived. Such people report feeling more in tune with their bodies, and as having an increased understanding of their nutritional needs and food desires (Byrne et al., 2003; Hindle & Carpenter, 2011). They also cease to eat when experiencing negative emotions and difficult situation (Byrne et al., 2003).

Berry (2004) found that the abandonment of the diet mentality was pivotal to weight loss maintenance. Participants avoided banning certain foods and were guided by the needs of their bodies. Self-monitoring and evaluation of the reasons for their desire to eat was also important in the process of maintaining weight loss (Berry, 2004). Other weight loss maintenance strategies used by the participants included accepting lapses, and ensuring that healthy food and exercise are pleasurable.

2.7.3 Initial weight loss and weight loss maintenance. Studies in a review by Elfhag and Rossner (2005) found an inconsistent relationship between initial weight loss and weight loss maintenance. Some studies suggest that the greater the initial weight loss, the greater the subsequent weight loss maintenance. Greater initial weight loss is also linked to greater compliance with treatment. Contradicting this, some studies state that slower rates of weight loss result in greater weight loss maintenance, and that greater initial weight loss leads to greater weight regain.

There is still speculation regarding how early weight loss affects later weight loss maintenance. Two long-term clinical trials reviewed by Elfhag and Rossner (2005) showed that an initial weight loss of >5% of body weight after a 12-week diet indicated a two-year weight loss weight maintenance. A >2.5 kg initial weight loss from a 4 week programme and a >10% weight loss after six months did not significantly predict two-year weight loss maintenance outcomes. What remains conclusive is that the longer the weight loss is maintained, the more likely it is that the lower weight is maintained, with less effort required to do so.

A qualitative study by Sarlio-Lähteenkorva (2000) examined the narratives of women who had participated in a weight loss programme seven years prior to the study. This study, which sought to investigate the women's weight loss maintenance, provides a more nuanced look at initial weight loss and weight loss maintenance.

Participants identified that the weight loss phase posed the least challenge (Sarlio-Lähteenkorva, 2000), stating that they engaged in a diet based on some weight-related discomfort, but that they were prompted to do so either by friends, relatives, or an advert. Joining a weight loss programme provided an everyday structure for eating. Their initial commitment to the weight loss programme was due to the financial commitment it required, and how weight loss is glorified (Sarlio-

Lähteenkorva et al., 2000). The initial weight loss resulted in a boost in self-esteem, feelings of satisfaction as a result of their accomplishment, and social initiatives.

Problems encountered during this stage included lack of social support and an inability to resist temptation.

All but one of the participants found weight loss maintenance more difficult than the initial weight loss (Sarlio-Lähteenkorva, 2000). As the support group fell away, so did the stringent rules of diet and exercise and the glorification of weight loss. Some participants reported feeling “too skinny”, and preferred to regain some of their weight. All of the participants maintained a higher weight than during the weight loss phase. Participants reported that, despite seven years having passed since the weight loss treatment programme, maintaining their weight remained a challenge (Sarlio-Lähteenkorva, 2000).

Weight loss maintenance is not considered to be a stable state, but one involving a constant risk of weight regain (Metzgar, Preston, Miller, & Nickols-Richardson, 2015; Sarlio-Lähteenkorva, 2000). Weight loss is thus described as an “ongoing process” (Metzgar et al., 2015, p. 4). Participants viewed constant vigilance and permanent behavioural changes as paramount for maintaining weight loss (Sarlio-Lähteenkorva et al., 2000). The valuable effects of weight loss maintenance were improved self-esteem, health, and professional gains.

2.7.4 Weight loss goals. Realistic goal-setting may be an important factor in weight loss maintenance. Weight loss expectations are centred not only on the desired weight, but also on aspects such as increased self-confidence, assertiveness, attractiveness, appearance, and health (Ohsiek & Williams, 2011). Unrealistic weight loss expectations seem to be highly prevalent among people attempting to lose weight, and this may greatly hamper their ability to maintain weight loss (Elfhag & Rossner, 2005).

People who have successfully managed their weight in the long term have been found to have achieved a self-determined goal weight (Byrne et al., 2003; Jeffery et al., 1998; Marston & Criss, 1984). An important aspect of weight loss maintenance, as noted by Byrne et al. (2003), is that a greater portion of maintainers reported feeling satisfied with their lower weight, even if they had not attained their weight loss

goal. This satisfaction resulted in improved appearance, health, and self-esteem. In contrast, regainers reported feeling dissatisfied with their weight, despite the weight loss.

It has been hypothesised that failing to achieve satisfactory weight loss may undermine the person's belief in their ability to control their weight. This may cause them to abandon further attempts at weight loss. A contradictory quantitative finding, however, suggests that there is no negative relationship between unrealistic goals and achievement; in fact, this study found a weak relationship between a higher goal (lower body weight), and greater long-term weight management (Linde et al., 2004).

This demonstrates the importance of qualitative research, as it allows for a more nuanced and detailed examination of variables associated with the maintenance of weight loss.

2.7.5 Life events, coping styles, and weight loss maintenance. Life events, both positive and negative, can both hamper and assist weight loss and weight loss maintenance (Elfhag & Rossner, 2005). Stressful life events and the perception of one's life as stressful have been implicated in weight regain (Dubbert, 1984; Sarlio-Lähteenkorva et al., 2000). Post-treatment, weight regainers are typically associated with having experienced crises, such as bereavement, whereas weight maintainers are more associated with stable life experiences (Elfhag & Rossner, 2005).

Some researchers argue that it is not the life event that hampers attempts to regulate weight, but emotional eating in response to the life event, instead of direct coping with stress (Dohm et al., 2001; Raman, Smith, & Hay, 2013). Several researchers (Gormally & Rardin, 1981; Grilo et al., 1989; Westenhoefer et al., 2004) state that amount of stress is not a precursor to weight regain; rather, it is the inability to cope with the stress. Typically, people who regain weight tend to soothe negative emotions and stress with food and eating (Byrne et al., 2003; Gormally & Rardin, 1981; Kayman et al., 1990; Raman et al., 2013). By contrast, people who are successful at weight maintenance have been found to cope better with cravings, and use direct coping and corrective methods in a relapse situation (Dohm et al., 2001; Ferguson et al., 1992).

Participants in qualitative studies found that certain life stages are associated with stressors that make weight loss and weight loss maintenance difficult. Pregnancy and post-pregnancy were noted as particularly challenging times for weight loss and weight loss maintenance (Befort et al., 2008; Metzgar et al., 2015).

Participants also experienced other life transitions challenging for weight loss and weight loss maintenance, including student status, employment, family structure, and health status. These all served as barriers to weight loss maintenance. Young adulthood and mid-life have been identified as periods where weight gain happens (Ball, Brown, & Crawford, 2002; Metzgar et al., 2015; Wane, Van Uffelen, & Brown, 2010). Additionally, life stress and pivotal life events are also identified as periods where weight gain occurs (Elfhag & Rossner, 2005; Metzgar et al., 2015).

2.7.6 Planning. Although not mentioned frequently in the literature, planning is important for achieving and maintaining weight loss (Metzgar et al., 2015). Planning is a skill that takes time to develop and maintain and is intrinsically linked to mindfulness and an awareness of food choices and energy intake. Although planning is important for weight loss, participants also acknowledge that it is time-consuming. Planning allows for the managing of special events and holidays. For example, people who were able to plan ahead and brought their own food to social events had greater success with weight loss and weight loss maintenance.

It was also reported that it was important for the participants to be “mindful” about what they were eating (Metzgar et al., 2015). Interventions should target planning skills in order to help people become mindful about food intake, energy expenditure, and the nutritional content of food. Crucially, these interventions should provide planning skills that are simple, practical, and provide structure (Metzgar et al., 2015).

2.7.7 Nutrition education. People have found that learning about nutrition improved their ability to make healthier food choices. The use of dieticians and the information they provided was reported to be valuable aspects of the primary intervention (Metzgar et al., 2015). Dieticians acted as “credible” resources; this was especially important for participants who had previously engaged in commercial weight loss programmes. However, these participants reported that without the support of the group dynamic, they often failed to continue complying with principles of the nutrition education. Support groups thus provided external accountability, but also helped the

participants incorporate healthier foods into their diet, enabling a greater awareness of the nutritional value of their food choices. Loss of this support group resource represents a substantial barrier to weight loss and weight loss maintenance (Metzgar et al., 2015).

2.7.8 Dietary intake and eating patterns. Lower dietary intake, in terms of both lower caloric intake and smaller portions, is related to greater weight loss maintenance. More specifically, greater weight loss maintenance is associated with a lower fat intake and smaller intake of snacks. A reduction in specific foods, such as French fries, butter, sugar, and high-fat snacks, is associated with people who are able to maintain a lower weight (Elfhag & Rossner, 2005). In addition, weight maintainers are more likely to have regular meals and not to skip breakfast. It is suggested that having breakfast helps a person to remain full, to choose less energy-dense food, and to have enough energy to engage in physical exercise during the day (Elfhag & Rossner, 2005).

Portion regulation is also an important aspect of weight loss and weight loss maintenance. Once the participants were able to recognise the distortion in their portion sizes, they were able to reduce their portions, resulting in reported weight loss and weight loss maintenance (Elfhag & Rossner, 2005; Metzgar et al., 2015; Sciamanna, Kiernan, Rolls, Boan, Stuckey, Kephart, & Dellasega, 2011).

Restraint is associated with a more successful intervention, but it can alternate with periods of overeating. It is therefore a risk factor for developing a disordered eating pattern (Elfhag & Rossner, 2005). A rigid eating pattern, as opposed to a more flexible one, is associated with higher weight regain. An explanation offered for this is that people who have rigidly restricted their food intake and have denied themselves food that they enjoy are more likely to feel deprived and are more likely to binge-eat. Dietary restraint should therefore be flexible in order to achieve effective long-term change (Teixeira et al., 2010).

More flexible patterns of eating are associated with long-term weight loss maintenance; Teixeira et al. (2010, p. 8) refer to this as the increase of “flexible cognitive restraint”. Flexible control is associated with less internal pressure to diet, and a more gradual and relative understanding of the impact of diet on energy balance (Teixeira et al., 2010). Conversely, rigid, restrained eating causes people to

give higher absolute value to restraining calorie intake; failure to comply with these restrictions could evoke a negative emotional response. This in turn increases the likelihood of the person engaging in disproportionate compensatory behaviours – including stricter cognitive restraint, compulsive exercise, or even counter-regulatory behaviours, such as a higher tendency to binge (Teixeira et al., 2010).

A breakdown in eating control following periods of strict restraint can be described as a “black-and-white” and “all-or-nothing” style of rigid thinking (Byrne et al., 2003), which is has been associated with weight regain. Individuals with a dichotomous thinking style perceive a failure to achieve (unrealistic) weight loss goals as a total failure, and any weight loss that has been achieved is considered unsatisfactory. It is theorised that this disappointment with weight loss achievement makes it highly unlikely that the individual will remain motivated to maintain weight loss (Byrne et al., 2003). Rigid dietary interventions are thus discouraged in favour of a more flexible eating plan, which can be described as a “more or less” thinking style (Elfhag & Rossner, 2005).

2.7.9 Physical exercise. Physical exercise has shown to be a significant predictor of long-term weight loss maintenance (Elfhag & Rossner, 2005). It facilitates this maintenance through both direct energy expenditure and by promoting a healthier and more active lifestyle. Additionally, physical exercise promotes other aspects of wellbeing that can lead to positive behaviour changes which, in turn, influence weight loss maintenance. A move away from a sedentary lifestyle and having self-efficacy related to exercise was a positive predictor for weight loss maintenance. By contrast, perceived resistance to exercise and poor compliance with exercise was related to later relapse (Elfhag & Rossner, 2005).

Teixeira et al. (2010) confirm that self-efficacy is crucial for long-term weight loss maintenance. They also posit that long-term weight loss can be influenced by perceived barriers to exercise, motivation, and confidence (Teixeira et al., 2010). Women who failed to maintain their weight reported that not adopting an exercise routine was a significant barrier to weight loss maintenance. People may not engage in exercise due to guilt, lack of time, and unpleasant experiences of exercise (Thomas, Hyde, Karunaratne, Kausman, & Komesaroff, 2008). Metzgar et al. (2015) suggest that intervention programmes should incorporate preferred and tailored

exercise routines in order to help people to persist with exercise in the weight loss maintenance phase.

2.7.10 Locus of control. Locus of control is an “important factor in relation to obesity as it indicates whether a person believes that his or her environment and choices are under his or her control” (Neymotin & Nemzer, 2014, p. 1). Additionally, actual physical cues of hunger or satiation, and a person’s ability to interpret those cues appropriately in any given social situation, will assist in determining how obesity develops and persists. It is complicated to determine the correct measure of locus of control to employ, and also to show a casual, rather than a correlational, relationship between locus of control and obesity (Neymotin & Nemzer, 2014).

There is contradicting evidence in regard to locus of control and weight maintenance (Elfhag & Rossner, 2005; Lazzeretti et al., 2015). While an internal locus of control has clearly been indicated in weight loss, there is not much available on the relationship between locus of control and weight maintenance. In the available studies it is, however, suggested that an internal locus of control does play a role in weight maintenance, probably because people more readily accept full responsibility for their actions (Nir & Neumann, 1995). Interestingly, people who failed to take responsibility for their overweight or obesity and who attributed the problem to an underlying medical cause were less successful at losing weight and maintaining the weight loss (Elfhag & Rossner, 2005; Ogden, 2000). However, measures of internal locus of control were found to be unrelated to long-term weight loss maintenance (Elfhag & Rossner, 2005).

2.7.11 Self-efficacy. Self-efficacy is related to the initiation and maintenance of behaviour change (Strecher, McEvoy DeVellis, Becker, & Rosenstock, 1986). In health-related areas, self-efficacy seems to be related to long- and short-term success. Manipulating self-efficacy can improve a person’s ability to initiate and maintain behavioural changes.

Bandura (1977) has a theory outlining the role of self-efficacy, which states that behaviour change and the maintenance thereof are a function of “outcome expectations”, that is, the expectation of the outcome and “efficacy expectations”, which are the person’s expectations of their ability to achieve the behaviour. It is therefore not the person’s actual abilities that influence their capability to behave in a

particular way, but their perception of their own abilities. Self-efficacy also relates to a person's beliefs about their capabilities for specific behaviours in specific situations. It is thus not a characteristic of personality, and does not operate independently of context.

Self-efficacy influences each aspect of behaviour – acquiring new behaviours, inhibition of existing behaviours, and disinhibition of behaviours. Self-efficacy also affects the behavioural setting the person selects, the amount of effort that they are prepared to expend on a task, and how long they will persist in the behaviour in the face of challenges. Finally, Bandura (1977) defines self-efficacy as a person's emotional reactions associated to the behaviour. For example, someone with a low self-efficacy surrounding a particular behaviour may ruminate about their shortcomings, which would impede their successful performance at that behaviour. Self-efficacy thus varies along dimensions of magnitude, strength, and generality, which in turn influences how a person performs at a task.

Bandura's (1977) theory of self-efficacy has been applied to weight control behaviours by Strecher et al. (1986). They hypothesise that self-efficacy is a barrier to weight management. Weight control has a desirable goal, namely reaching a specific target weight or weight range, and the psychological implications of doing so.

The study by Jeffery et al. (1984) on the efficacy expectations in weight control interventions at pre-treatment, post-treatment, and at a one-year follow up, divided self-efficacy into emotional efficacy and situational efficacy. Emotional efficacy refers to a person's ability to refrain from eating in response to emotional states. Situational self-efficacy refers to a person's ability to abstain from eating in such a way that goes against their prescribed eating patterns in social situations. High levels of emotional and situational self-efficacy at the pre-treatment stage were correlated with a greater ability to maintain weight loss, both initially and at the long-term follow-up.

In order to manipulate efficacy expectations, Chambliss and Murray (1979) offered a placebo treatment in conjunction with a standard weight loss programme, which was then reattributed to the participant's personal abilities. Half the group were told about the placebo, and congratulated on their personal achievements. The other half of the group were left to remain under the "drug efficacy". They found that there was a

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significant reaction between locus of control (as measured by Rotter's Locus of Control Scale) and self-efficacy. Those in the group who were told about the placebo, and had an internal locus of control, had the highest weight gain, while those who had an external locus had slight weight gains. The reverse was true for the drug efficacy group – those with an external locus of control had higher weight loss than those with internal locus of controls.

As stated by Strecher et al. (1986), overweight and obesity treatments should help participants take responsibility for their problem. Relapses should thus be viewed as an opportunity to analyse the factors causing the relapse.

Self-efficacy in the context of weight loss, exercise, and the ability to handle emotions has been indicated in long-term weight maintenance (Jeffery et al., 1984; Rodin et al., 1988; Teixeira et al., 2004). People successful at maintaining their weight have been shown to have more confidence in their ability to manage their own weight compared to individuals who regained weight (DePue et al., 1995).

Self-monitoring is a person's ability to monitor their own eating and weight. The ability to consistently self-monitor is associated with greater weight loss maintenance. Weight maintenance requires continual dedication to weight loss behaviours learnt in the treatment phase, and requires a person to have frequent weigh-ins and to record food intake (Elfhag & Rossner, 2005). People who were more successful at maintaining their weight loss demonstrated greater understanding that they had to continually engage in weight monitoring behaviours. Regainers, however, demonstrated a lack of awareness of their eating behaviours (Elfhag & Rossner, 2005). Maintainers are able to prevent minor weight fluctuations from turning into large relapses.

Metzgar et al. (2015) report a finding that was novel to their research, that is, the women in their study reported that self-accountability, or "willpower", was integral for weight loss maintenance. However, self-motivation and readiness for change were found to be crucial for successful weight loss and weight loss maintenance. Interventions should include the creation of scenarios that test the ability of self-control, willpower, and self-regulation, to deal with relapses. Discussing and cultivating self-forgiveness for non-compliance is an important aspect of interventions.

2.7.12 Self-autonomy. Teixeira, Silva, Mata, Palmeira, and Markland (2012) state that personal autonomy is an important aspect of the motivation necessary for achieving a lifestyle change identity. Autonomy in this sense refers to the perceived origin of one's action (also known as the locus of causality). The degree to which behaviour is self-directed and endorsed, and the extent to which it is perceived to be a product of personal choice, rather than an obligation, are essential in determining the level of motivation (Teixeira et al., 2012).

According to the self-determination theory, the behavioural pursuits of people that are characterised by extrinsic goals, such as aiming to lose weight to improve physical attractiveness, are usually associated with controlled reasons. Intrinsic goals, such as weight loss to improve health and for personal growth, are related to the satisfaction of psychological needs, and are usually regulated by autonomous motivation (Silva, Vieira, Coutinho, Minderico, Matos, Sardinha, & Teixeira, 2010; Teixeira et al., 2012).

Autonomy regarding individual choices and behaviours is crucial for motivation. It has significant consequences for initiating behaviour and for maintaining behaviour (Silva et al., 2010; Teixeira et al., 2012; Williams, Grow, Freedman, Ryan, & Deci, 1996). The results of a study by Williams et al. (1996) support the findings by Teixeira et al. (2012); Williams et al. (1996) report that autonomous regulation and motivation predict greater weight loss, as well as maintenance of both weight loss and engagement in exercise.

According to the self-determination theory, the same goal – for example, self-monitoring one's eating behaviour – can be driven by various motivational features. It can be externally driven (for example, to avoid criticism from health professionals), or it can be partially internalised regulation (for example, "other people in the programme are minimising sugar, I should do it too"), or completely autonomous regulation (Teixeira et al., 2012).

People who engage in autonomous regulation usually choose to self-monitor their behaviour because self-monitoring has become personally important or enjoyable to them. The difference between the various forms of regulation is thus the level of choice and personal endorsement involved (Teixeira et al., 2012). Lasting behaviour

change involves internalisation and taking personal responsibility for behaviour, rather than relying on external motivation and monitoring.

2.7.13 Self-monitoring. Self-monitoring refers to the systemic observation and recording of target behaviours. Self-monitoring of physical activity, fruit and vegetable intake, body weight, and water intake are significant for attaining weight loss maintenance (Baugh, Savla, Akers, Raynor, Davy, & Davy, 2014). Scales, mirrors, and food diaries were some of the tools utilised by participants to monitor their weight (Hindle & Carpenter, 2011; Sarlio-Lähteenkorva et al., 2000).

According to Burke, Warziski Turk, Derro and Ewing (2009), self-monitoring is sustained by personal aptitudes that favour organisation and computation, positive personal feelings, and an attitude of commitment and determination. Positive support systems from family and friends are also related to the ability to sustain self-monitoring.

Challenges to the ability to self-monitor include participation in multiple weight loss programmes in an attempt to lose weight, resistance to the computational and organisational burdens of self-monitoring, an inability to focus on and nurture the self, and a lack of social support. Participants were required to integrate the techniques necessary for self-monitoring, including recurrent self-examination, and continuing social support. Successful integration of these techniques allowed participants to lose or maintain their body weight, despite internal or external demands.

Three factors impact the inability to self-monitor: lack of cognitive integration of the techniques needed to self-monitor; lack of self-nurturing and/or the preoccupation with care of others; emotional eating.

Participants who neglect their own needs in favour of those of others and use food to fulfil their own needs have a decreased ability to self-monitor when their emotional needs are not met. First-time success increases self-efficacy, and increases the likelihood that self-monitoring behaviours will be continued. It is therefore important that weight management programmes are geared towards initial sustainable success (Burke et al., 2009).

2.7.14 Depression and psychiatric disorders. Depression and obesity are comorbid and many obese people entering treatment present with depression (Elfhag & Rossner, 2005; Lazzeretti et al., 2015). There is a slight association between depression and weight regain, and psychiatric disorders are shown to negatively influence long-term weight loss maintenance. Weight regain is also associated with slight depressive symptoms. This indicates that people who are more successful at weight loss have fewer depressive symptoms. However, studies examining the relation between weight loss and weight loss maintenance have been contradictory. Elfhag and Rossner (2005) argue that more research is required to examine the relationship between psychiatric disorders and weight loss maintenance. They posit that higher levels of dissatisfaction with body weight provide ample motivation for weight loss. This is in direct contrast with other research (Lazzeretti et al., 2015; Ohsiek & Williams, 2011), which states that better body image is correlated with weight loss control.

2.7.15 Total lifestyle change. In a study by Reyes et al. (2012), it was found that participants were usually aware that fads and quick-fix diets are not sustainable and do not produce long-term results (Reyes et al., 2012). They recognise that the only way to sustain weight loss is through a lifestyle overhaul (Byrne et al., 2003; Herriot, Thomas, Hart, Warren, & Truby, 2008). Participants described lifestyle change as being mediated by a number of important factors, including behavioural and psychological factors.

Establishing behavioural changes and support systems was important for providing coping mechanisms for situations where there was a high likelihood of relapse (Sarlio-Lähteenkorva, 2000). Participants reported that this lifestyle change was a permanent move to healthier eating and engaging in regular exercise (Hindle & Carpenter, 2011; Metzgar et al., 2015). Interestingly, the women in the study by Metzgar et al. (2015) stated that integrating a portion-controlled sweet snack allowed them to alter thinking patterns around consuming snacks. They considered the introduction of snacks as necessary to weight loss and weight loss maintenance.

2.7.16 Social support and personal accountability. Accountability to others and having support from people in close proximity (friends, family, and co-workers) are emphasised as key facilitators in the weight loss and weight loss maintenance

journey (Metzgar et al., 2015). Conversely, lack of accountability and support were stated to be barriers to weight loss and weight loss maintenance. Metzgar et al. (2015) recommend that weight control programmes have an element of external accountability during both the weight loss and maintenance phases. Since high levels of support are needed, programmes should also assist the person to build social support networks.

Social support research and practice differentiates between structural and functional support (Verheijden, Bakx, Van Weel, Koelen, & Van Staveren, 2005). Whereas structural support refers to the availability of potential support-givers, functional support involves the perception of support. Weight loss interventions often target structural support – for example, through peer groups – but neglect to ensure that dieters experience functional support, even though this shows a stronger correlation with health (Verheijden et al., 2005).

Social support was identified in qualitative research as one of the most important factors in weight loss and weight loss maintenance (Gorin, Powers, Koestner, Wing, & Raynor, 2014; Verheijden et al., 2005). It did not however make a difference where the support came from – whether from family, co-workers, or support groups (Barnes et al., 2007; Elfhag & Rossner, 2005; Metzgar et al., 2015). Social support is not only a positive factor with regard to weight loss and weight loss maintenance; it can also be detrimental to the process (Metzgar et al., 2015; Tessaro, Rye, Parker, Trangsrud, Mangone, McCrone, & Leslie, 2006). This is because people who sabotage weight loss attempts are reported to be significant hindrances to implementing dietary and lifestyle changes (Befort et al., 2008; Hardcastle & Hagger, 2011; Hindle & Carpenter, 2011; Thomas et al., 2008). Social sabotage is related to negative self-monitoring outcomes (Burke et al., 2009).

Social support is crucially important to weight loss and weight loss maintenance because it provides enhanced motivation (Jeffery et al., 2000). External accountability is an important aspect of social support as it serves as an incentive for the maintenance of lifestyle, and provides support and motivation (Hardcastle & Hagger, 2011; Metzgar et al., 2015; Reyes et al., 2012). These studies (Green, Larkin, & Sullivan, 2009; Herriot et al., 2008; Reyes et al., 2012; Sciamanna et al., 2011) found that participants' motivation to sustain their altered lifestyle decreased

over time and that the accountability provided by external support systems reduced the chances of relapsing.

The social support of autonomy influences people's motivation for health-related behaviour change and contributes to sustained change by increasing autonomous self-regulation. Autonomous regulation, in turn, predicts greater initial and long-term weight loss (Gorin et al., 2014).

It is proposed that autonomous support encourages the development of self-directed, personally meaningful choice, by creating an environment that allows intrinsic motivation to flourish. Such support is provided when the feelings and unique perspective of the person attempting to lose weight are acknowledged by others. Professionals, friends, and family provide support through their use of neutral language, their refraining from excessive control and pressure, their provision of choices and options, and their provision of informational positive feedback.

Participants in a study by Gorin et al. (2014) report that despite good intentions, trained professionals and significant others may provide support in directive or controlling ways that undermine autonomous self-regulation. This interferes with initial weight loss and maintenance as the person attempting to lose weight blocks the internalisation of the behaviour change (Gorin et al., 2014). These results indicate that not all social support is beneficial, as it may be perceived as being controlling and as a significant barrier to weight loss.

2.7.17 Executive functioning. Raman et al. (2013) in their Clinical Obesity Maintenance Model propose that executive functioning is necessary for successful weight loss maintenance. Executive function is especially important for dealing with external temptations, which researchers have found to always be present, despite initial weight loss and a seven-year maintenance of weight loss (Sarlio-Lähteenkorva et al., 2000). Participants thus had to develop strategies to deal with cravings (Raman et al., 2013; Sarlio-Lähteenkorva, 2000). Social situations proved to be the most challenging for weight loss maintenance.

2.7.18 Gender. Gender was also an important factor in weight loss and weight loss maintenance. Women perceive that they have less ability than men to achieve and maintain weight loss (Metzgar et al., 2015; Williamson, Kahn, Remington, & Anda,

1990). Metzgar et al. (2015) suggest that since women face unique biological and physiological challenges to weight loss and weight loss maintenance, and desire to prevent weight gain across life transitions, weight management programmes should be tailored to a person's needs.

2.7.19 Primary vs. secondary weight maintainers. Little research has been done on primary weight maintainers; that is, people who manage to successfully maintain their weight within a normal BMI level (Reilly et al., 2015). Most research has focused on secondary weight maintainers; that is, people who managed to achieve and maintain weight loss. Although Reilly et al. (2015) state that much can be learnt from primary weight maintainers, there is no blanket approach. Their study indicates the complexity of weight loss maintenance, and identifies interesting differences between the groups in terms of attitudes, behaviours, strategies, resilience, emotional control, levels of family support/social support, and willpower. The consistent factor between the two groups was the desire to be slim.

Reilly et al. (2015) state that weight loss maintenance, due to the nature of society, and even for people who are considered to be primary weight maintainers, is no longer a passive process. Instead, maintaining a healthy weight requires constant cognitive attention. People currently function in an obesogenic environment, where they have to constantly pay attention to portion size, planning, organisation, planned regular exercise, and the organisation of healthy eating and regular exercise as priority areas of life. Reilly et al. (2015) assert that people who are lean constantly strive to maintain their weight. Therefore, weight loss maintenance is constructed as an ongoing process, whether a person is classified as overweight or obese.The study highlighted that balance was necessary to maintain weight loss. It was shown that people relaxed their control over their food choices at certain times or on certain occasions, such as weekends, or during the festive season, and were able to "row back" afterwards and to return to making healthier life choices, increase organisation and planning around food, and increase exercise. Weight loss maintenance is also influenced by various factors, including personal motivation, personal perceptions, and the home, work and environmental conditions (Reilly et al., 2015).

Interestingly, the primary weight maintainers in the research by Reilly et al. (2015) did not use scales to monitor their weight. They used the "waist band" measure; that

is, when the waist band of their clothes became tighter, they lowered their calorie intake or increased their exercise for a number of weeks until their clothes fit comfortably again. The participants in this group never allowed themselves to buy bigger clothes.

Motivation for remaining slim included health and vanity concerns, and wanting to be a good parental model. Being thin was an integral part of the participant's identity (Reilly et al., 2015). Themes that emerged from the qualitative study performed by Reilly et al. (2015) included willpower, emotional balance, regulation, emotional control, and resilience. Important tools to achieve weight loss maintenance was planning and organisation, which included shopping regularly to ensure a well-stocked food store, planning meals in advance, and restricting dining out to special occasions. Eating patterns were flexible in that during the week participants followed a strict dietary pattern, followed by a more relaxed eating pattern over the weekend. An important aspect of this flexible eating pattern was the acknowledgment that treats are vital. Family support systems were also good for weight maintenance. Healthy food choices were often automatic choices, and poor food choices were not selected often. Exercise, although also undertaken for health and weight benefits, was equally important for mental health and feeling good (Reilly et al., 2015).

Primary weight maintainers also had a good understanding of portion sizes and the nutrient value of their food (Reilly et al., 2015). Eating low fat foods was not a priority in this group. Secondary weight maintainers found that weight loss interventions should have a personalised approach, and acknowledged that overweight and obesity interventions cannot have a one-size-fits-all approach (Reilly et al., 2015). They found that support from friends and family were important motivators. In addition, participants in this group also increased the intensity and duration of exercise. Some participants found it easier to join support groups such as Weight Watchers while others found that they had to make the transition alone. This group viewed weight loss maintenance as an ongoing process that requires a lifetime commitment and effort, and that the participants had to discard their bad habits. Perseverance was identified as key to weight loss maintenance (Reilly et al., 2015).

The third group that was examined were unable to achieve and maintain weight loss, and was characterised by despondency (Reilly et al., 2015). Even though the group

was concerned with both health outcomes and vanity, they were not able to change their behaviours. Unlike primary maintainers, this group was likely to buy the next clothes size up instead of modifying eating patterns to remain within their usual weight range. Lifelong fluctuations in weight were commonplace. Secret eating and guilt eating featured across the participants' accounts. Planning around food was absent, and meals were often skipped or eaten later in the day. This resulted in excess hunger, followed by consuming more than necessary. A deficit in knowledge was not a reason for the participants' inability to maintain weight loss. They reported that they knew they ate too much and exercised too little. Among the participants, their weight was viewed as out of control (Reilly et al., 2015). They reported critical periods of weight gain related to pregnancy, marriage, and emotionally stressful life transitions, such as moving jobs or homes. Although weight loss is extremely important, it was not prioritised in reality. Participants in this group likened their relationship with food to an addiction. They described not only having difficulty in their eating patterns, but also within their lives (Reilly et al., 2015). They described their lives as lacking routine, and exercise as being an add-on, as opposed to an essential aspect of their lives. People in this group tended to follow fad diets in order to lose weight, in programmes that only allowed for the achievement of short-term weight loss (Reilly et al., 2015).

2.7.20 Summary of weight loss maintenance. In summary, despite the high prevalence of overweight and obesity, many people are able to maintain a healthy and stable weight.

A few qualitative studies have examined the facilitators and barriers to weight loss and weight loss maintenance (Barnes et al., 2007; Befort et al., 2008; Byrne et al., 2003; Green et al., 2009; Hardcastle & Hagger, 2011; Herriot et al., 2008; Hindle & Carpenter, 2011; Reyes et al., 2012; Thomas et al., 2008). However, little is known about people who are able to monitor and control their weight after incremental weight gains, and who avoid becoming overweight or obese (Teixeira et al., 2010). Additionally, little is understood about how 20% of people who lose a substantial amount of weight are able to maintain the lower weight, while others cannot. Some studies (e.g. Byrne et al., 2003; Elfhag & Rossner, 2005; Gorin et al., 2014; Hardcastle & Hagger, 2011; Hindle & Carpenter, 2011; Jeffery et al., 1984; Ohsiek & Williams, 2011; Sarlio-Lähteenkorva, 2000) have made considerable efforts to

examine these underlying mechanisms in order to explain how people who maintain weight loss differ from those who regain weight.

Qualitative studies (Herriot et al., 2008; Hindle & Carpenter, 2011; Metzgar et al., 2015; Reyes et al., 2012; Thomas et al., 2008) have shown that people undergo multiple weight loss attempts throughout their lives. Participants in these studies reported that certain points in their lives were particularly challenging with regard to weight maintenance, and that stressors related to life events resulted in weight regain. Motivations to lose weight are reported as the desire to improve appearance, self-esteem, and/or health (Barnes et al., 2007; Hindle & Carpenter, 2011; Reyes et al., 2012).

Social support is integral to weight loss and weight loss maintenance (Barnes et al., 2007; Elfhag & Rossner, 2005), while also being both a facilitator and a barrier to weight loss and weight loss maintenance (Befort et al., 2008; Hardcastle & Hagger, 2011; Hindle & Carpenter, 2011; Thomas et al., 2008). In contrast to the National Weight Registry (Wing & Phelan, 2005), people found that external accountability, as opposed to self-accountability, provided essential motivation for weight loss and maintenance efforts (Reyes et al., 2012). Nutritional knowledge, portion regulation, and exercise were identified as essential to weight loss and weight loss maintenance (Elfhag & Rossner, 2005; Metzgar et al., 2015; Sciamanna et al., 2011).

Elfhag and Rossner (2005) propose a model of successful weight loss maintenance in order to explain these variations. Ideally, the person loses weight early in the treatment and reaches their set weight loss goal. The person also engages in active leisure activities, and reduces the time spent in sedentary activities. They will continue to engage in weight monitoring activities, such as monitoring food intake and weighing in regularly, after the treatment phase is over. Food intake remains lower, and healthier foods and snacks are selected in preference to high-calorie snacks. Should a relapse occur a weight maintainer is able to deal with the relapse, without exaggerating it as a detrimental failure. Their eating plan is more flexible than rigid. The weight maintainer is in a more stable emotional state and their life circumstances are stable (Elfhag & Rossner, 2005).

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2.8 Conclusion

As demonstrated by this review of the literature on permanent treatments of overweight and obesity, no stand-alone treatment provides a complete solution to the overweight and obesity pandemic. Obesity treatments such as diet, exercise, and behavioural change are less effective on their own, and there is an increasing need to develop a more comprehensive model that targets the various facets of the obesity epidemic (Brownell & Wadden, 1986; Foreyt et al., 1971). This is evident in the increase in integrative models such as the socio-ecological model, and behavioural treatments being combined with counselling, nutrition education, and cognitive therapy. Bariatric surgery is also supported by psychotherapeutic preparation of the patient and the learning of behavioural strategies for the maintenance of weight.

This thesis explores the efficacy of strategies from an Integrative, Transactional Analysis, Non-Diet Programme view, and from the subjective perspective of participants in the treatment. The ITAND Programme was developed based on the research described in this literature review. The ITAND Programme is based on a TA framework, which also integrates nutrition education, exercise, behaviour profiling, behaviour modification, and cognitive modification. The focus of the research is the experience of intentional weight loss and the long-term maintenance of weight loss in women, following their participation in the ITAND Programme.

There is increasing recognition that overweight and obesity constitute a growing pandemic, resulting in a health problem on a global scale. In spite of the multitude of destructive consequences of overweight and obesity, research has failed to offer long-term solutions to these problems. While there has been an abundance of research focused on the causes of overweight and obesity, and on treatment interventions, the studies have been short-term and quantitative in design. There has been little qualitative research into models of treatment intervention and their effect on long-term weight loss. The long-term qualitative research that has been conducted is largely limited to a follow-up period of six months to two years. Some studies have a follow-up period of two to five years, with at least one study having a seven-year follow-up of weight loss maintenance and its association with a treatment modality (Sarlio-Lähteenkorva, 2000; Sarlio-Lähteenkorva et al., 2000).

In order to address the paucity of knowledge about the psychological and physiological processes that are associated with lifelong weight loss (>20 years), this study adopts a qualitative approach, informed by phenomenology, to explore the experience of lifelong weight loss and maintenance in women who participated in the ITAND Programme. The research questions guiding the exploration of the current research are the following:

1. What are the meanings, constructs, and strategies, derived from the ITAND Programme, which participants perceived as enabling their attainment of weight loss as well as the long-term maintenance of weight loss?

2. Which psychological, behavioural, and physiological processes are perceived as mediating lifelong weight loss?

3. Which cognitive-behavioural strategies and skills are perceived to mediate the maintenance of lifelong weight loss?

CHAPTER 3: THE ITAND PROGRAMME

3.1 Overview

Taking cognisance of the escalating global overweight and obesity epidemic with the associated severe health risks, there is a need for the development of innovative treatment interventions and for an understanding of the processes mediating successful weight loss maintenance enabled by new treatment models. The superfluous short-term-based quantitative research focusing on overweight and obesity treatment, and the absence of long-term qualitative research provides further motivation for the necessity of developing an integrative model for treatment and for conducting a qualitative long-term follow-up regarding the maintenance of weight loss and the constructs perceived as mediating the successful treatment of overweight and obesity.

The current research constitutes a qualitative study regarding the maintenance of weight loss and the constructs mediating success of an integrative, transactional analysis non-diet (ITAND) model. The research may add considerable value to the identification and understanding of the psychological as well as the physiological processes which mediate lifelong weight loss maintenance.

The aim of this study is to identify, explore and examine the weight narratives of women who had successfully lost a significant percentage of their weight (≥20%) and maintained the weight loss for over 20 years through participating in the ITAND Programme.

The ITAND Programme was previously known as the Weight-Winners Programme. I developed and introduced the Weight-Winners (ITAND Programme) in South Africa in 1989.

3.2 My personal narrative

In order to contextualise this study it is important to provide a description of the ITAND Programme. Since the development of the ITAND Programme is pivotally

connected to my personal journey with food, my body, overweight and my attainment of permanent weight loss, it is appropriate to begin by sharing my personal narrative.

For as far back as I can recall I considered myself to be on the “overweight” side of the fat-thin continuum. I reached puberty at age 13 feeling uncomfortable and distressed about my body. I was consumed with negative “self-talk” regarding my appearance, which affected my self-perception, self-projection and along with it every relationship I was engaged in. Thoughts of being overweight dominated my thinking and I knew I had to do something to lose weight. At the age of 14 carrying 72 kilograms on my 1,60 m frame, I went on my first diet.

At the time, dieting seemed the only way accessible to me which would help me lose weight. My first diet was randomly chosen from an array of commercial diets and the absurdity of both the name, ‘The Drinking Man’s Diet’ and the special allowance of alcohol included did not occur to me at the time!

I lost weight while I followed the diet and felt delighted as I began to shed some unwanted kilograms. I felt “lighter”, my outlook on life improved and I began to feel my confidence improving. However, after three months on the diet I developed difficulty following the diet. The problem I had was that I became preoccupied with and developed cravings for the food I was not permitted to eat on the diet. I felt like I was fighting an internal tug-of-war. One part of me was screaming “I want ice cream” (and all the other forbidden foods), while another part of me was attempting to stop the screaming “part” by shouting it down, “You can’t have an ice cream because you are fat!”. Eventually the screaming childlike voice won over the autocratic, controlling voice, and I began eating all the foods which were disallowed on the diet. I ate even more than I did before the diet because I felt so deprived by the food on the diet and I was terrified I would be deprived of these foods again. Painfully, I regained all the weight I had lost and went on to gain even a few extra kilograms. I felt like a failure and knew my failing was evident for everyone to see. I felt totally exposed. I was now the heaviest I had ever been and at 75 kilograms I felt absolutely desperate about my eating , my body and my weight .

Following several attempts at an array of other diets obtained through diet books, which all resulted in failure after failure and continual weight cycling, a family friend suggested that I seek professional help and consult with a dietician. Her suggestion

was based mainly on feeling that I needed a personalised eating plan and regular individually based professional assistance which would serve the dual purpose of constant guidance as well as focused monitoring to make sure I did not deviate from the agreed prescription. I left the dietician consultation with a restrictive eating plan in which almost all the foods I enjoyed were removed or offered in very restricted quantities. I really did my best to follow this diet but from the start began to feel preoccupied with food. I ruminated over the food I wanted but wasn't allowed, felt hungrier than ever before and always deprived in social eating situations. However, I realised I was privileged to have professional help and used all the "willpower" I could harness to remain committed to both the diet and my weekly consultations with the dietician. When I had lapses in my willpower and ate incorrectly the weekly session would help to put me back on track. I remained on diet for four months and lost 9 kgs, by which time the dietician felt she could start reintroducing some previously forbidden foods as substitutes to deal with my "forbidden food" cravings.

This approach just heralded back in my increasing need to compensate myself for having been deprived of these foods – I overate continuously. I began to slowly regain the weight I had lost. With each kilogram I regained my despondency increased and in response I ate even more. I felt stuck in a vicious cycle – a cycle I later named the "Diet Destructive Cycle". As I steadily regained weight to reach 78 kgs I felt more desperate than ever before. At this stage I persuaded my mother, who was most resistant to the idea, to take me to a medical physician who specialised in pharmacological treatment. He prescribed an "appetite suppressing" medication which he promised would help me lose weight by altering my appetite. I believed I now I had my "miracle cure". However the medication caused side-effects and after noticing that it was seriously affecting my mood, resulting in me becoming disorientated, my mother insisted on me terminating the treatment.

A school friend suggested that I should try another diet, a moderate sensible diet, which both she and her mother were doing and which really "worked". With renewed enthusiasm I enrolled on this programme which provided a "balanced" rather than extreme approach to weight loss. I recall standing in "weighing-in" queues week after week, waiting my turn to be weighed and being applauded for losing weight and felt totally ashamed in the weeks I did not lose weight. The endless hours of preoccupation with purchasing and preparing my food as well as having to weigh

and measure the food drove my family mad and was not a suitable eating lifestyle for a teenager. Eventually I abandoned that attempt too.

By the time I was 18, I had been on more diets than I care to recall and continued the repetitive cycle of losing weight while I harnessed sufficient “willpower” to “stick to” the diet, and the regaining of all the weight I had initially lost, and often a few kilograms more (due to my overeating of every food I felt deprived of while following the diet). During my matric year I began to question what it was that kept me locked in a cycle of defeat in the area of managing my weight. I asked myself how I could be successful in the other areas of my life and yet fail with managing my weight. Was there something that I was doing differently in those areas of my life in which I succeeded which I was not applying to my food, weight and my body?

In the process of my self-reflection I reached the insight that in every area of life in which I was successful I put “myself” in charge. I took personal responsibility for my decisions, functioning and conduct. My locus of control was internal. I listened to the views of other people, reflected on them, understood them, digested them, but in the final analysis I reached my own decisions. The only area of my life in which I had totally given away responsibility for my decisions and behaviour was in regard to food and eating. When it came to my personal nutrition, I had come to rely on the dictates of an external authority and had believed that a diet plan or diet physician knew better than I did, when it was appropriate for me to eat, what I should eat at a prescribed time as well as the quantities which I should eat.

As I sat with this insight, my realisation regarding the ineffectiveness of diets as a weight loss method, and the irrationality of what I was doing, became increasingly evident. How had I regarded someone else, whom I often randomly selected, as knowing better than myself when, what and how much to eat? The answer I arrived at was that the reliance on an external authority would never work for me in winning my battle with food and my weight. I knew with clarity I had to learn to work out the answers for myself. I needed to take back control of my decision making in relation to food and nourishing myself. This would mean I would have to stop dieting. I understood that taking the decision not to diet would not be easy and that it would be a journey during which there would be much to discover for myself.

This insight was coincidentally timed with my co-occurring experience of becoming physically ill and having to be hospitalised for several surgical procedures within the time span of five months. While in hospital, I became aware that I often did not feel like eating, and that I had the ability to follow the needs of my body and could reject food when I did not feel like eating. This was the first time I became aware of my body in relation to food and eating, and I began to identify my unique hunger and satiation signals. Armed with insight regarding my locus of control, as well as my insight into the experiential workings of my body, I made the decision on my recovery to take personal responsibility for my weight and to stop dieting. The only directive I gave myself was to "focus inward" and to eat in response to hunger and to be aware of my own physiological cues. I would also select what I ate by problem-solving around food in the same way as I made other decisions in my life. Within six months I lost 20 kilograms. Most importantly, during this time I was responsible for directing my eating and I had developed a normal relationship with all food.

3.3 My clinical experience

Following graduation from secondary school, I studied for a Bachelors of Arts Degree and following that an Honours and a Master's degree in Psychology. In 1984 I registered with the Professional Board as a counselling psychologist and started a private primary care practice, specialising in working with people who had weight problems. During this time I discovered that weight was a primary issue in governing the way a person felt about him- or herself. Overweight and obesity had a negative effect on my patients' self-esteem. In affecting the way they felt about themselves, it affected the way they projected themselves, and in affecting self-projection, it affected every relationship that they were engaged in. So overweight was not simply accompanying dysthymia and depression, but overweight in fact was a major causative factor in my patients' development of depression. I also discovered with many patients the causes for being overweight were actually not always psychodynamic but instead cognitive and behavioural. In many instances the causes for overeating were easy to identify, unravel and understand. This was a significant insight for me and influenced my thinking in writing the ITAND Programme. My approach to therapy was integrative. In addition to my psychodynamic orientation, I employed a transactional analysis and cognitive-behavioural therapeutic orientation

which led me to reach an insight which I believed could contribute to a “paradigm shift” for the treatment of overweight and obesity.

Through a counselling process with many overweight and obese patients, I discovered that their destructive relationship with food, their weight and their bodies was attributable to four major factors – all of which were underpinned by the “diet mentality”, that is, a mind-set generated by prescriptive, restrictive eating plans and schedules.

- The first factor was that diets, and the associated behaviours, alienated my patients from their own physiological functioning. More specifically, it alienated them from their physiological cues regarding hunger and satiety. The loss of ability to identify hunger was critical in causing, maintaining and escalating my patients’ struggle with food, weight and their bodies. While I uncovered that many patients had lost touch with their physiological cues of hunger and satiation through family eating scripts and/or more complex emotions associated with life events, diets served to overlook this alienation, thereby exacerbating the very issue which required focus in order to regain personal comfort with food, weight and their bodies. My patients required physiological awareness coaching which focused on learning hunger satiation awareness in order to lose weight and develop a comfortable relationship with food and their bodies.

- The second contributing factor to the destructive relationship patients had with food, their weight and their bodies, was that diets and the associated behaviours had resulted in my patients externalising their locus of control in the belief that an external authority, such as a dietician or weight physician, would provide the answer to their struggle with food, weight and their bodies. My patients needed to be coached in internalising their locus of control regarding food and eating in order to restore the physiological and emotional integration essential to permanent weight loss. My patients needed to learn that they were able to determine for themselves when to eat as well as to decide what to eat and how much to eat through remaining in touch with their relearned awareness.

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- The third factor was that diets physiologically disempowered my patients and resulted in their believing that they had insufficient adult capacity to make their own food decisions and choices. This further alienated them from their core physiology, and reintroducing all food back into my patients' lives through coaching became essential. They needed to be assisted in recognising that they could behave normally around all food.

- The fourth, and possibly most significant destructive feature of diets, derives from my insight that the psychological foundation on which diets are based is incompatible with personality integration. The psychological foundation stone of diets is the concept of "willpower". "Willpower" I realised through inductive reasoning and my application of TA, is in fact the "power of the will" of the "Critical Parent" (CP) ego state over the "Child Ego State" and the will of the rebellious "child". While the Parent ego state was "in control" my patients would lose weight on their diet, but invariably the imposition of "willpower" resulted in the escalation of resentment and defiance in the Child ego state, causing the "Child" ego state to become rebellious and defiant. This dynamic resulted in the "Child" ego state overthrowing and defeating the "Parent" ego state at some stage in every diet. With the rebellious "child" in control the diet is overthrown and defiant compensatory eating for the imposed deprivation follows. This invariably results in regaining the weight which was lost in the initial stage of the diet in which the "Parent" ego state dominated. I discovered for myself and my patients that only by giving up dieting, empowering the "Adult" ego state, and re-contracting between the "Parent" ego state and the "Child" ego state, would he or she never again have autocratic restraint imposed and never be forced again to endure feelings of continued deprivation, and would desired weight loss be attained as well as maintained. I also uncovered that nutrition education, exercise education and the learning of psychological strategies, including problem-solving skills which enhanced the Adult ego state, were essential in attaining weight loss goals which were sustainable.

My unique application of psychologically integrative counselling, as well as transactional analysis, in assisting my patients to achieve sustained weight loss, and simultaneously regain personality integration, improved mood as well as

psychosocial functioning, provided the theoretical framework for the ITAND approach on which this study is based.

3.4 My synthesis of research studies

Armed with my personal and clinical experience, I applied myself in 1989 to researching the field of weight management with the goal of writing a weight loss programme. From the published academic research I extrapolated the theoretical constructs and principles which were demonstrated as positively contributing to the development of the treatment of overweight and obesity. Research findings for the ITAND Programme were derived from the fields of Transactional Analysis theory, cognitive modification theory, behaviour modification theory, mindfulness practice, motivational theory, psychodynamic theory, neuroscience, nutrition education and exercise physiology. The development of the ITAND Programme was thus based on the integration of clinical research findings from the field of weight management.

The ITAND Programme comprised eight modules and extended over eight weeks with two-hourly sessions provided once a week. Since the programme was systematised I was able to train a clinical associate team of psychologists and medical practitioners to run the programme with me. The non-diet orientation of the programme resulted in it being an enormous success as women were freed from diets and were taught to develop a normal relationship with ALL food. A central tenet of the programme was that no food was forbidden and that locus of control in regard to food and weight became internalised. Participants on the ITAND Programme lost significant amounts of weight and experienced positive change in their relationship with food and their bodies. During the years 1990-1993, my associate team and I took thousands of women through the ITAND Programme. I stopped running the programme in 1993 owing to the premature, tragic death of my beloved husband, Jeremy.

I have been approached many times over the years by people wanting to do the programme because they knew someone who had significantly benefited from the programme. I have also received many commercial propositions for re-launching the programme over the years since I stopped offering the programme. I have not reintroduced the programme because I have been developing a fulfilling career in corporate wellness over the years following termination of the programme. However,

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I have maintained a goal of introducing the ITAND through academia, thereby enabling the methodology to be utilised as a stand-alone or complementary treatment for weight management, and thereby contributing to professional knowledge.

This PhD research brings to fruition my life goal of enabling a contribution to the treatment of overweight and obesity. This study aims to examine and understand the meaning of the ITAND Programme in the participants' journey with food, weight and their bodies as well as in the attainment of lifelong weight loss maintenance. In order to enable an understanding of the theoretical foundation of this study, it is important to provide an overview of the ITAND Programme.

3.5 ITAND Programme overview

The ITAND Programme comprised a systematised and modulised eight-week programme.

3.5.1 Session 1. The first session was 2-3 hours and focused on the following topics:

- Deconstruction of diets
- Understanding why "willpower" is unsustainable
- Strategy for reintroduction of ALL food
- Introduction of Transactional Analysis
- Understanding the ego states
- Recognising the "internal dialogue"
- Cognitive restructuring using Transactional Analysis
- Restructuring frequent cognitive distortions
- Empowering the Adult ego state
- Re-decision work and re-contracting between the Parent ego state and the Child ego state

- Addressing the internalisation of locus of control
- Enabling awareness of causes for overeating
- Eating “drivers” and “scripts”
- Goal setting
- Introduction of concepts of visualisation in regard to goal accomplishment
- Motivation and goal orientation

Session 1 – Homework

- Self-monitoring of internal dialogue
- Awareness of eating triggers – daily diary eating charts
- Practice of visualisation using the ITAND visualisation cassette

3.5.2 Session 2. The second session was 2-3 hours and comprised the following:

- Reviewing and enabling awareness of original causes for overweight and obesity
- “Working through” the psychodynamics of original causes for overweight and obesity
- Identification of current eating triggers through analysis of daily eating diary charts
- Introduction of concepts of Intuitive Eating
- Development of personal hunger gauge
- Training the identification of hunger and satiation
- Further enablement regarding re-introduction of all food through use of Transactional Analysis and hunger awareness
- Visualisation exercise for overcoming emotional eating
- Motivation, personal responsibility and proactivity for goal attainment

Session 2 – Homework

- Hunger and satiation awareness exercise
- Practice visualisation and reinforcement of goal attainment

3.5.3 Session 3. Comprised a 2-hour session focused on the following topics:

- Behaviour modification of eating through structured and guided participation in a meal eaten with all members of the group
- Implementation of intuitive eating
- Implementation of sensory focus
- Cognitive-behaviour modification of eating through participation in a facilitated group meal

3.5.4 Session 4. Comprised a 2-hour session focused on:

- Learning to “re-parent” the inner Child without restricting food
- Parenting styles
- Empowerment of Adult ego state through:
    - Active listening
    - Constructive confrontation
    - Assertiveness skills
    - Problem solving
    - Action planning
    - Re-contracting and re-decision work between the Child ego state and Parent ego state, facilitated by the Adult ego state
    - Development of Adult ego state decision-making processes through design of personal decision-making flow-chart
    - Motivation – exploration of concepts of commitment versus wanting

Session 4 – Homework

- Operationalising a healthier style of parenting the Child ego state through Adult ego state guiding and assisting with setting limits
- Operationalising personal flow-chart
- Completion of exercise physiology questionnaire for exercise physiology – session 5

3.5.5 Session 5. A 2-hour session facilitated by an exercise physiologist, addressing:

- Exercise education – the relevance of exercise for weight loss and maintenance
- Identification of exercise resistance in the “Child” ego state
- Debriefing of exercise resistance
- Identification of internal power struggle between Parent ego state and Child ego state
- Empowering the Adult and Nurturing Parent ego states
- Cognitive distortions and cognitive restructuring
- Group participative movement exercise to assist in overcoming exercise resistance
- Exercise re-contracting and re-decision work with the Child ego state
- Development of exercise action plan

Session 5 – Homework exercises

- Practise implementation of learnings from session
- Operationalise exercise action plan

3.5.6 Session 6. A 2-hour session focused on:

- Deconstructing emotional eating

- Understanding emotions
- Identifying the four primary emotions
- Expression of emotions
    - Intra-psychically
    - Interpersonally
- Communicating feelings
- Dealing with “unfinished business”

3.5.7 Session 7. Comprised a 2-hour session addressing:

- Nutrition education
- The energy equation and weight loss
- Nutritional conceptual framework of the nutritional “Tree of Life”
- Making healthy nutritional choices from Adult ego state
- Reinforcement of normalisation of ALL food
- Mediating between “Child ” ego state and “Critical Parent ” ego state in regard to food choices
- Exercising choice
- Operationalising hunger and satiation

3.5.8 Session 8. A 2-hour session focused on:

- Understanding the mind-body connection
- The power of the mind in attainment of weight loss goals
    - Scripts
    - Self-fulfilling prophecy
    - Positive psychology

- Re-writing of personal “script”
    - Cognitive restructuring process
- Mental rehearsal as maintenance strategy
- Body concept and self-esteem enhancement
    - Mirror work
    - Affirmative self-talk
- Understanding ITAND as a process comprised of stages which are often interconnected and not necessarily sequential in the integration into “self”
- Concept of maintenance process involving transition from conscious awareness to unconscious awareness attained through the ongoing implementation of processes, strategies and skills acquired

The ITAND Programme concluded with allowing participants to provide feedback concerning their experiences of the programme and with an opportunity for the counsellor and all participants to acknowledge each other.

CHAPTER 4: METHODOLOGY

4.1 Introduction

This study is positioned as the only non-diet-based weight loss maintenance study with a follow-up period of 20-25 years. Data was obtained through participants' written narratives of their journeys with food, eating, body image, and weight. Semi-structured interviews were used as an adjunct to the written narratives to further the exploration of meanings, probe for more information, as well as to clarify the constructs and processes described. Qualitative research methodology was used to enable the collection of the richest data reflecting both experiential and meaning systems of participants. The utilisation of qualitative methodology made it possible to access the rich detail of the participant narratives and interviews, and enabled an enquiry into the psychological processes mediating weight loss and lifelong weight loss maintenance following participation in the ITAND Programme. Interpretative phenomenological analysis and narrative methodology were applied to the analysis of the data.

4.2 Qualitative versus quantitative methodology

The particular epistemological base of qualitative methodology makes it appropriate for this particular study. When selecting quantitative and qualitative methodology the question is not the method or technique, which refers to how the data is gathered, but the methodology, which refers to a particular epistemological position (Bryman, 1984; Eatough & Smith, 2008; Smith & Eatough, 2008; Smith & Osborne, 2008). Quantitative methodology is viewed as originating from natural science and thus a positivistic tradition. It is concerned with concepts such as objectivity, operational definitions, replicability, and causality (Bryman, 1984; Eatough & Smith, 2008; Smith & Eatough, 2008; Smith & Osborne, 2008). Since this study is an enquiry into the weight loss maintenance experiences of participants who had attended the ITAND Programme, with a follow-up period of 20-25 years, the analysis and understanding obtained required a qualitative individualistic approach.

Research in the field of overweight and obesity has predominantly focused on quantitative methodologies (Sarlio-Lähteenkorva, 2000). There is a paucity of research focusing on factors related to weight loss maintenance and relapse, and in particular the psychological factors mediating change (Annesi & Mareno, 2015). In this thesis I focus on examining qualitative research which is directed at an exploration of the psychological and physiological mediators enabling weight loss and long-term weight loss maintenance (Hindle & Carpenter, 2011). There have been only a few studies examining the facilitators and barriers to weight loss and weight loss maintenance obtained from the perspective of a person who engages in diets and/or seeks long-term weight loss maintenance (Metzgar et al., 2015). Qualitative research is especially suitable when examining variables with an outcome that is poorly understood and/or unclear, which makes it ideal for obtaining detailed information essential to generate hypotheses about the psychological factors associated with weight loss maintenance (Byrne et al., 2003).

Operationalising overweight or obesity also proves problematic, as people who may not empirically be classified as overweight or obese may still qualitatively identify as being overweight. It is possible for people who do not meet the criteria for overweight and/or obesity defined by the BMI, body fat percentage and abdominal circumference, to self-identify as being overweight and/or obese. Since obesity is considered an illness that is embedded within a societal discourse, self-identification should also be recognised in research (Conrad & Barker, 2010). The self-identification of overweight and obesity rests on the notion that people know what constitutes “normal” weight (Conrad & Barker, 2010). Quantitative methodology views the world from the outside in and takes an empirical point of view; it is generally imposed upon a social reality with little or no reference to the subjective point of view (Bryman, 1984; Eatough & Smith, 2008; Smith & Eatough, 2008; Smith & Osborne, 2008). Therefore, it is more useful for the sake of this research to examine the subjective definitions of overweight.

Qualitative methodology is concerned with the experience of the participants and obtaining their world view from a phenomenological perspective. It is also focused on the contextual meaning systems utilised by a particular set of people or society (Bryman, 1984; Eatough & Smith, 2008; Smith & Eatough, 2008; Smith & Osborne, 2008). Qualitative methodology is considered to be more fluid and concerned with

finding novel discoveries, and as a result may change direction according to findings. This may be contrasted with quantitative methodology, which has a fixed method and hypotheses, and less field work involvement. Qualitative research produces so-called “rich” data (Bryman, 1984; Eatough & Smith, 2008; Smith & Eatough, 2008; Smith & Osborne, 2008), which allows for the documentation of the narratives of overweight or obese women who have participated in an anti-diet programme and maintained long-term weight loss for a period of more than 20 years – something which has previously not been examined. As a result, this study does not seek generalisability but aims to provide insight into the factors perceived by the participants as mediating their weight loss and weight loss maintenance. It is also invaluable to learn about successful weight loss maintenance by utilising the knowledge and experiences of people who have managed to successfully maintain weight loss themselves (Sarlio-Lähteenkorva, 2000).

Qualitative research can be said to be more sensitive to complex social phenomena than quantitative methods (Bryman, 1984; Eatough & Smith, 2008; Smith & Eatough, 2008; Smith & Osborne, 2008). As a result of this, it is a much-preferred method of analysis for this study. While there have been copious numbers of studies that have examined the efficacy of weight loss programmes (such as diet, exercise, counselling etc.), there have been very few long-term weight loss maintenance studies, and even fewer qualitative studies on weight loss and weight loss maintenance. Of the quantitative studies, few have managed to offer an explanation of why weight loss maintenance presents such a challenge in the obesity epidemic. This qualitatively based study, while not able to offer statistically reliable and generalisable data, offers a detailed examination into weight loss maintenance after a period of 20-25 years. Quantitative methodology conducted over a 20-25-year time frame would fail to access the richness of the data available from participants who had participated in the ITAND Programme and maintained their weight loss over a long-term period of 20-25 years.

4.3 Qualitative methodology

This study utilised a qualitative research methodology, specifically, Interpretive Phenomenological Analysis (IPA) and narrative analysis. Both narrative analysis and IPA originate from the post-structuralist and post-modern traditions, which

demonstrate an interest in language and how it informs social processes. Both forms of analysis are premised within social-constructionist assumptions (Crossley, 2000; Griffin & May, 2012). Methodology with a social-constructionist foundation is more concerned with how linguistic practices shape the way in which people make sense of their everyday lives, past experiences, and conceptions of self and others (Crossley, 2000). Both IPA and narrative analysis have critical realist psychological underpinnings, which state that human experiences, knowledge and feelings can be accessed through the application of certain methodologies (Augustinous & Walker, 1995; Crossley, 2000). Critical realism states that while there are many subjective realities, there are enduring and stable features that exist externally to human conceptualisation (Bhaskar, 2013).

The narrative tradition of qualitative inquiry was chosen because of its ability to provide a detailed understanding of a complex problem (Creswell, 2007). Narrative inquiry provides the potential to produce rich data as well as explore feelings and beliefs found in the detailed stories and life experiences that are found in a single or multiple episodes of the life of a person or a small group of people (Creswell, 2007). The richness of data sought in this study will emanate from an exploration of the subjective realities of each of the participants and the context through which they make sense of their weight loss maintenance achievements.

Narrative research maintains the view that human life can be structured within a narrative format, and humans phenomenologically experience and orient to time (Crossley, 2000). In this context the term “narrative” is used interchangeably with the term “story”, and is defined as a form of expression that follows a clear sequence and that relates events in a meaningful way (Bingley, Thomas, Brown, Reeve, & Payne, 2008). Narratives usually have an identifiable beginning, middle and end, and can be present even in a single sentence. They can be written, told verbally, and can be expressed through music and art (Bingley et al., 2008). Narrative research holds that past experiences are projected forward and backward, in order to construct a sense of meaning, coherence, and a sense of identity. It has been argued that when people construct traumatic experiences, such as life-threatening illness, in a narrative format these narratives serve to restore a sense of order and meaning (Crossley, 2000; Labov & Waletzky, 1997). Overweight and obesity can be considered to be both a challenging life experience as well as a serious health

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threat; therefore narrative analysis is an excellent tool for understanding the participants' experiences. In addition, the analysis of narratives can examine how participants account for events, and construct their story as "worth telling" and believable (Squire, 2005). This is important to keep in mind, that participants do not just report a story as a factual account, but orientate to larger societal discourses and facets of the story that make their story "worth telling" and believable (Bingley et al., 2008; Squire, 2005).

Narrative analysis also allows for the examination of how the participant positions him- or herself in relation to the audience (in this case, me as the researcher), how they position themselves within the experience, and how they position "themselves in relation to themselves" (Bamberg, 1997, p. 337). This is due to the fact that narrators are inherently socially positioned (Sandelowski, 1991). It is important to remember that the participant is writing an account intended for me to read and analyse. Knowledge of the fact that I am the researcher and am also positioned as the author of the ITAND Programme, may influence the participants' writing of the narratives. In essence, narrative analysis is an innovative and rigorous qualitative approach dedicated to improving the understanding of the experiences of individuals and cultures (Bingley et al., 2008). Research using narrative analysis has the potential to inform and advance health care policy and practice (Bingley et al., 2008).

Interpretive Phenomenological Analysis (IPA) is a research method that has a psychological interest in how people make sense of their experiences. In particular, this study makes use of an ideographic case-study approach to IPA, which is utilised for the exploration and development of in-depth themes (Smith & Osborne, 2008). This is done by collecting and analysing in-depth, retrospective first-person accounts (Larkin & Thompson, 2012). Successful use of IPA achieves a balance between a phenomenological element on the one hand, which is dedicated to providing a "voice" for the preoccupations of the participant and is concerned with the lived experience of the participant, and an interpretive element on the other, which places the narratives into a psychological context (Larkin, Watts, & Clifton, 2006). This is especially important to this study, which wishes to place the participants' accounts within the structure of the ITAND Programme and examine the psychological processes though which weight loss and lifelong weight loss maintenance were achieved. While "giving voice" (Larkin & Thompson, 2012, p. 101) to the concerns

and experiences of the participant, it also allows for a “making sense of” (Larkin & Thompson, 2012, p. 101) their narratives and interviews to be placed within the context of the ITAND Programme.

Interpretive Phenomenological Analysis acknowledges that the process by which the account is created by the participant is that of intersubjective meaning-making between the participant and the researcher, who is myself (Larkin & Thompson, 2012; Smith & Osborne, 2008); thus, it is not “objective knowledge” of the experience that is sought, but the participant’s perception thereof (Smith & Eatough, 2008). IPA understands that the experience cannot be directly accessed during the interview or in written narratives, and that it remains an account that is being co-constructed by both the participant and the researcher (Larkin et al., 2006; Silverman, 2004). It is therefore important for me to be aware of and reflect on my own subjective experiences and knowledge that may be influencing the interview, and to remain cognisant that my presence as audience for which the narrative is written may influence the content of the narrative (Larkin & Thompson, 2012).

The selection of both IPA and narrative analysis allows for a multilevel examination of the subject matter. Both IPA and narrative analysis are concerned with the “lived experience” or personal experience of the participant. Narrative analysis provides an element of understanding how participants make meaning out of their experiences, in terms of how participants make their experiences meaningful and coherent, and how they contribute to their sense of identity (Crossley, 2000; Labov & Waletzky, 1997). It adds a sense of temporality to their accounts and describes how past experiences with their weight and the ITAND Programme have shaped their current identity (Labov & Waletzky, 1997). IPA allows for “giving voice” to the participant’s experiences, while situating the accounts within the context of the ITAND Programme as well as to other psychological contexts related to weight. Densin and Lincoln (1994, as cited by Sarlio-Lähteenkorva 2000) argue that while no single method of analysis can fully capture the complexities and variation of human experience, an amalgamation of different methods allows for a better understanding of phenomena to be reached.

4.4 Sample selection

This study utilised purposive sampling. Participants were identified through suggestions from associate psychologists who had facilitated the programme, and by myself. I approached all the participants telephonically to request their participation and offered an explanation of the purpose of the study. Ten participants were approached and 8 agreed to participate. I explained that for the purpose of my research, which aimed to explore and examine the constructs and processes from the ITAND Programme which were perceived by participants as having made a meaningful contribution to their long-term maintenance of weight loss, I would require them to free-write their narrative of their journey with food, weight, and their bodies, before and during their participation on the ITAND Programme, and also in the 20-25 years following that. I also explained that the writing of their narratives would be followed up with a telephonic interview, which I would personally conduct in order to provide an opportunity for further exploration as well as clarification on their written narratives. The telephonic briefing of participants was followed up with the sending of a letter of confirmation outlining the procedural requirements of their participation in this research (see Appendix A – Letter of confirmation).

4.4.1 Participants. This section presents a profile of each participant, reflecting their biographical information in regard to their weight history (see Appendix C – Biographical Form).

All the participants maintained a loss of between 8% and 22% of their initial weight, which is considered as their weight prior to participating in the ITAND Programme. Research identifies 5% weight loss as being both clinically significant and resulting in health benefits such as improved management of diabetes and reduced cardiovascular disease risks (Franz, Van Wormer, Crain, Boucher, Histon, Caplan, & Pronk, 2007). Table 4.1 reflects the profiles of the participants' biographical information, including initial weight loss during the 8-week ITAND Programme, total weight loss maintained, and initial and current BMI. Data that participants could not recall is represented by '-':

Table 4.1

Participant profiles

Participant	Initial weight loss (kg)	Weight loss maintenance (kg)	% weight loss	Initial BMI	Current BMI
Caroline	5	20	31.0	34.7	23.92
Lesley	10	17	20.2	27.8	22.65
Brenda	8	20	27.4	25.8	18.60
Kate	-	20	20.2	39.6	32.04
Kelly	8	10.5	15.9	25.6	21.30
Linda	5	-	8.3	22.4	20.45
Ruth	14	28	32.6	32.5	21.90
Alice	-	19	26.2	28.6	22.38

4.4.1.1 Participant 1: The profile of Caroline. Caroline attended the ITAND Programme in 1991, which allows for a 24-year follow-up. Her age was 25 at the time of participation and she is now 49 years old. When she participated in the programme she weighed 90 kg, her height was 1.61 m, and her BMI 34.7. During her participation in the ITAND Programme, she achieved an initial weight loss of 5 kg, which represents a 5.6% reduction in initial weight. In the 24 years following the programme, she lost a further 23 kgs, with a resultant weight loss maintenance of a total of 28 kg. Her current weight is 62 kg and her current BMI is 23.9, reflecting her lifelong maintenance of a 31% loss in weight over 24 years.

4.4.1.2 Participant 2: The profile of Lesley. Lesley attended the ITAND Programme in 1991, which allows for a 24-year follow-up period. Her age was 42 at the time of participation and she is now 66 years old. When she participated in the programme she weighed 84 kg, with a height of 1.72 m, and a BMI of 27.8. She achieved an initial weight loss of 10 kg during the eight-week ITAND Programme, which represents an 11.9% reduction in initial weight. To date, she has lost a total of 17 kg (10kg in the programme and 7kg in the subsequent years). Her current weight

is 67 kg and her current BMI is 22.2, reflecting her lifelong maintenance of a 20.2% loss in weight over 24 years.

4.4.1.3 Participant 3: The profile of Kate. Kate attended the ITAND Programme in 1991, which allows for a 24-year follow-up. Her age was 30 years at the time of participation and she is now 54 years old. When she participated in the programme she weighed 99 kg, had a height of 1.58 m, and a BMI of 39.6. She achieved a weight loss of 20 kg in the years after participating in the programme. Her current weight is 79 kg and her current BMI is 31.6, reflecting her lifelong maintenance of a 20.2% loss in weight over 24 years.

4.4.1.4 Participant 4: The profile of Brenda. Brenda attended the ITAND Programme in 1992 and 1993, which allows for a 22-year follow up. Her age was 36 years at the time of participation and she is now 58 years old. When she participated in the programme she weighed 72 kg, had a height of 1.67 m, and a BMI of 25.8. She achieved an initial weight loss of 8 kg during the eight-week ITAND Programme, which represents an 11.1% reduction in initial weight. She continued to lose a further 11.7 kg in the years following her participation in the programme. Her current weight is 52.3 kg and her current BMI is 18.6, reflecting a new lifelong maintenance of a 27.4% loss in weight over 22 years.

4.4.1.5 Participant 5: The profile of Alice. Alice attended the ITAND Programme in 1993, which allows for a 22-year follow up. Her age was 29 years at the time of participation and she is now 51 years old. When she participated in the programme she weighed 73 kg, had a height of 1.6 m, and a BMI of 28.2. She achieved an initial weight loss of 15 kg during the eight-week ITAND Programme, which represents 20.5% reduction in initial weight. Her current weight remains at 58 kg and her current BMI is 22.4, reflecting a lifelong maintenance of a 20.5% loss in weight over 22 years.

4.4.1.6 Participant 6: The profile of Linda. Linda attended the ITAND Programme in 1991, which allows for a 25-year follow up. Her age was 18 years at the time of participation and she is now 43 years old. When she participated in the programme she weighed 60 kg, had a height of 1.64 m, and a BMI of 22.4. She achieved an initial weight loss of 5 kg during the eight-week ITAND Programme, which represents an 8.3% reduction in initial weight. Her current weight remains at 55 kg and her

current BMI is 20.5, reflecting the lifelong maintenance of an 8.3% loss in weight over 25 years. Although Linda was not classified as overweight by her BMI, she met the criteria for binge-eating disorder and was experiencing significant discomfort with her weight and body.

4.4.1.7 Participant 7: The profile of Kelly. On commencing the ITAND Programme Kelly's BMI was 25.56. Through her participation in the programme Kelly attained a BMI of 21.30, reflecting a 15.9 % weight loss maintenance for a period exceeding 20 years.

4.4.1.8 Participant 8: The profile of Ruth. On commencing the ITAND Programme, Ruth had a BMI of 32.50. Through her implementation of the Programme, Ruth attained a BMI of 21.90, reflecting a 32.62% weight loss maintenance for a period exceeding 20 years.

4.5 Data collection

The data collection stage consisted of two processes. In the first process, the participants were requested to free-write their personal narrative regarding their journey with food, eating, body image, and weight. Following the collection of narratives, I commenced an initial reading of the narratives and noted the areas I wished to probe further as well as any information which required clarification.

The second process involved telephonic interviews, which were semi-structured and performed to further explore constructs and processes that emerged from the participants' narratives.

4.5.1 Narratives. Initially, I requested that the participants write their personal narrative regarding their journey with food, eating, body image as well as the significance of the ITAND Programme in influencing the course of their journey. I asked them to complete their narratives within a period of six months. After receiving and reading the narratives, I conducted semi-structured telephonic interviews to allow for further exploration and inquiry into the narratives. The participants' narratives were utilised as a guideline for the semi-structured interview questions. The invitation to free-write their narrative allowed the participants to create and describe the processes and constructs of the ITAND Programme which they perceived as important in their weight loss maintenance journey. Since the first

contact with the participants was telephonic and simply involved my request for participation in the study as well as a description of what I required from them, I consider that there was minimal influence from me in the process of obtaining the narratives.

Writing narratives allows people to give their life meaning over time, and therefore it is an exceptionally rich data source and focuses on how participants embody their experiences through their stories. Narratives is one of the most significant ways through which our culture and personal interactions are shaped (Bingley et al., 2008). The richness of the data in this study was felt to be likely to emanate from exploring the subjective realities of each of the participants through their personal written narratives. Narratives were considered to provide a process through which participants made sense of their weight loss journey and weight loss maintenance experiences.

4.5.2 ***Telephonic interview.*** The second process that was utilised as an adjunct to the narratives was that of a semi-structured telephonic interview. The semi-structured telephonic interview was employed in order to allow participants to have agency in the research process through directing the flow of the conversation (Smith & Eatough, 2008). Due to the richness of the written narratives, the interview allowed for further exploration and creative inquiry based on the narrative. The interview also allowed me to probe areas of the written narrative that I identified as requiring more in-depth inquiry and/or clarification.

Interview questions were constructed in a manner that reduced my bias. Questions were constructed with the aim of being neutral and open-ended, and not leading of the participant's response. However, as the researcher, I recognise that this was not always attainable in practice since the interview is interactive in nature (Larkin & Thompson, 2012; Larkin et al., 2006; Smith & Osborne, 2008; Speer, 2002a, 2002b). However, utmost care was taken not to lead the participant in a specific direction and I diligently and reflexively analysed the transcripts to see whether the way in which a question was phrased may have influenced a participant's response (Smith & Eatough, 2008).

Before commencing the interview, the participants were re-briefed about the study and their rights as research participants, and were then asked to verbally consent to

the interview, the recording of the interview, and the transcription of the interview (see Appendix A). The interviews were dictated by the participant. Thirty minutes to an hour was allocated for each interview, but due to the nature of the semi-structured interview, the time frame did vary for each participant. The interviews were recorded on a mobile device audio-recorder to allow for exact transcription following the interview. Because IPA is concerned with the "lived" experiences of the participants, I considered the use of the participant's own words in the analysis as being imperative to the methodological rigour of the research.

4.6 Analysis of the qualitative data

For both IPA and narrative analysis, the goal is not to measure the frequency of the themes. Instead, it is to measure the content and complexity thereof, while adhering to the concerns and preoccupations of the research participant (Smith & Osborne, 2008). The data analysis stage commenced after the collection of the narratives and involved a multi-step process.

4.6.1 Phase 1: Multiple readings and making notes. In the initial stage of analysis I conducted multiple close readings of the collected narratives and collated interview transcripts in order to familiarise myself with the text (Pietkiewic & Smith, 2014; Smith & Osborne, 2008). This initial process was important in allowing me to immerse myself in the data (Pietkiewic & Smith, 2014). Since each reading was considered to provide additional insights into the text, it was important for the research material to be read both in relation to the research questions and to the principles of the narrative methods (Burman, 1994). I utilised the left-hand margin to make general notes about my observations and anything interesting written or said by the participant. My notes were unfocused and not clustered in any way (Pietkiewic & Smith, 2014; Smith & Osborne, 2008; Willig, 2008). My notes focused on the content of what was written, the participant's use of language, repetitions, and made initial interpretive comments. I also noted issues of reflexivity during this process (Pietkiewic & Smith, 2014).

During these readings, I noted areas requiring clarification or further probing for inclusion in the follow-up semi-structured interview. Once the interviews were complete, the next step was to transcribe them. An important aspect of IPA and narrative analysis is that the transcript is verbatim. These transcripts focused not just

on the verbatim transcription of the participants' words; any significant pauses, laughter, false starts, and strong emotions were also noted (Smith & Osborne, 2008).

Once the transcription was completed, I engaged in the same process as previously done with the written narratives: multiple readings, with unfocused, unclustered notes in the left-hand margin (Smith & Osborne, 2008; Willig, 2008). Notes made during this stage were detailed and comprehensive in order to reflect the source material and lay the foundation for the later stages of analysis (Pietkiewic & Smith, 2014). My unfocused notes in both the narratives and the transcripts of the interviews paid special attention to both the IPA and narrative analysis concerns.

4.6.2 Phase 2: Transforming notes into emergent themes. At this stage of analysis, after the process of reading and notation was complete, I used the right-hand margin to list emerging themes in both the narratives and the transcripts of the interview. During this stage, I relied more on my notes than the narratives and the transcripts (Pietkiewic & Smith, 2014). Once this was complete, the themes were listed in a separate document and connections between themes were clustered to create superordinate and subordinate themes (Smith & Osborne, 2008). Quotations from both the narratives and the interviews were utilised to support the emerging themes.

In discussion and reflection with my research psychologist assistants, I proceeded to label the resulting clusters of themes. The labels aimed to capture the essence of all themes within it. A summary table containing the superordinate theme and subordinate themes that illuminated the phenomenon under investigation for each transcript, alongside citations representing these themes in the text was constructed (Willig, 2008). I then further discussed the clustered theme titles with my assistants with a view to validate my analysis process.

The participants' quotations were clustered based on each theme. Through immersing myself again in this reading I selected the quotations which I felt most effectively illuminated the identified themes. My aim was to produce superordinate themes that captured these phenomenological experiences of the participants' and that would be presented through extracts from their narratives. I will proceed to present the superordinate and subordinate themes which occur across the participants' narratives and interpretive themes in light of the participants' lived

experience, while simultaneously presenting the higher order theoretical ideas reflected, which I will locate within the context of the ITAND theoretical model.

4.6.2.1 Interpretive phenomenological analysis. At this stage, I shifted my analysis to a higher level of abstraction and positioned the data within the psychological framework of the ITAND Programme while still maintaining focus on the participants' primary concerns (Burman, 1994; Larkin & Thompson, 2012; Larkin et al., 2006; Pietkiewic & Smith, 2014).

4.6.2.2 Narrative analysis. I conducted narrative analysis concurrently with the IPA analysis. Narrative analysis goes beyond the examination of the content of the interviews and narratives; it examines the interactional and language structures of the data (Squire, 2005). Extending beyond the exploration of themes, narrative analysis requires the examination of the general structure of the narrative: abstract, orientation, complicating action, evaluation, and resolution (Labov & Waletzky, 1997). A narrative always has a story-teller and an audience. Therefore, it was important for me to keep in mind during the analysis that the audience for the participants' writing was myself (Squire, 2005).

The narrative is not just a story, but serves a cultural, social, and personal function for the story-teller (Labov & Waletzky, 1997; Viney & Bousfield, 1991). The story is required to account for its telling. Narratives can assign blame, speak about causality, give lessons and demonstrate morality (Squire, 2005). Participants also engage in narrative positioning. Therefore, I analysed the extracts in terms of how the characters within the narratives were positioned in relation to each other, how the speaker positioned herself in relation to the audience (myself), and how the speakers positioned themselves in relation to themselves (Bamberg, 1997). These aspects of the narrative were noted in the right-hand margin, to be expounded on in the write-up.

4.6.3 Phase 3: Identifying relationships and clustering themes. This phase involved identifying connections between the emergent themes identified in the previous step. The themes were grouped together based on conceptual similarities, and I identified each cluster with a descriptive label (Pietkiewic & Smith, 2014). A table was created that ordered the main and subordinate themes in a coherent way (Smith & Osborne, 2008). These themes were accompanied by a short description,

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and relevant short extracts from the narratives and transcripts were added. At this stage, emergent themes which had a weak evidential base or were redundant to the emerging structure were eliminated (Pietkiewic & Smith, 2014).

It was important to pay attention to analytic reflexivity at this stage, to place the analysis within an account of its production and acknowledge the constraints of the analysis (Burman, 1994). Analysis requires interpretation, and inherent in this is incompleteness, partiality and bias. A transcript can be vulnerable to over-interpretation and/or misinterpretation. A text can always be read in multiple ways; it is important to acknowledge that any analysis done on the transcripts is only one way of reading them (Burman, 1994). Since the analysis of a transcript is non-exhaustive and partial, I also accept that the analysis remains unfinished (Burman, 1994).

4.6.4 Phase 4: Writing up. Having completed the analysis, the findings were documented according to the individual themes (Pietkiewic & Smith, 2014). During this time, the analysis was expanded and the themes were translated into a narrative account in which I made analytic comments (Smith & Osborne, 2008). Each theme was described, illustrated with supporting quotations, and then followed by an analytic comment by me (Pietkiewic & Smith, 2014). Using extracts from the narratives and interview transcripts has two functions. The first allows the reader to critically examine my interpretive analysis. The second provides an opportunity for participants' perspective to be presented and the participant's voice to be heard.

In the write-up, when passages were selected to elaborate a point, limitations on length dictated that the whole transcript could not be used (Bucholtz, 2000). I remained cognisant of the fact that whichever content I selected or ignored would have an effect on the context of the research. The selection of part of the content of the transcript for the research report reflects my research questions, ideas about the participants, ideas about the topic at hand and many other unintentional dimensions. While it is impossible to remove this bias, it was essential that I remained reflexive about it (Bucholtz, 2000).

For IPA, the write-up presents an opportunity for the participant's concerns to remain the centre of the analysis, while grounding it within the psychological framework of the ITAND Programme. The write-up can present a multi-level analysis, focusing

from a low-level interpretation, to a highly detailed, theoretical examination which generates new insights (Pietkiewic & Smith, 2014). The write-up of the narrative analysis was woven into the IPA analysis, focusing on the interactional and language structures of the data (Squire, 2005). It also allowed for the examination of cultural, social, and personal function of the narrative for the story-teller (Labov & Waletzky, 1997; Viney & Bousfield, 1991), which provided a useful reflexive tool for me as the researcher.

4.7 Quality

The procedural process of the research is outlined as clearly as possible within the methods section, so that it can be evaluated by an external reader and be clear enough to be replicated by other researchers (Miles, Huberman, & Saldaña, 2014; Tracy, 2010). In this study, the processes and analyses were evaluated by two research assistants, both with Master's degrees in Research Psychology. This allowed the establishment of a reliability measure, as there was a peer review aspect to the research (Miles et al., 2014). Other reliability measures were that the process of acquiring participants had to be accurately described and the participants had to be placed within their context (as was done in the sampling section in the Methodology chapter); specifications on the limits of participation must be included (see sampling for discussion of inclusion and exclusion criteria, section 4.4); and it must be acknowledged that there is limited generalisability for qualitative research (Miles et al., 2014).

An important consideration for the quality of qualitative research is the plausibility of the conclusions drawn from the data (Miles et al., 2014). One way to ensure plausibility is by providing quotations from the participants' narratives and, if applicable, interviews, in order to demonstrate that the findings are based within the data and to expose the analysis to scrutiny by the reader. This introduces sincerity into the research process by demonstrating transparency (Tracy, 2010). The process also ensures that the conclusions drawn from the research extend beyond the use of intuition and demonstrates a commitment to the verification of the findings (Miles et al., 2014). The process is reinforced through demonstrating how the current findings align or do not align with previous research findings reported in the literature review. There is a distinction between plausibility and confirmability (Miles et al., 2014).

While the research demonstrates commitment to making the analysis of the participants' accounts logical and locating them within the current state of knowledge, it cannot claim any generalisations due to the nature of qualitative research.

While both narrative analysis and IPA adhere to social constructionist principles that state that there is no single reality, this does not mean that the analysis is protected from criticism (Larkin & Thompson, 2012; Larkin et al., 2006; Miles et al., 2014). In my analysis I endeavoured to reach reasonable conclusions. I also remained cognisant throughout of acknowledging that the nature of qualitative research is inherently complex and difficult to classify into neat groups or clusters (Miles et al., 2014). I am aware that owing to the limitations of qualitative research, I am only able to demonstrate one, possibly imperfect, reading of the data, which may not necessarily group into the clusters or themes which I identified.

4.8 Reflexivity

Reflexivity was described by Mead (1934, p. 134) as the "turning back of the experience of the individual upon her- or himself", and Delamont was cited by Adelberg (2002, p. 8) as saying that reflexivity is "a social scientific variety of self-consciousness". It is a complex process which takes many forms. The relationship between social constructionism and reflexivity are integral to accounts of social epistemology. My reflexivity aims to illuminate the inseparability of research, epistemology, and ontology, and also to describe the influences that shaped my research and the impact of these on my data analysis as well as my interpretative practice. As a result of IPA and narrative analysis being reliant on my interpretations, it is important for me to describe where I am currently positioned in my profession, my orientation and my views regarding the management of obesity to accomplish long-term weight loss maintenance. My reflexive process is presented in Appendix D.

4.9 Ethical considerations

Although the participants are not considered to be a vulnerable population, and no adverse effects were anticipated from their writing the narratives or participating in the interview, a clinical or counselling psychologist was made available to the participants should any of them require such referral.

When the participants were initially approached for their narratives, they received a Letter of Confirmation (see Appendix A), which confirmed their participation and outlined the requirements for the participants. The Letter of Confirmation also outlined the aims and objectives of the study as well as the requirements from the participants requesting them to return a typed narrative and to agree to a follow-up telephonic interview (Brinkman & Kvale, 2008; Burman, 1994). This was followed by a Consent Form, which participants were required to sign and in which they consented to their participation in this research. The consent form also informed the participants of their right to withdraw from the study at any point in the research process – at the stage of writing the narrative or at the interview stage. All the participants were invited to bill at their professional rate for time invested in participating in this study. This would be determined by either their hourly consulting rate, or by calculating their hourly working rate.

Issues of confidentiality were explained at this point and participants were informed that any identifying features in their narratives and interview transcripts, should they partake in an interview, would be removed and their names would be replaced with pseudonyms (Brinkman & Kvale, 2008). The consent form detailed who would have access to the written narratives, transcripts, and interview recordings; in this case, it would be the researcher, research assistants, and supervisors. I obtained permission to publish extracts of the interviews and the narratives from participants. The recordings of the interviews and the transcripts were kept in a password-protected file. The telephonic interview session was opened with a short briefing and clarification on the use of the audio recording. The use of a recording device was also agreed to verbally by the participants. At the end of the interview, the participants were provided an opportunity to express any feelings or concerns and were informed that they could request access to transcripts and the analysis (Brinkman & Kvale, 2008).

4.10 Conclusion

Utilising qualitative research methodology, specifically narrative analysis and IPA, this study examined the weight loss and weight loss maintenance stories given by eight women who had undergone the ITAND Programme. This study allows for a 20-25-year follow-up. These stories detailed their journeys with food, eating, body image

and weight, and were collected through written narratives and semi-structured telephonic interviews. This analysis method allows for the collection of rich data reflecting both experiential and meaning systems of participants. The utilisation of qualitative methodology made it possible to access the rich detail of their narratives and interviews, and also enabled an enquiry into the psychological processes mediating lifelong weight loss maintenance following the ITAND Programme. Interpretative phenomenological analysis and narrative methodology were applied to the analysis of the data.

CHAPTER 5:TRANSFORMATIVE LEARNING AND LONG-TERM WEIGHT LOSS MAINTENANCE

5.1 Overview

Having conducted an extensive review of the literature, this study represents the lengthiest weight loss maintenance study in the treatment of overweight and obesity to my knowledge. The study is positioned to address the low efficacy of weight loss interventions in regard to the maintenance of weight loss, through an analysis of the narratives of eight formerly overweight and obese women, who maintained significant weight loss for a period of 20-25 years following their participation in an Integrative, Transactional Analysis, Anti-Diet Programme (ITAND Programme).

This study aims to illuminate the processes, theoretical constructs, strategies and skills that mediate lifelong maintenance of weight loss, thereby contributing unique understandings to improve the efficacy of treatments for overweight and obesity. The study also aims to examine the non-diet-based strategies that the women perceived as directing positive change in their relationship to food, their bodies and their weight, and thereby enabling the lifetime maintenance of weight loss.

The results of this study emerged through the application of narrative analysis, as well as Interpretative Phenomenological Analysis (IPA), to the data. The selection of both IPA and narrative analysis allows for a multilevel examination of the subject matter. Both IPA and narrative analysis are concerned with the “lived experience” or personal experience of the participant.

Narrative analysis provides an understanding of how participants create meaning out of their experiences, and thus how they determine their experiences as meaningful and coherent so that it contributes to their sense of identity (Crossley, 2000; Labov & Waletzky, 1997). Narrative adds a sense of temporality to their accounts and indicates how the participants’ past experiences with their weight and the ITAND Programme have shaped their current identity (Labov & Waletzky, 1997).

IPA allows for “giving voice” to the participants’ experiences, while situating the accounts within the context of the ITAND Programme as well as other relevant contexts.

Guided by the epistemology and methods of phenomenology, the research questions of this study examine the composite experiences of lifelong weight loss maintenance. Considering the scope of this study, and in order to potentiate the analyses and discussion of the findings that emerge from the research, I will present the analysis of the data in two chapters:

- Chapter 5 focuses on Transformative Learning and personal identity transformation, which emerges in this study as the principal mediator of lifelong weight loss maintenance.

- Chapter 6 focuses on the superordinate and subordinate themes, which emerge from the data analysis as mediating lifelong weight loss maintenance.

5.2 Transformative Learning Theory (TLT)

An analysis of the participants’ narratives revealed similarities in terms of the emotional cadence, sequences, themes, and of the underlying processes that defined such similarities. A dominant theme emerging from the analysis was that without being conscious of the process, the participants in their narratives were describing a process of learning that resulted from their participation in the ITAND Programme, as constituting the basis of their transformative experiences.

It became evident that the programme’s efficacy was significantly based on this process of learning which enabled the participants’ sustained lifelong health behaviour change. The outcome of this behaviour change was the maintenance of weight loss for a period exceeding 20 years.

Having established that a process of learning was central to enabling permanent weight loss maintenance, I researched the literature pertaining to the examination of health behaviour change in regard to learning theory. My review of processes of learning revealed that the process of learning that I had observed in my analysis of the participants’ narratives was not satisfactorily explained by the process of learning described in the Transtheoretical Model (TTM) of change, which is the model of

learning at the centre of much research on the treatment of overweight and obesity. In assessing the relevance of further theoretical models of learning, it emerged that the process of learning facilitated through the ITAND Model, which was being described in the participants' narratives, closely mirrored the process of learning explained by Transformative Learning Theory (TLT) , as developed by Jack Mezirow (1991).

As a result of the unexpected yet highly relevant finding of the significance of the TLT learning process in mediating lifelong weight loss maintenance, I realised that I had uncovered a process which has the potential to contribute to enhancing the understanding and facilitation of sustained weight loss. I therefore thought it relevant to examine the participants' narratives through the conceptual lens of Transformative Learning Theory.

Transformative Learning Theory offers a model of learning that is uniquely adult, and grounded in the nature of human communication. While this theory is partly a developmental process, learning is best explained as the process of using a previously acquired interpretation to construct a revised interpretation of the meaning of an experience to guide future action (Mezirow, 1996, p. 162).

Transformative Learning Theory (TLT) explains the importance of change in meaning structures as a mediator of sustained health behaviour change. TLT proposes that meaning perspectives are often acquired uncritically in childhood through the processes of socialisation and acculturation, which occur most frequently in encounters with "significant others", such as teachers, parents, and mentors. Meaning perspectives thus "mirror" the way various situations are defined by culture and by the individuals responsible for our socialisation (Mezirow, 1991, p. 131). Over time, and in conjunction with numerous congruent experiences, these meaning perspectives become more ingrained in the person's psyche, and thus less responsive to change. Essentially, meaning perspectives provide rationalisations for thoughts and behaviours, and the individual becomes dependent on their meaning perspective to make sense in an often irrational world. Meaning perspectives thus support the individual by providing an explanation of the occurrences in their daily lives.

Since meaning perspectives are simultaneously a reflection of cultural as well as psychological assumptions, they are constraining and subjective, and often distort our thoughts and perceptions. In this regard, meaning perspectives resemble the proverbial “double-edged sword” through providing meaning and validation to our experiences, but simultaneously distorting one’s view of reality.

According to TLT, when one is confronted with a radically different and incongruent experience that they cannot assimilate into their current meaning perspective, the experience must be either rejected or transformed in order to allow assimilation through the development of a new meaning structure.

The concept of changing meaning perspectives is central to Mezirow’s theory of perspective transformation, which involves a worldview shift. A perspective transformation is “a more fully developed” (more functional) frame of reference; one that is more (a) inclusive, (b) differentiating, (c) permeable, (d) critically reflective, and (e) integrative of experience (Mezirow, 1996, p. 163).

Perspective transformations are often stressful and painful, and may threaten the individual’s self-view. These transformations of perspective can occur either through an accumulation of transformed meaning schemes, or as a result of an acute personal or psycho-social crisis (Mezirow, 1996; 1997; 1990; 1978; 2000; Mezirow & Taylor, 2009).

Transformative Learning Theory emerged in this study as providing a synthesis and description of the manner in which the meaning system of diets, which have as their central foundation the alienation from one’s body and “self”’, become internalised through the process of socialisation and unconscious assimilation. Through their participation in the ITAND Programme, participants in this study were exposed to many processes, concepts and experiences that were different to those defining their previously accepted diet meaning systems. These disparate experiences resulted in the participants’ critical reappraisal of the assumptions and beliefs which formed the basis of their diet mentality. This served as a catalyst for a revision of their meaning systems. Their revision of meaning systems resulted in a shift in paradigms from a diet-based paradigm to an anti-diet-based paradigm to an anti-diet paradigm. To facilitate and reinforce their anti-diet paradigm shift, participants had to critically revaluate their thinking and expose themselves to new meaning systems, including TA, intuitive eating, and cognitive-behavioural strategies.

The participants attributed their “anti-diet” paradigm shift as both a precedent and antecedent of lifelong weight loss, as well as the mechanism through which they achieved personal transformation.

The parallels identified between Mezirow’s phases of TLT and the phases through which the participants transitioned are considered as closely approximating each other. The relevance of TLT in facilitating sustained weight loss maintenance thus emerged as a significant factor for contributing to the treatment of overweight and obesity.

Mezirow (1991) proposes that paradigm and personal transformation often follow some variation of the following 10 phases of meaning challenges:

1. The experience of a disorienting dilemma
2. Self-examination, with feelings of guilt or shame
3. A critical assessment of assumptions
4. Recognition that the experiences of discontent and transformation are shared by others who have negotiated a similar change
5. Exploration of options for new roles, relationships, and actions
6. Provisional trying of new roles
7. Planning a course of action
8. Acquisition of knowledge and skills for the implementation of a new paradigm
9. Building of competence and self-confidence in new roles and relationships
10. Integration on the basis of meanings derived by one’s new perspective

5.3 Transformative Learning Theory and long-term weight loss maintenance

In accordance with TLT and Mezirow’s phases of transformative learning, the analyses of participants’ narratives in this study reflects their engagement in a process of transformative learning, facilitated through their participation in the ITAND Programme, as comprising seven phases of transformative learning.

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In this study, Mezirow's phases were present to varying degrees. In addition, the experiences of the participants in this study included other ways of learning and knowing, as described by Clarke (1991). Especially relevant in this study were psychological processes in the understanding of self in which participants engaged. The seven phases of transformative learning that emerged in this study are described in the following subsections.

5.3.1 Phase 1: The experience of a disorientating dilemma. Participants in this study experienced the attainment of the paradigm transformation essential to weight loss maintenance as being enabled by having to face a disorientating dilemma. This dilemma represents the first of three key themes of Mezirow's TLT experience, namely an experience that did not fit with the participants' pre-existing meaning structure.

The disorientating dilemmas that the participants experienced were most often incremental, involving a gradual recognition over time of a disconnect between their weight-related meaning system and their real-life experience.

Many participants constructed their narratives in a way that expressed their disorientating dilemma. The structure of the narratives emphasised that every dimension of their lives was defined by their pre-ITAND Programme weight. This was illustrated by the way narrative headings were named, with each heading demarcating a phase of life that was adversely impacted by their weight prior to their participation in the ITAND Programme.

For example, Brenda constructed her narrative by splitting her weight journey into "early years, school, university, and adulthood". Beneath each heading she describes her difficulties with weight as defining each of these important development phases. These headings are followed by the heading called "Weight-Winners".

Caroline organises her adulthood into subheadings, as follows: "How it all started", followed by "Overweight Child, Overweight Adult". She interrupts this narrative with a chapter on "the impact of the ITAND Programme".

All the participants' narratives end with the impact of the ITAND Programme, and accounts of their transformed life experiences after the ITAND Programme. Before

the ITAND Programme, all the participants' stories were constructed as weight narratives. After the ITAND Programme, the stories were reconstructed to reflect the change in their identity and their taking agency for actualisation in all dimensions of their lives.

The ITAND Programme emerges clearly from the participants' construction of their narratives to serve as a resolution to their disorientating dilemma of reaching the end of the road in terms of diets, as well as providing the insight that diets were compounding their weight problem and that weight was affecting every dimension of their lives, resulting in the experience of existential despair.

5.3.2 Phase 2: Experience of a "defining moment". The "defining moment" refers to a turning point in life where something happens to direct the actual transformation (Devine & Sparks, 2014). For most participants in this study, their defining moment was the simultaneous realisation that diets had failed them and that an anti-diet paradigm existed, which offered completely new and different meanings, processes, and strategies for attaining permanent weight loss maintenance.

In this study, the participants construct their narratives as having a turning point, which functions as a defining moment, or epiphany. The defining moments are characterised by a number of features. The first feature is the presence of a compassionate leader who functions as a first layer for the participants to accept themselves as they are; in the context of this study, the compassionate leader was me. The second feature is the ability to separate their identity from their weight. This enabled the participants to recognise other areas in their lives where they were successful, such as career, and motherhood, which provided the motivation for them to disrupt their destructive thought patterns, and to enter a state of self-introspection and self-knowing. A major epiphany, which served as the defining moment for most participants, was the insight that their previous solution (diets) had in fact been an obstacle to their attempts to permanently overcome their weight problem. Finally, knowing that others were also facing these struggles added an additional layer of self-acceptance. All these factors contributed to the participants' experience of a defining moment, which was characterised by their immediate decision to enrol in the Integrative, Transactional, Anti-diet Programme (ITAND Programme) on which this study is based.

5.3.3 Phase 3: Self-examination and psychological insight. Participants in this study experienced that self-introspection, gaining insight, and working through the complex web of causes for the development and exacerbation of overweight and obesity, was an essential process in the journey toward achieving long-term weight loss maintenance.

A process of self-reflection contributed to the participants shifting their paradigms from the dictates of diets to an anti-diet paradigm that is more integrative of psychological insight.

Ruth stated that, “Comprehending the psychology behind my weight issues felt like an epiphany and the weight began melting off of me, pound by pound, week after week, month after month and eventually I returned to the naturally thin size I was always meant to be.”

Kate explained that, “My daily life’s experiences had been related to the way I looked, which in turn related to how fat or thin I was. I did not trust anyone who said I looked good, as I did not feel good about myself and so there was no way they were being honest. I believed that ANY discussions around weight were related to me, hoping I would get the message. In general conversations, comments about how one looked, were the equivalent of saying ‘what wonderful weather we are having’ – to them it was a passing non-committal statement, to me it was gut-wrenching.”

For Kate, not only her daily life was shaped by weight, but every experience – every conversation she heard spoken about weight – was constructed according to her weight narrative.

Furthermore, these problems are constructed as impacting on many seminal relationships, including significant others, family members, and friends ... Lesley reflected that, “Being fat, my father despised me even more. If I could only get this hunger under control maybe my father would love me.”

Brenda describes how her weight was a central issue in her marriage. “At the age of 29 I met my future husband, and married him at 30. My weight became increasingly unacceptable to him – he wanted a thin wife.”

5.3.4 Phase 4: Paradigm transformation. After experiencing a disorientating dilemma and attaining insight into the causes of their weight problems, this next phase involved critical self-examination, and a critical assessment of epistemic, sociocultural, or psychological assumptions.

Participants experienced discomfort with their epistemology and reviewed its validity given their experience of diets. This process involved critically examining diets and the meanings and assumptions on which diets are based. The ITAND group process facilitated critical discourse and enabled a paradigm shift away from diets to an anti-diet, transactional analysis, intuitive eating paradigm. In this phase, participants recognised that their discontent was shared, and that others had negotiated a similar paradigm shift. The participants experienced the paradigm shift as all-encompassing, and comprising three dimensions of perspective transformation, namely, psychological changes, involving understanding the self; convictional changes, in which their beliefs were revised; and behavioural changes, relating to changes in lifestyle.

Many participants juxtapose their experience of engaging in the ITAND Programme to their previous experience with diets.

In this phase of the programme, the participants viewed the importance of a compassionate and inspiring leader as a major differentiator during critical discourse. Lesley described it as follows: “it came into my darkness like a beacon of light.”

The embodying of hope was important to the process. Participants had to develop trust in the belief that they were able to lose weight.

Ruth stated that, “Maureen provided me with insights and a new understanding about my relationship to food that just made so much sense and shared it in a way that I associate with all things Maureen – with beauty and grace. Maureen is one of those women other women should aspire to be. She inspired me, she encouraged me, she was incredibly kind to me and she never made me feel like she was judgeing me.”

It is important that a leader is constructed to hold important insights, to be compassionate, and most importantly, not to judge. This allowed for Ruth to accept herself and to gain sufficient insight to take control of her weight.

The approach of the ITAND Programme was very different to the participants' previous experiences of weight loss programmes.

Caroline recalls: "Those meetings, looking back now, were semi-cultish. The head (name of weight loss programme) lady would always give a 'pep talk' and brag of how she had lost weight so easily, so therefore you should also be able to. It was so shaming and humiliating."

In their experience, previous programmes in which they had participated were perceived as being focused on shaming participants. Such an approach is the complete antithesis to the ITAND Programme, in which I offered a story of struggle, enabling the participants to empathise and identify, as opposed to losing weight "so easily", which was no longer a view they could relate to.

Many diet programmes were also perceived as shaming people who cannot lose weight through their prescribed methods. Brenda, emphasising the shaming nature of traditional weight loss programmes, stated that, "I was terrified of the woman who ran the class because I couldn't stand the disappointment on her face if I hadn't lost the required 1 kg minimum for the week. I felt useless and worthless."

5.3.5 Phase 5: Acquisition of processes and skills to enable long-term change. It was evident that all the participants engaged in the process defined by Mezirow (1991), namely that of planning and implementing a course of action, and acquiring the skills necessary to do so. Participants describe their acquisition of knowledge and skills as an essential process for enabling the changes that allowed their long-term weight loss maintenance. The anti-diet strategies that participants illuminate as mediating long-term weight loss maintenance include transactional analysis, intuitive eating, exercise, nutrition education, and behaviour modification strategies. The participants perceived their acquisition and mastery of these strategies as central to their achievement of long-term weight loss maintenance.

5.3.6 Phase 6: Lifestyle transformation. The participants' continued implementation of their newly acquired processes and skills enabled the internalisation of competence, and the improvement in their self-esteem. During this phase, the participants' new perspectives determined and allowed the integration of

new behaviours in their lives. This resulted in permanent behaviour change, and is reflected in the participants' attainment of a holistic lifestyle transformation.

5.3.7 Phase 7: Personal transformation. The participants' experience of personal transformation was constructed in their narratives as significant positive changes in self-esteem, autonomous self-directedness, and a permanent change in identity. Personal transformation was demonstrated through their re-integration into their lives, on the basis of new conditions that were defined and shaped by their new paradigm perspective.

In describing her personal transformation, Brenda states: "I would go as far as to say [the programme] saved my life! It certainly saved me from the old destructive me." The programme allowed Brenda to move away from destructive thought patterns and she was able to be "saved" from herself.

Linda says that the ITAND Programme "gives me the opportunity to come to terms with who I am so that I may embrace innate talents and capabilities, without wanting to be someone else."

The programme allowed the participant's focus to shift from weight to focusing on the talent and capabilities she already possessed, thus allowing an acceptance of self. Linda later says, "the process of losing excess weight took me on a journey of self-discovery … it changed my approach concerning the value I place on my body, health, and self-worth."

5.4 Transformative Learning and personal transformation

5.4.1 Overview. This study identified the process of transformative learning, attained through participation on the ITAND Programme, as the primary process mediating successful and sustained behaviour change that enabled the participants' achievement of lifelong weight loss maintenance.

In my analysis of the data I have re-storied the participants' narratives in order to clearly reflect the process of transformative learning that resulted in the participants' attainment of personal transformation and lifelong weight loss maintenance.

The re-storying of the participants' narratives is reflected in the portraitures developed for each participant, through the application of a transformative learning

theory lens to the analysis of the participants' narratives. One participant's portraiture is presented here to serve as a prototype for the remaining seven participant portraitures, which comprise Appendix E.

5.4.1.1 Portraiture of Alice. Alice attended the ITAND Programme in 1993, which allows for a 22-year follow-up. Her age was 29 years at the time of her participation and she is now 51 years old. On commencing the ITAND Programme, Alice had a BMI of 30. During her participation in the 8-week ITAND Programme, Alice lost 15 kgs and attained a BMI of 23.5. Alice has subsequently maintained her weight loss for over 23 years, and currently has a BMI of 23.5, which reflects weight loss maintenance of 20.5 per cent for over 23 years.

Alice's narrative describes her journey with food, weight, and her body, before, during, and in the 24 years following her participation in the ITAND Programme. In her narrative, Alice describes the processes and strategies that enabled her permanent weight loss maintenance. Alice's narrative has been re-storied through narrative analysis to reflect the process of transformative learning as well as the other processes and strategies that she perceives as mediators of her attainment of lifelong weight loss maintenance.

5.4.1.1.1 Phase 1: Disorienting dilemma. Alice's engagement in the ITAND Programme was precipitated by her facing a disorientating dilemma. Her disorientating dilemma was characterised by a feeling of existential despair regarding her self-esteem, her weight, her failed attempts at diets, and being trapped in an emotionally abusive marriage. Alice expresses her existential despair when she explains that:

> "I felt worthless in relationships with men. I felt ugly, fat, and a compromise for any man. Who would possibly find me attractive! And this is how I developed a fear that I would never find a husband. Who would marry me!!! This led me into one of the darkest times in my life, where I married a man that I couldn't bear. As I walked down the aisle I wanted to run in the opposite direction ... The voices in my head were screaming to RUN. But I had nowhere to go!!! Nobody else would ever want to marry me ... He was so invested in my appearance to elevate his own inadequacies around his own weight issues. It was a devastatingly lonely time in my life. I was living a total lie. We were

> living across the road from Hyde Park Shopping Centre and somehow I came to hear about the WW programme … I decided to give it a go."

The disorientating dilemma serves to preface the story and constructs Alice's story as one worthy of being told. It also frames her difficulties with her weight as a protracted experience of existential despair that has spanned her life, well into her adulthood. It illustrates how severely and significantly her issues around her weight had impacted her life. This reflects on the discourse regarding overweight as just an aesthetic issue, or something that affects people on a deep psychological level. It demonstrates to the reader that her weight issues influenced her entire self, and constructs the story that is worth telling.

Alice can be understood as having faced a disorienting dilemma characterised by the feeling of existential despair when she describes feeling trapped in an "abusive" marriage while simultaneously feeling "fat and ugly" and undesirable. She had experienced failure on numerous diets and felt she had reached a "dead end" with regard to changing her circumstances.

At age 22, Alice felt a great pressure to be married. Marriage is a powerful normative social discourse, which defines the value of an individual. The failure to achieve marriage is a social disaster that would further impact her self-esteem. She bought into the discourse that, as a woman, her only value would be to get married, and if she could not achieve this, she would not have any worth. Even getting married to a man who was not desirable was better than remaining single. This further emphasised her appearance as her only value, since she weighed her attractiveness as the only factor in whether a man would marry her, despite being a brilliant woman. Her weight and resulting lack of self-love is constructed as having a major impact on her choice to get married to a man she did not love and who was abusive.

The inclusion of this component in her narrative establishes a contrast between her pre- and post-ITAND Programme self. It is the ITAND Programme in which Alice and the other participants orient to time and self, and the ITAND Programme becomes a central event in their lives.

5.4.1.1.2 Phase 2: Defining moment. Alice expresses her experience of a defining moment during her attendance at an ITAND introductory talk, when she writes:

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> “I can cry as I write this. It was truly a turning point in my life. Maureen gave an introductory talk in her gentle, confident, compassionate way. And at no point did I ever feel that her exquisite beauty was intimidating. She was just so kind. After her introductory talk something shifted inside me, reminding me to acknowledge all that I WAS. All that I AM. And that my weight and my perception of my weight was only a part of that. There was a whole competent successful person in me that made sad and disappointing decisions simply because I hated my body. It was time for me to look closer at what was really going on. I held onto every word Maureen said. It felt like she had written the programme entirely for me. And that's how everybody else felt as well. I kept on saying to myself 'how do you know that about me!' From the introduction I realised I wasn't ALONE. I would never be alone again on this journey.”

This is the point in the narrative that functions as the defining moment or epiphany. The defining moment is characterised by a number of features. The first is the presence of a leader with whom she could identify, and who was compassionate as well as non-judgemental. I fulfilled this need and functioned as the first layer of acceptance. The presence of a leader who can accept her thus provides her with an opportunity to accept herself. This process required her to separate her weight from her sense of self, and allowed her to look at the other arenas of her life, in which she was successful, and not to hinge her entire identity on her weight. She was then able to shift to a state of self-knowing and introspection that disrupted her all-encompassing negative beliefs about herself. Seeing that she was not alone in her struggle allowed her to accept her struggle and to break free from isolation. Alice’s feeling that the programme was made just for her, but was resonated among others, led to her realisation that her struggle was a collective one. This realisation gave her ownership of the conditions that dictated her relationship with food, her body, her self-esteem, and with all other aspects of her life.

The disorientating dilemma is generally viewed to disrupt the order of someone’s life. However, Alice’s life was very normatively ordered (school, university, marriage, etc.), but the dilemma caused a disruption in herself. The defining moment allowed her to disrupt her normatively ordered life in favour of a more authentic life – to divorce her abusive husband and get her finances in order. The defining moment required that she make a choice; that is, to continue on the path of self-destruction,

or take the risk of a paradigm shift into an unknown space. This occurred in a profound and momentary way – it did not require a long process of reflection. Her feelings of unworthiness, shame, and incompleteness were immediately evaluated, allowing her to separate herself from those feelings and to no longer be defined by them.

5.4.1.1.3 Phase 3: Self-reflection and psychological Insight. In her narrative, Alice shares her self-reflections and insights regarding the complex and multi-layered causes for her development of a weight problem. This process reflects her engagement in the attainment of self-awareness and personal insight with regard to the unconscious causes that she perceived as essential to work through in order to attain weight loss and maintenance thereof. This is an important dimension of learning that is required to change her perception of self and to adopt a new world view.

Alice describes the importance of this process when she explains that these unconscious causative factors were "all going to emerge and become conscious when I entered the WW programme. The structure of the WW group was such that I felt supported with no judgement and I could face and reveal my weight story in an un-traumatic way".

The insights that Alice uncovered through critical reflective thinking and discourse, facilitated through her participation in the professionally facilitated ITAND group, may be understood as constituting a phase of transformative learning. An exploration of the causative factors uncovered by Alice follows.

5.4.1.1.3.1 Psychological scripting. Alice reached the insight that she was "scripted" to have difficulties with her weight from before birth. Alice explains this scripting as originating "in utero", as an identical twin, when she writes, "the blood flow in identical twins, where there is a shared umbilical cord where the one twin can 'siphon off' oxygen and nutrients from the other. It appeared that I was possibly doing this to Lauren and so I have always felt like the 'greedy twin!' At birth I was larger and sturdier and have remained that way 'largely' for the rest of our lives so far."

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She continues, describing the complex psychological dynamics inherent in her being an identical twin, which underpinned the development of her weight problem, by explaining that, “from birth, we were identified not by our names … But by ‘the bigger’ and ‘the smaller’ twin … So since I was conceived I have been ‘bigger’, ‘more womanly,’ ‘Chubbier!!!’ What I have described here is a constant backdrop to the story of my life and relationship to food … I don't think there was a day in my life that I never felt overwhelmed by my weight.”

Alice’s explanation sets up her story in a particular way. Her difficulties with her weight are constructed as inevitable and inescapable, which makes her transformation more profound. It also sets up the function of the ITAND Programme as a process through which she was able to reclaim her agency.

5.4.1.1.3.2 Maternal neglect and paternal abuse. Alice proceeds to share how her experience of maternal neglect and paternal abuse constituted significant causal factors, which negatively impacted her self-esteem and resulted in the development of her weight problem. Alice expresses the pattern of maternal neglect as follows:

> “My mother has always been extremely vain … It is truly an obsession. But it felt like she never concerned herself much with her daughters. On the contrary, she barely paid attention to how we looked.”

Alice expresses her experience of paternal emotional abuse by explaining:

> “My father was obsessed with beautiful woman and to this day cannot walk past a beautiful woman without commenting – he once made a comment in company, ‘why do my girls not look like Brooke Shields!’ I felt shame by my presence and my looks. That comment has never left me … I can only say that I grew up with the commentary in my head about my weight forever.”

Both parents’ obsession with appearance and their subsequent abuse surrounding Alice’s lack of adherence to this sexualised feminine ideal brought home the idea that weight and appearance were issues of worth. If she could not look like ‘Brooke Shields’ then she had no value. This translated into her selection of an unsuitable husband; she believed that she had no value if she was not thin, and thus she should accept any love on offer, even if it was unsuitable and undesirable. This was

her conclusion, despite being a doctor, which reflects that all other aspects of her identity were not valued.

5.4.1.1.3.3 Eating scripts. Alice describes uncovering a problematic family eating script when she says:

> “When we sat at the dinner table it was unbearably stressful and I would often knock over the water jug or spill, and my dad would hit me on the forehead and shame me terribly; if any of us three daughters didn't finish the food on our plates we were threatened that it was going to be kept and put into the dog’s bowl and we would have to eat our next meal with the dogs! It breaks my heart to remember this. So, of course, we polished off every last morsel of food on our plates. I had to ‘UNLEARN’ this habit when I became aware of it … through the weight, then this programme. It is still hard for me to leave food on my plate. I continually reassure myself that it's okay.”

The presence of abuse and trauma surrounding food made eating an emotionally charged activity, which contained the possibility of being dealt with punitively. These eating scripts were not covertly kept in place but were overtly reinforced through physical abuse. Food then became threatening.

5.4.1.1.3.4 Deprivation and disordered eating. Alice explains that in her meaning system, food was associated with feelings of deprivation. As a result, she developed an obsession with food. Alice describes her disordered eating and associated feelings of deprivation from food:

> “I would secretly take left-over delicious food to eat in the bathroom. Gobbling it down so nobody could see. They always had leftovers ... that I would sneak into a serviette and put in my bag … This sense of severe deprivation and need to indulge in other people’s food stayed with me for many years ... I have no words to describe my obsession with food. What others had for lunch, how much it cost, who prepared it, was there some left over for me? It was an entire metaphor of my life of deprivation ... the emptiness of how does somebody care so much for you that they will actually prepare food for you ... The metaphor of there being enough love.”

In the family home of her childhood, food was equated with abuse, and food was also scarce. However, in other homes she experienced food as being associated with nurturance and love, and food was abundant. The lack of love and food in her home created an obsession around food. This obsession was not about food, but about love. Her questions around the amount and type of food that was available in other homes were questions around how much love was available, and food was then used to fulfil the lack of love she felt in her own home.

5.4.1.1.3.5 School experiences. Alice shares her insight regarding how being overweight was negatively appraised by others, which further negatively impacted her self-esteem, and in turn compounded her weight problem:

> "Waybury School was a hurtful experience of never being accepted … I was the fat and ugly girl … no wonder I gained 10 kg and on my 5-ft-2-frame … I was too visible when all I wanted was to be invisible … I continued to feel fat and ugly."

Throughout her life – first with her parents and then with her friends – Alice was told that appearance and weight were intrinsically linked to self-worth and love. Thin and beautiful is a societal mind-set, which is ingrained in the psyche unless conscious steps are taken to remove it from the unconscious mind. Because she could not fulfil the image of a thin woman, she was never accepted by her peers or her parents. The defining moment was essential as it allowed her to break away from this constant feedback that weight was equal to worth, and allowed her to love herself as she was. In order to be thin, she needed to disassociate it from a sense of unworthiness of herself and to prioritise loving herself and acknowledging herself as she was.

5.4.1.1.4 Phase 4: Critical examination of meaning systems and paradigm transformation. Alice may be considered as engaging in the phase of transformative learning, which is defined by a critical examination of meaning systems and assumptions. Alice shares her experience of the diet paradigm by explaining that she

> "... entered a new phase of dieticians that would continue backwards and forwards for the next nine years … I continued to feel fat and ugly … I never

> ever lost more than 2 kgs in all that time and yet it was in my mind 100 per cent of the time. It became obsessive! I could not have a conversation without talking about it. As I greeted anyone I would report on my weight and what I ate the day before …"

Dieting reflected Alice's attempt to take agency, but it fails because it involves the externalisation of locus of control. Although it is her choice to turn to a dietician, her body is ultimately in the control of someone else. This in itself is a failure of diets. Although it represents a possible opportunity for someone to take agency, it sets them up for failure as it paradoxically takes away their agency and control.

Alice proceeds to describe her experience of paradigm transformation from a diet paradigm to an anti-diet paradigm by sharing that,

> "... Debunking diets lent a voice and an insight that I had been living with for years. It theoretically and statistically validated what I had felt and yet was too scared to express. The 'magical thinking' of 'if I don't diet I will lose my control forever around food and end up obese …' Time would affirm that the rigidness of dieting would never resonate with me."

It was essential for Alice to engage in critical thinking regarding the meaning structures embodied by diets. This would allow her to re-evaluate her unfiltered assumptions regarding diets and the reasons for their inevitable failure in the taking away of agency. By reclaiming personal autonomy and self-directed eating, as well as by regaining trust in the wisdom of her own body, she regained her "voice" and the ability to normalise all food, which dieting had distorted and removed from her self-directedness.

Alice further illuminates the insights that enabled her paradigm shift when she explains that,

> "... the concept of debunking diets and the Diet Destructive Cycle was genius. That diagram never ever leaves my consciousness. When I am feeling vulnerable around food I go straight to the diagram in my head and pinpoint where I am at. And I can immediately identify where I'm heading and make a choice. It assists me with letting go of the 'all or nothing' concept, that even if I know I'm eating beyond satisfaction I have the choice of how far I want to

> push the 'overeating'. The Diet Destruction Cycle gives me the confidence that I can forever let go of my fear of 'not dieting', that if I don't read the next best diet available I won't be missing much. I am totally and forever congruent and sure within myself that a prescriptive diet that does not take Alice in all her uniqueness into consideration will never work for me or that I will think it is more powerful than me."

Alice describes her shift to an intuitive eating paradigm by explaining what the significance of hunger-based eating is to her.

> "The word HUNGER was introduced in this session. Hunger?? What was hunger?? I truly never considered hunger as a variable in my entire life experience around food until the WW programme. I was entirely dictated to by the availability of food; by the time of day: whether it be breakfast, lunch or supper or 'snack time.' I fell in love with being hungry and have stayed in love with the feeling for evermore. I just love feeling hungry. It means my metabolism is working. It means I am alive. It means I honour and respect my body."

This paradigm shift allowed Alice to stop using diets to regain control over her weight. She was able to shift from a fake agency to a genuine agency, which allowed her to listen to herself and her body. She was able to respond appropriately to body cues in regard to hunger and desired food, as well as to acknowledge her own needs and her own existence. She no longer hated her body, but respected and honoured it. The ability to critically examine and adjust her old ways of thinking about herself and her body allowed her to create more generative worldviews. She was able to construct a more honest and authentic view of self, and thereby to create a process in which she replaced an external dictate over her body with her own agency and autonomy.

5.4.1.1.5 Phase 5: Acquisition of knowledge, skills and processes. Alice describes the transformative learning phase involving her engagement in a process of acquiring the knowledge and skills to lose weight without dieting when she writes:

> “This is a new phase, something significant had shifted in my commitment and my insights so that I knew what my real challenges were and what I still needed from the programme to get me to a place of personal actualisation.”

Alice explains her acquisition and application of the process of transactional analysis, which mediated her long-term weight loss maintenance when she writes:

> “... Another new concept that was introduced to us was that of transactional analysis – the conversations in our heads that I call my personal ‘radio Alice’. Understanding the voices of the critical parent and deprived angry child was an AHA moment. And then I was introduced to my very own ADULT voice. Because I had to grow up very prematurely in my life I was very familiar with my reasoning, good decision-making, sensible adult voice. But around food it never ever existed. I had to learn the conscious skill of finding my adult voice around food. TA was such an accessible and simple way to understand the war zone in my head.”

This process facilitated a shift in her decisions around food, which were now based on the process of transactional eating. Transactional eating refers to eating that is determined by the dialogue between the internal ego states or personalities, and other transactional analysis principles related to food and eating.

Alice makes an interesting distinction between the lack of an adult voice around food, but having a prominent and functional adult voice in regard to other dimensions of life. This echoes her own feelings of inadequacy around weight and food, and a failure to acknowledge her success in other arenas. Acknowledging success in other arenas and a failure in just one allowed Alice to rebuild her self-esteem. By operating without an adult voice in relation to food, the communication around food involves a transaction between child and parent; this often results in a power struggle as there is no mediating adult voice to facilitate the ability to self-regulate.

Alice illuminates the knowledge and skills of intuitive and transactional eating, which taught her that,

> “... The REAL LIFE experience of eating a meal together at the session had the greatest impact on me ... The black rubbish bag filled with leftover food is

> an unforgettable vision. It gave me permission not to not use my body as a black rubbish bag anymore."

It was essential for Alice to move away from the thinking embodied by diets in order to re-evaluate the inevitable failure of diets in the removal agency. This change, as well as her rejection of dieting, allowed her to listen to her intuitive knowledge of herself and her body. It returned her "voice", which dieting had taken away.

The exercise that Alice refers to was an interactive group meal that was designed to implement the concepts of the anti-diet paradigm. The meal was structured as a buffet, for which each participant prepared and brought one dish of food. Participants were asked to serve themselves, and were then guided through the application of a paradigm defined by an anti-diet, intuitive eating, and transactional analysis approach to this meal. The guidance involved assisting participants to determine their physiological hunger and to eating accordingly. Participants were asked to stop eating when they had reached their satiation point. When everyone had stopped eating, there was food left on each person's plate. They were astounded about how little they needed to eat to feel satiated. They were required to dispose of their leftovers in a refuse bag. This was to emphasise the script regarding the wasting of food, and many participants struggled to perform this action. At the end of this part of the exercise, the bag was passed around to each participant to hold so they could experience the weight of the excess food, which was over 6 kgs. This was a defining moment for the participants. There was a realisation that, prior to this meal, that weight of food would have gone into their bodies instead of being disposed of in a bin. The metaphor of using their body as a dustbin when eating past the level of satiation became vividly apparent to the participants – the food was no more wasted in the bin than in their bodies if they were no longer hungry. Alice describes this as a second defining moment, which allowed her to break through one of her most prominent eating scripts around not wasting food. This is a powerful moment since this script had previously been reinforced through violence.

Alice describes some of the cognitive-behavioural strategies she acquired:

> "What transformed permanently for me in my eating control strategies is that when I am 'on track' I will always plan to be hungry for my food and make every single meal that I eat an occasion. I will never ever waste my hunger on

> a below par meal. And I will always prepare my food in a way that is irresistibly delicious and exciting to eat. I often buy myself a new plate or teacup or mug or place mat to keep myself excited about my food. I will even transfer my takeaway meals onto beautiful crockery. And I would never share eating with TV or reading. Even when I'm in a social environment there is a separate place in my brain that is consciously paying attention to my food. This has been a game changer for me. The other forever-effortless transformation is that I will never eat a meal 'on the go'. I make time for myself so that I can embrace each meal, sit at my beautifully set table, and cherish every mouthful." She continues with, "I am so proud of myself … I have now refined my eating when there is an abundance of food available. Interestingly, the sight of excess food even turns me off. Through WW I have truly learnt how to manage the excess availability and tune in to what my body is saying."

While the previous stages of transformative learning involve significant self-examination, reflection, cognitive and emotional work, this phase provides the knowledge and interactional learning to integrate the previous phases. This includes transactional analysis, intuitive eating, and cognitive behavioural strategies.

5.4.1.1.6 Phase 6: Lifestyle transformation. Alice describes the transformative learning phase of integrative lifestyle transformation through an explanation of how the psychological processes and skills and behaviours she learned have become integral to her functioning. This knowledge has integrated into her lifestyle and reflected through her development of a normal relationship with all food. She says:

> "Maureen teaching me the concept of how initially the Weight-Winner concepts are a conscious skill but that they will ultimately become unconscious like riding a bicycle. I can say that what became an unconscious skill is knowing hunger, knowing that I can eat the food I love, not being afraid of food and making the right choices when I do eat. However, I still need to remain conscious around unconscious picking and around when to stop eating." She continues: "I am loving it looking at the goals I set 20 years ago and I have truly met them all." She says, "This is a new phase. Something significant had adjusted in my commitment and my insights so that I knew

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> what my real challenges were and what I still needed from the programme to get me to a place of personal actualisation."

Alice adds that, in addition to integrating transactional analysis, intuitive eating, and behaviour modification strategies into her lifestyle, the inclusion of exercise was of paramount importance in her transformed lifestyle.

Overcoming exercise resistance was important to Alice's lifestyle transformation. Alice describes having to select clothes which she felt comfortable in for exercise in order not to feel ashamed and exposed:

> "The first and greatest step towards exercise for me is finding something to wear that feels comfortable. This sounds ridiculous to a thin person but when you are overweight it is a trauma to get dressed for gym."

Alice's use of transactional analysis principles allowed her to integrate exercise into her lifestyle, which served to cement her lifestyle transformation. Alice emphasises the importance of exercise in her weight loss maintenance by describing how she uses exercise in her medical practice to assist her patients: "Being a medical doctor who works with women suffering from postnatal depression, I cannot encourage both aerobic and weight training exercise enough. There is nothing better than having a physically strong body to carry emotional vulnerability. You just don't feel as frail physically, and that is huge when you are so emotionally frail. The impact of feel-good endorphins and self-empowerment is immeasurable." Alice explains the process of integrating exercise into her lifestyle transformation by describing how initially she fell into the trap of counting calories while exercising, but over the years she has managed to develop an approach to exercise for health purposes rather than weight loss.

The integration of autonomously self-directed, healthy, and flexible nutrition was crucial to Alice's lifestyle transformation. The nutritional knowledge Alice had gained through the ITAND nutrition module reinforced what she knew about healthy nutrition in her profession as a medical practitioner. She explains how the methodologies of the ITAND Programme enabled her to develop the ability to self-direct her eating, and gave her the flexibility to make decisions based on healthy nutritional choices by applying transactional analysis. Alice views her development of an autonomous self-

direction in regard to nutrition as crucial to her attainment of lifelong weight loss maintenance. She states that, “I am fortunate that I love good healthy food with a lot of variety. The skill I gleaned was ... that when I am not hungry to make a careful caloric choice of what I eat.”

Alice was able to integrate healthy nutritional principles into her lifestyle in a flexible way, using strategies that empowered her to accommodate selecting foods which were previously forbidden. She was thus able to develop a comfort with all food.

5.4.1.1.7 Phase 7: Personal transformation. Alice’s transition through phases 1 to 6 of the transformative learning process led to her personal identity transformation. She describes this process in the quotations from her narrative that follow. This functions as the resolution of her story. Alice achieved personal transformation and weight loss through her participation in the ITAND Programme. The transformative learning acquired in the programme allowed her to sustain the weight loss in a way that didactic learning and diets did not. Personal transformation is thus both an antecedent and a consequence of weight loss maintenance.

Alice emphasises her personal transformation by defining parts of her narrative according to her pre-ITAND and post-ITAND identity:

> “Another journey that shifted my ease with myself was the Weight-Winners programme that redefined my world as the person I was before and after having gone through it.”

Alice describes her proactivity in accomplishing personal transformation through the ITAND Programme:

> “What I know for sure is that life rewards ACTION and not INTENTION. ‘WISHING’ I could be thin didn’t change anything. Having this structured, step-by-step approach that WW OFFERED me was the most remarkable and innovative and insightful journey I could ever have ‘WISHED’ for. As I said before, it still amazes me that Maureen had a finger on the pulse of every nuance of what eating and weight issues encompass. What I know for sure is that I am no longer a fat person. Even when I think I’m fat, I’m NOT. I am a petite person with a large energy. I no longer have to be large to be seen. I can be small AND significant at the same time. I can safely say that I’m proud

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> to be me, and the WEIGHT-WINNERS programme has played one of the most significant roles on this journey. I am eternally grateful to Maureen."

Alice ascribes her ability to have permanently resolved her disordered eating to her personal transformation; she says:

> "I am not a secret eater anymore. In fact, I save my eating for being with people I enjoy when I can. I no longer have anything to hide. What a relief. The skills I have learnt from focusing and committing to the WW programme has empowered me with a refreshing sense of self that is not oppressive."

The portraitures of all the participants in this study, which are contained in Appendix E of this thesis, serve to illustrate the transformative learning process that defines their attainment of lifelong weight loss maintenance.

5.5 Conclusion

The process of transformative learning emerged in the study as the primary component for mediating lifelong weight loss maintenance. The description of the anti-diet paradigm shift that defined the participants' attainment of personal transformation, and served as both the precedent and antecedent of lifelong weight loss, illustrates the parallels identified between Mezirow's phases of TLT and the participants' transitional phases. TLT is thus relevant in facilitating sustained weight loss maintenance. Considering the findings in this research, I propose that transformative learning is of significant relevance in contributing to the treatment of overweight and obesity.

In this study, the ITAND Programme's anti-diet paradigm emerged as a transformative learning process, which facilitated the participants' experience of change in all dimensions relating to food, eating, and weight. The participants gained a new perspective by transitioning through the transformative stages of learning, including facing a disorientating dilemma, experiencing a defining moment, engaging in a critical assessment of their previous assumptions, and acquiring concepts and strategies.

Data from this study point to continuous reinforcement of the anti-diet paradigm that participants experienced in the years following their participation in the ITAND

Programme. Thus, while they experienced physical, emotional, and social transformation through implementation of the processes and strategies of their new anti-diet paradigm in the short term, in the long term this precipitated further reassessment of their assumptions and a growth in self-confidence that reinforced their new behaviours.

Through the analysis and findings in this study I propose that the specific context of perspective transformation and the adoption of an anti-diet paradigm provide a post-transformative capability. This post-transformative “capability” endures beyond the initial behaviour change, and it is this competence that allows participants to maintain lifelong weight loss maintenance.

This serves to explain the relevance of TLT in facilitating perspective and personal transformation, which emerged as the overarching theme in enabling lifelong weight loss maintenance in the treatment of overweight and obesity.

CHAPTER 6: THEMATIC ANALYSIS

6.1 Introduction

This study is considered to represent the lengthiest maintenance of weight loss study in the research literature that I have accessed on the maintenance of weight loss. This study is positioned to address the low efficacy of weight loss interventions with regard to the maintenance of weight loss. Through analysing the narratives of eight formerly overweight and obese women who have maintained significant weight loss for a period of 20-25 years following their participation in an Integrative, Transactional Analysis, Anti-Diet Programme (ITAND Programme), the study aims to illuminate the processes, strategies, and theoretical constructs that mediate lifelong maintenance of weight loss. It is hoped that the findings of this study will contribute unique understandings for improving the efficacy of treatments for overweight and obesity.The study also aims to examine the non-diet-based strategies that are perceived by women as directing positive change in their relationship to food, their bodies, and their weight, thereby enabling the lifetime maintenance of weight loss.

The research questions that this study sought to explore are the following:

1. What are the meanings, constructs, and strategies, derived from the ITAND Programme, which participants perceived as enabling their attainment of weight loss as well as the long-term maintenance of weight loss?

2. Which psychological, behavioural, and physiological processes are perceived as mediating lifelong weight loss?

3. Which cognitive-behavioural strategies and skills are perceived to mediate the maintenance of lifelong weight loss?

The results of this study were obtained through the application of narrative analysis as well as interpretative phenomenological analysis to the data. The selection of both IPA and narrative analysis allows for a multilevel examination of the subject matter. Both IPA and narrative are concerned with the “lived experience”, or personal

experience, of the participant. Narrative analysis provides insights into the way that participants make meaning out of their experiences so that their experiences are meaningful, coherent, and contribute to their sense of identity (Crossley, 2000; Labov & Waletzky, 1997). Narrative analysis adds a sense of temporality to the participants' accounts, illustrating how past experiences with their weight and the ITAND Programme have shaped their current identity (Labov & Waletzky, 1997).

IPA allows "giving voice" both to the participants' experiences, while situating the accounts within the context of the ITAND Programme, and to other psychological contexts related to weight.

In this chapter I will present and discuss the themes that emerged as mediating the participants' attainment of lifelong weight loss maintenance following their participation in the ITAND Programme. The themes identified are illustrated through quotations from the participants' narratives, which allow the inclusion of their "voices" in the analysis.

6.2 Themes

The analysis of data in this study identified one defining process and several significant themes as significant for mediating lifelong weight loss maintenance. In addition to the one defining process, the themes were categorised and counted as follows: one overarching theme, ten superordinate themes, and seven subordinate themes. The categories are defined as follows:

- Defining process: The process of transformative learning is identified as the primary process mediating lifelong weight loss maintenance.
- Overarching theme: Personal transformation is identified as the overarching theme mediating lifelong weight loss maintenance.
- Superordinate themes: The superordinate themes identified as mediating long-term weight loss maintenance identified in this study are:
    1. Psychological insight and resolution of causes and triggers
    2. Transformation from a diet paradigm to an anti-diet paradigm
    3. Normalisation of all food

4. Applying the process of transitional analysis
5. Integrating the paradigm of intuitive eating
6. Overcoming emotional eating
7. Cognitive-behaviour modification strategies, including the subordinate themes of (a) mindful eating, (b) flexible goal setting, (c) planning, (d) portion regulation, and (e) discarding food
8. Lifestyle transformation, including (a) nutrition and (b) exercise
9. Construction of weight loss maintenance as a flexible and dynamic process, including (a) cognitive flexibility, (b) conscious and unconscious implementation, (c) self-monitoring, and (d) weighing
10. Personal transformation

6.2.1 Psychological insight and resolution of causes and triggers. The findings relating to the causes for overweight and obesity that this study uncovered, through the phenomenological analysis of participants' narratives and interviews, is that obesity has its origins in a complex system of interrelated bio-psychosocial factors. The causes that emerged in this study were varied and differed from those generally addressed in conventionally focused interventions.

Insight and awareness of causes emerged as a superordinate theme mediating long-term weight loss maintenance. Participants explain that the need to take a holistic approach to the treatment of overweight – where consideration is given to the psychological and emotional aspects – is essential in attaining long-term weight loss maintenance.

In this regard, psychotherapeutic and cognitive therapy orientations form a necessary part of any weight loss intervention that has as its goal the facilitation of lifelong weight loss maintenance. The Weight-Winners Programme (ITAND Programme) was structured as a small group process, facilitated by psychologists and medical practitioners. It provided both a psychotherapeutic context as well as an opportunity for discourse and transformative learning.

Several causes emerged in this study through the interpretive phenomenological analysis deletion here, and included those of psychodynamic origin relating to early life injuries and life changes as a result of the death of a parent or sibling, maternal or paternal neglect and/or abuse, rejection by a spouse or intimate partner, change of schools, maternal eating disorders, and humiliation through teasing or shaming. Psychological pressure to adhere or adapt to destructive family eating scripts, as well as being raised in an obesogenic environment, also emerged as causative factors in the development of overweight and obesity.

Uncovering the psychodynamic causes allowed participants to distance themselves from the past, to set boundaries and expectations, and to explore how overweight was often an attempt to provide a protective shield against disturbing emotions. This enabled participants' to free themselves from these previously unconscious causative factors for overeating and to control the causative factors governing their disordered eating.

Since the participants' reflective thinking, which facilitated insight into the causes for their overweight and obesity, has been explored extensively in Chapter 5, the participant's portraitures reflecting the narrative and IPA analysis of causes comprise Appendix E.

6.2.2 Transformation from a diet paradigm to an anti-diet paradigm. The experience of a shift from a diet paradigm to an anti-diet, intuitive eating paradigm emerged as a superordinate theme mediating weight loss maintenance.

Participants explain that in order to lose weight and maintain the weight loss, they needed to permanently reject diets as a methodology. In order to shift from a diet paradigm to an anti-diet paradigm, they needed to reach the realisation that diets had failed them as a methodology for weight loss maintenance. On the ITAND Programme this realisation was facilitated through their critical thinking and reflecting on their diet histories as well as focusing on the repetitive failures and the experience of diet cycling. Their insights were reinforced through facilitating an understanding of the destructive cycle of dieting, as well as the provision of research demonstrating the failure of diets as a methodology for weight loss maintenance. Reaching the insight that diets had failed them rather than that they had failed the diets, facilitated their shift to an anti-diet approach.

Participants' rejection of the diet paradigm, which has as its foundation stone restrained eating and reliance on willpower, was perceived as constituting a critical process in mediating long-term weight loss maintenance.

Coupled with this paradigm shift was the change in their locus of control from external to internal. The process of rejecting the diet paradigm required participants to engage in several participative exercises, which facilitated critical examination of the diet meaning system. The group exercises, which were facilitated by psychologists, included reflecting on their personal diet history, experiencing an epiphany regarding the reasons for the failure of diets, considering the incorrect psychological foundation of diets that rely on the dieter's willpower, an introduction to the concept of the internal dialogue, and the paradigm of intuitive eating.

Brenda reflects on her experience with diets and recalls her failure and the negative impact on her self-esteem as a result. She says, "My mother put me on my diet at the age of 16 – 'Weight Away'. It was truly torture since I was the only one in the family who had to eat this way … I was terrified of the woman who ran the class because I couldn't stand the disappointment on her face if I hadn't lost the required 1 kg minimum for the week. I felt useless and worthless."

Kate shared her experience of diet cycling when she shares that, "I have been on every imaginable 'diet'. I've taken pills, counted calories, and had injections, all of which were extremely successful. However it did not take long before I regained the weight and then some."

Kelly recounted "I had done the Dr. Atkins religiously in my early 20s and did not lose a POUND. I committed myself to the Beverly Hills Diet and one day found myself having a tantrum on the floor (1 kg down after 8 weeks); clearly my neurochemistry had hit a major deficit of 'something'. I had been a gym instructor and finally reached near my goal weight ... but the weight always crept [back] on."

Lesley tells of the cycle of deprivation and bingeing she experienced in her diet career:

> "At Varsity I learnt about Diets. Rotating carrots or grapes for weeks at a time was the madness we got up to as students. We'd fast, have liquid days, or eat

> high protein for weeks on end. Then we'd break out for double portions of slap chips devoured before we got back to res, defeated.
>
> "Diets would always start on a Monday. I would polish off all contraband that could scuttle my chances of success. By Monday I was too nauseous to eat anything. Diet already compromised, I chucked it. The guilt trip would set me off. Might as well eat – what's the use? What I did was nothing short of insanity. I ran the gauntlet of crazy diets. I consumed either grapes, just oranges or only carrots for weeks. I was now on the treadmill of yo-yo dieting, big time. I must have lost the same 25 kgs 20 times."

In critically examining her diet history, Lesley explains that she was introduced to diets at university. She explores how she and her friends would "fast, have liquid days … would eat high-protein for weeks on end". This severe restricting led to an all-or-nothing mind-set and they would "break out for double portions of slap chips, devoured before we got back to res, defeated". After university, Lesley's diet cycling continued. She describes how "diets would always start on a Monday. I would polish off all contraband that could scuttle my chances of success". She engaged in "Last Supper eating" to the point where by Monday she was "too nauseous to eat anything". She "ran the gauntlet of diets" for years, "yo-yo dieting big time" but only losing "the same 25 kgs over again – yet remaining fat".

The new methodology she was taught on Weight-Winners resonated deeply with Lesley and she experienced a fundamental change in her approach to food, eating, her body, and her weight. Through self-reflection and critical thinking, Lesley shifted from a diet-based paradigm to an intuitive eating paradigm that enabled autonomous self-directedness, hunger awareness, and mindful eating.

Caroline echoes Brenda's experience, reinforcing the failure of diets and the destruction of self-esteem they engender. In her narrative, Caroline says,

> "I remember being put on my first diet when I was 9, and 'Weight Away' was my first attempt and first failure. I really did not understand why I had to go to the Scout Hall once a week with all these old ladies and get weighed. Those meetings, looking back now, were semi-cultish. The head weight-watcher lady

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> would always give a ‘pep talk’ and brag of how she had lost weight so easily, so therefore you should also be able to. It was so shaming and humiliating.”

Caroline’s experience of continual failure on diets further reflected her despair regarding the unsustainable methodology of diets. She says,

> “I was living on and off diets, gaining more and more weight … On one of my many reconversions to being a dieter I can remember very clearly being weighed and the lady telling me I had put on 0.8 kg. I decided in that moment that maybe G-d just decided that some people can be thin and others fat. I was going to just have to accept that mine was the latter.”

6.2.3 Normalisation of all food. Analysis of participants’ narratives and interviews uncovers that through the ITAND process of normalising all food they were able to free themselves from the cycles of deprivation and overcompensation in respect of the eating of “forbidden foods”. The normalisation of all food was reflected by participants as being a significant mediator of long-term weight loss maintenance. This result is congruent with existing research by Byrne et al. (2003), who found that people who maintain weight do not engage in dichotomous or all-or-nothing thinking. They are flexible in their approach to food and avoid banning any types of food from their diet in order to prevent feelings of deprivation. Although restraint is associated with a more successful intervention, it can alternate with periods of overeating and is therefore a risk factor for developing a disordered eating pattern (Elfhag & Rossner, 2005). A rigid eating pattern, as opposed to a more flexible one, is associated with higher weight regain. An explanation offered for this is that people who have rigidly restricted their food intake and have denied themselves food that they enjoy are more likely to feel deprived and are more likely to binge-eat.

The participants in this study all reflected on how the normalisation of all foods gave them the freedom of knowing that all food is allowed, and encouraged autonomous self-directedness. Participants felt that the rigid and restrained eating imposed by diets failed as an approach in their attainment of weight loss and long-term weight loss maintenance. Participants perceived the reintroduction of all food into their lives, along with processes that ensured the normalisation of all food, as a crucial mediating factor for long-term weight loss maintenance.

Linda reflects how in the process of engaging the compassionate, loving parent, the Adult voice became louder in reasoning and problem solving with the Child, who was – due to the normalisation of all foods – given the freedom to behave without fear of deprivation or admonition. She explains,

> "I was taught to re-educate the Child to be more flexible and spontaneous. As the Child became less demanding, the once Critical Parent became more caring and nurturing. I had to keep the dialogue going.
>
> "Once I understood this dynamic it became an exercise for me to practise. As soon as the Angry Child was deprived, a binge was on the way. Do not deprive the Child. The Adult would say 'okay, one chocolate won't hurt. Why not relax with the chocolate once you've done your chores?' Attempt to bring about a win-win situation."

Lesley illuminates how the normalisation of all food was crucial in giving her autonomy over her relationship with food and overcoming the fear of deprivation that had led her internal Child to binge-eat. She elucidates that "All food being permitted – normalising all food – was also a 'foreign' concept yet it made perfect sense. All I ever wanted to be was 'normal around food'. My life had been either a feast or famine. I came to realise that I gave food the power it had over me. Bingeing was a choice. When I binged I was punishing myself. I had to become the master over food. Failing was a choice." She explains that in learning to identify true hunger and then eat with the knowledge that all foods were permitted, "I learnt to side-step the diet syndrome by depriving myself of any food. Every deprivation would set me up for another binge. I became quite adept at DELAYING GRATIFICATION." Delayed gratification is a form of internal dialogue. During this dialogue she problem-solved and rationalised with the Child voice so that she could ascertain whether a particular food at a particular time was a physiological need, or a reaction to external or emotional cues, or appetite and cravings.

Linda illustrates the way in which the normalisation of all food has become a lifelong principle for long-term weight loss maintenance: "In the years since [the Programme], I have practised the concept of always eating exactly what I felt like, listening to my body, nourishing myself instead of deprivation and embracing nutrition instead of being on a diet." To this end, she says, "it is about choosing the

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muffin and the coffee over the scrambled egg whites and the toast. Understanding what you need, for your body."

6.2.4 Mastering the process of transactional analysis. The mastery and application of transactional analysis emerged as a superordinate theme that was perceived by participants as directly mediating long-term weight loss maintenance. The processes of normalising all foods were facilitated in this study through the process of transactional analysis. Through empowering the rational voice of the Adult personality and using it to resolve the power dynamics between the critical Parent and the rebellious Child with regard to food choices, the participants developed the capacity to normalise all food. The empowerment of the internal Adult sub-personality formed the primary focus of the Weight-Winners Programme. The analysis of participants' narratives and interviews illuminates the disturbed power dynamics between the sub-personalities of the internal Parent and Child. Diets and dieting behaviour exacerbate the power struggle between the Critical Parent and the Rebellious Child, resulting in ongoing conflict, in which for some time the parent would reign supreme and the diet would be adhered to, only to be overthrown by the Child personality who felt unheard and deprived through the imposition of the dietary restraints. A continual win-lose struggle defines the short-lived efficacy of diets. To attain long-term weight loss maintenance, participants describe emancipating themselves from this power struggle through the empowerment of the Adult personality, which makes decisions based on facts and rational thought as opposed to pre-judged and often irrational meaning perspectives.

Through the process of transactional analysis, participants developed the capacity and skills to re-parent themselves. In tuning out the voice of the Critical Parent and replacing it with the voice of the nurturing, Compassionate Parent, their Rebellious Child no longer feared deprivation and criticism. By empowering the Adult voice and implementing rational thought processes and problem solving skills between the critical Parent and rebellious Child with regard to food choices, the participants developed the capacity to normalise all food. the participants learnt to mediate the power dynamics between Parent and Child, thus facilitating autonomous self-regulation and arbitration of the internal power struggle around food.

As a result of the paradigm shift which involved the rejection of diets, participants realised and harnessed their self-autonomy and are able to practise autonomous self-regulation with regard to directing their relationship with food and eating. The finding that through the internalisation of their locus of control, participants are able to self-direct, making long-term decisions and changes for themselves, accords with the findings of the research by Teixeira et al. (2012), which states that personal autonomy is an important aspect of motivation required to achieve lifestyle change identity. The degree to which behaviour is self-directed and endorsed, and the extent to which it is perceived to be a product of personal choice, rather than an obligation, is essential in determining level of motivation (Teixeira et al., 2012). The findings of this study also aligns with research findings indicating that people who failed to take responsibility for their being overweight or obese and who attributed the condition to an underlying medical cause, were less successful at losing weight and maintaining the weight loss (Ogden, 2000).

Caroline explains that making sense of transactional analysis revealed how her voices were in conflict and that once she engaged her Adult voice fully she was able to "interrupt" her "default mode around food". Through applying transactional analysis to changing her internal dialogue she was able to shift her locus of control and self-direct her eating. She explains,

> "... The inner dialogue helped me to stop, think, remember and act differently. Firstly, to just stop and activate the adult voice by asking what is going on? Am I really hungry? Why am I eating? If I am not hungry, what is going on? Do I need something else? If so, what is it that my body needs?"

She also illuminates how transactional analysis and the process of problem solving is necessary for long-term weight loss maintenance:

> "Sometimes if the mind talk is getting out of control and I'm getting into a bit of a thing about it, I hear that voice saying, well you're feeling like you've put on weight, I'll just do it to get that critical parent out of my head. And I'll weigh and I'll say, you see, there's nothing to concern, you're fine, nothing's changed. So it's just that critical parent voice of yourself … I have times when I overeat or feel unhappy with my body but I simply focus on my recovery rate;

> I engage my Adult as quickly as possible to start asking the right questions and coming up with helpful options and solutions."

Ruth encapsulates the attitude shift reflected by many of the participants once they had internalised their locus of control and begun to operate with autonomous self-regulation when she states, "This new approach was entrenched" and she began to behave in her own interests, saying "nobody was on my case but me" and "Weight-Winners was for me".

Alice describes her experience of transactional analysis and its role in normalising her relationship with food and in empowering the "adult" voice to mediate and reason around food. She explains:

> "The conversations in our heads that I call my personal 'radio Alice'. Understanding the voices of the critical parent and deprived angry child was an 'AHA' moment. And then I was introduced to my very own ADULT voice. Because I had to grow up very prematurely in my life, I was very familiar with my reasoning, good decision-making, sensible adult voice. But around food it never ever existed. I had to learn the conscious skill of finding my adult voice around food. TA was such an accessible and simple way to understand the war zone in my head."

She also demonstrates the relationship between an internal locus of control and a compassionate, kind Parent voice as follows: "What has become my greatest motivation to maintain my focus and commitment to my personal internal locus of control and eating behaviour is to be FREE of my internal mind commentary of guilt and remorse and self-deprecation." By shifting her control internally, she has the self-directed autonomy to make decisions and problem solve, without admonishment or criticism from the Parent voice. Alice also explains how she learnt to re-parent herself through empowering the nurturing and compassionate Parent:

> "With age I have become kinder to others and myself. I do tend to be very hard on myself but I'm improving my softer kinder adult voice and I know that this is a life journey of self-compassion."

Brenda illuminates how empowering her Adult voice has enabled her to modify her internal dialogue, to read her physical hunger cues, and to solve problems in situations when her Parent and Child voice are in conflict:

> "I'll be walking in a shopping centre and see a beautiful mud cake and I'll look at it and think, 'oh I could eat that right now, it looks yummy' and then I have to go into this self-talk, where I'm arguing with myself. Then I go back to the Weight-Winners thing and I say 'okay well how hungry are you right now because if you're really hungry then eat it.' Then I realise I'm not that hungry and then I will pass it by, so it isn't any longer the mother telling the child what to do, or the child being submissive … I could actually find that adult. To look at it logically and say okay, it doesn't matter whether you have it or not. How hungry are you right now?"

She continues to describe how the process of transactional analysis helped her recognise the critical parent and its effect on her weight:

> "Understanding my inner world and the power struggles around food and weight was immensely helpful. We learned that there were different voices, all with a specific agenda, in a way. I became aware that my permissive parent voice often sabotaged me being able to set healthy boundaries, and my rebellious child voice was also very powerful in getting me to go off the rails. My adult voice was nowhere to be found around food! The critical parent was expert at shaming me and telling me how ugly and fat I was."

She continues to illustrate how understanding her internal voices through this process gave her the means to better understand not only her inner world, but also to become a more engaged and compassionate parent as a mother herself. She says,

> "Transactional analysis gave me a language to better understand my inner world. This helps me even today with all my relationships and with parenting my children."

Ruth reveals how, through transactional analysis, she was able to recognise the eating behaviours associated with the conflicting voices and mediate her internal dialogue to gain back control over her relationship with food:

> “Comprehending the psychology behind my weight issues felt like an epiphany and the weight began melting off of me, pound by pound, week after week, month after month and eventually I returned to the naturally thin size I was always meant to be. Once I understand that I was feeding my deprived child, and the damage of a critical parent and punishment that had been inflicted by an angry teenager on herself, I was able to take control over food instead of allowing the food to control me.”

6.2.5 Integrating the paradigm of Intuitive Eating. The superordinate theme of the adoption of an intuitive eating paradigm emerged from participants’ narratives as a significant mediator of long-term weight loss maintenance.

Intuitive eating is a nutrition philosophy that is based on the premise that becoming more attuned to the body’s natural hunger signals is an effective way to attain a healthy weight. It introduces an approach that teaches people how to create a healthy relationship with food, mind and body in which ultimately the individual becomes the expert regarding his or her own needs and gains a sense of body wisdom, which guides eating behaviour.

The significance of intuitive eating in mediating long-term weight loss maintenance correlates with research findings that intuitive eating promotes a reduction in the preoccupation with weight, thereby enabling weight loss (Tylka, 2006). The findings in this study also align with an existing review of the results of 20 studies based on encouraging individuals to eat intuitively. The findings of this review indicates that intuitive eating promotes improved metabolic fitness, increased body satisfaction, reduced psychological distress, and the abandonment of unhealthy weight control behaviours (Schaefer & Magnuson, 2014).

The first foundation concept of intuitive eating is eating in accordance with internal cues of physiological hunger. This decision-making was based on an understanding of and a connection with the body’s physiological signals (Tylka, 2006).

In the ITAND Programme no foods were forbidden and if (through the process of transactional analysis) only a non-healthy food was deemed necessary to satisfy hunger, participants were given permission to eat any food they desired. The unconditional permission to eat when hungry and to eat any food that is desired

encourages people not to ignore physiological needs, and also to refrain from classifying foods as acceptable or unacceptable (Tribole & Resch, 1996). People who place restrictions on their eating in terms of what they may consume, how much and when, based on external criteria rather than internal physiological drives, have been found to feel deprived and hence become preoccupied with food (Polivy & Herman, 1999; Tribole & Resch, 1996). People who restrict their diets are more likely to eat even when not hungry, tend to consume more food, and in general have a higher body mass than those who do not restrict their diets (Bacon et al., 2005; Faith et al., 2004). This study found matching results to those of the above-mentioned research and found that the absence of a preoccupation with food and external criteria around food, as a result of non-restrictive and non-prescriptive eating regimes, is a mediating factor in long-term weight loss maintenance.

Aligned with learning to identify and honour their physiological hunger, participants were taught the second foundational premise of intuitive eating, which is to respect satiation. The concept of identifying satiation and the accompanying behaviour of terminating eating was perceived by participants as crucial to their attainment of lifelong maintenance. Intuitive eating, according to hunger and satiety cues, was pivotal to the ITAND Programme.

The third concept that participants were taught as part of the intuitive eating paradigm was mindful eating. Mindful eating is explored further as a subordinate theme of cognitive-behavioural strategies identified as being important mediators of lifelong weight loss maintenance.

The fourth concept that participants learned through the intuitive eating training on the ITAND Programme was how to separate feelings from food, thereby learning to eat to satisfy physiological rather than emotional hunger. Participants were coached into overcoming emotional eating by honouring their emotions without the use of food. Through psychological awareness and resolution of causes as well as the ITAND Programme’s psychotherapeutic exercises, such as the “empty chair” exercise of Gestalt Therapy, participants learned to manage emotions without turning to food.

The findings in this study with regard to intuitive eating are aligned with existing studies which found that women who scored higher on the Intuitive Eating Scale

(IES) had significantly lower BMI scores. This suggests that eating in response to signals of hunger and satiety, as well as eating without restrictive prescriptions, results in a reduction in the incidence of eating behaviours that lead to weight gain (Madden, Leong, Gray & Horwath, 2012).

The defining concepts of intuitive eating – the when, the why, the what, and the how much of eating – are considered in the ITAND Programme to work in conjunction with each other and are all deemed essential to the successful implementation of the intuitive eating paradigm.

The other key principles in Intuitive Eating are internalising the locus of control and mediating the internal dialogue. These concepts are established as superordinate themes in the process of transactional analysis and are reinforced in the adoption of an intuitive eating paradigm. When eating intuitively, the internalisation of the locus of control manifests as eating in accordance with their own physiological hunger and needs, rather than according to the dictates of environmental, emotional, or situational triggers (such as rigid meal times). The normalisation of all foods is activated as the understanding of the body's signals for a specific food, disregarding conceptions of what is deemed "healthy" or "low-calorie" or "forbidden". Through the intuitive eating paradigm, the participants learnt to select foods in response to their natural wants and internal signals.

The selected quotations from participants' narratives and interviews in the section that follows reflect their perception of the role of an intuitive eating paradigm as constituting the cornerstone of long-term weight loss maintenance.

6.2.5.1 Identifying hunger. It emerged clearly from the participants' narratives that generally, their past eating patterns were determined by external factors rather than the body's own hunger signals. In discovering why and when they engaged in non-hunger eating and through learning to gauge hunger, participants were able to discern physiological hunger from other emotional or situational eating drivers. The participants expressed that this was a breakthrough as many of them did not have a concept of physical hunger. This result echoes existing literature (Daily, 2014), which states that naturally thin people cease to eat in response to fullness rather than environmental cues. It is also in accordance with literature on the Intuitive Eating approach, which emphasises eating in response to internal cues of physiological

hunger and satiety, rather than the cognitive monitoring of food and calorie intake (Kratina, 2003; Tylka, 2006).

Alice illuminates her transition in learning to identify physiological hunger while still eating according to imposed directives that had previously regulated her eating behaviour:

> “Hunger?? What was hunger?? I truly never considered hunger as a variable in my entire life experience around food until the WW programme. I was entirely dictated to by the availability of food; by the time of day – whether it be breakfast, lunch, supper, or 'snack time'. I fell in love with being hungry and have stayed in love with the feeling for evermore … I'm proud to say, ‘I'm hungry’. And it gives me the opportunity to choose whatever I want to fulfil that hunger.”

She continues by illustrating the way that gauging hunger and being mindful of what she wants to eat has become an internalised strategy: “I can say that what became an unconscious skill is knowing hunger, knowing that I can eat the food I love, not being afraid of food, and making the right choices when I do eat.”

Kate echoes the revelatory experience of learning true hunger: She says, “One of my very first breakthroughs came when I had to record levels of hunger. I realised that I honestly did not know what ‘hunger’ felt like.”

Brenda describes how, by being mindful of her physiological hunger, she is able to self-monitor her eating in accordance with her physical needs. When confronted with a previously tempting food, such as cake, she is able to engage in an internal dialogue to differentiate physiological hunger from temporary craving. She describes how in this situation:

> “I realise I’m not that hungry and then I will pass it by … It’s more, I look at how hungry I am and then I can make up my mind, and if I am really hungry I’ll have it. Believe me, I’ve had some disgusting things to eat when I’m really hungry.”

This behaviour extends to her overcoming preconditioned food-related cues. She explains.

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> “I open the fridge and I look at something. I get milk out for my daughter’s tea and I look at everything in the fridge and I think ‘oh that looks nice I should have some of that.’ Then I think ‘no, hold on – how hungry are you’ and I just close the fridge.”

Caroline also illuminates the process of eating in accordance with true hunger as opposed to external cues. She realised, “I did not need to eat if I was not hungry, oh what was hunger? I had always just eaten whenever there was food.” She identified the negative habits that she had developed around food as a result of unconscious eating or eating in response to external cues, saying,

> “I also realised that I ate when I was stressed/bored or just because it was meal times. I also learned that I finished everything on my plate always and went back for seconds.”

Kelly describes self-directing her eating through the use of a hunger gauge:

> “I had internalised the mantra: Are you hungry? On a scale of 1-10, how hungry are you? Are you hungry for savoury or sweet?”

Lesley explains that, for her, the concept of recognising true hunger “has become like breathing”. She describes the relationship between true hunger and respecting satiety as a principle she could make sense of easily:

> “Eating only when hungry was the easiest principle for me to adopt. I would wait for the “burn” to eat any food, and stop before I was stuffed. I learnt the difference between appetite and hunger. Meal times were artificial events.”

6.2.5.2 Respecting satiation. In practising mindful eating, participants learned to stop eating when they feel satisfied, as opposed to continuing until they feel full. Eating slowly and being aware as well as continuously gauging their hunger were key processes in learning to respect satiation, which centred primarily on the principle of stopping when physically satisfied and making peace with discarding food.

Caroline reveals how the principle of respecting satiation was previously non-existent for her, but she realised that by being able to recognise her satiation and control her intake, her relationship with food had truly changed. She recounts:

> "I clearly remember a meal at the famous Ma Cuisine restaurant in Rosebank, I ordered the chocolate mousse and it was delicious, half way through the serving I realised that I did not need anymore. I sent the rest back; the chef came to find out what was wrong with his chocolate mousse. He was so offended; no one ever leaves this chocolate mousse, he said! In that moment I realised my relationship with food had changed forever! I had taken back the control. This felt like something I could do for the rest of my life."

Kate describes how the process of recognising satiation was related to the normalisation of all foods and the undoing of her fear of deprivation:

> "Not only did this experience give me the authority to eat what I wanted; it freed me to stop when I was full. I knew I could have them later or tomorrow, so I did not feel deprivation if I stopped."

6.2.5.3 Eating mindfully. Linda says that eating mindfully allowed her to relinquish the habit of eating until her plate was empty rather than respecting her satiation:

> "This simple rule to calmly acquaint oneself with the food is psychologically so satisfying that one might be averse to eating full portions to clear the plate as a course of habit. Some days I only eat half the meal and still feel satisfied; I become so satisfied with the enjoyment of it that only a little goes a long way." She continues to illustrate the relationship between mindful eating and the normalisation all foods, "I learned from Weight-Winners to focus on only eating the kind of food I found most palatable and that made me feel mentally and physically satisfied."

6.2.5.4 Eating cessation. The results of this study in regard to eating cessation illustrate the effectiveness of this strategy in mediating long-term weight loss maintenance. In learning to control the amount of food intake by stopping when they have reached satiation, through tuning into their self-regulatory system and using their hunger gauge, participants reflected that they became comfortable with the concept of stopping eating even in the presence of food on their plates.

Alice explains that she is aware that the concept of leaving food once she is satiated is a skill she still struggles with:

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> “My challenges that I still need to work on with unconscious overeating are talking on the phone and the availability of food. I still need to reassure myself that I can throw the cake away or give it away because the only person tempted to eat it in my home is me.”

However, she says that the concept of leaving food is still “remarkable” for her:

> “Maureen also taught me that even if I’m just eating a sucking sweet or peppermint I don’t have to finish it all. I will never eat a whole sweet now. I get the taste and throw it away. Even such a small thing as a sweet is a choice of ‘how much’ I eat.”

Kelly illustrates how the experience of seeing a black bag heavy with food that they would otherwise have eaten, past the point of satiation, allowed her to visualise the principles behind leaving food:

> “When that black garbage bag was passed along the table ... That full black bag that was weighed down with food. Food that could have been in our bodies ... THAT was IT! ... From that day onwards, I never finished a plate of food.”

Lesley reflects on how the concepts of honouring emotions without food and delaying gratification have assisted her in leaving food behind. She recounts how:

> “There’s a two-litre container in the deep freeze now. I’ve had some of that yesterday but why must I eat the whole thing. Now I would have eaten the whole thing before.”

This anecdote reflects that she is comfortable leaving food behind, rather than finishing everything in an attempt to satisfy cravings or emotional needs.

She continues to say that she now behaves normally around food; she is now “normal like other people” and, she can take one bite and put it down; “(before) I would eat the whole thing”.

Kelly reveals how the act of rejecting and discarding food (during the Group Meal Exercise) marked a turning point in her eating behaviour with regard to her ability to leave food behind when satiated: “I never looked back. From that day onwards, I

never finished a plate of food. I never ate according to regimens. I felt no need to finish the plate. I had no reason to adhere to the illogic of eating traditions."

6.2.6 Overcoming emotional eating. Researchers Gormally and Rardin (1981) maintain that it is not the amount of stress in a person's life that serves as a precursor to weight regain, but rather their ability to cope with the stress, that is of greater significance in emotional eating. Aligned with existing research findings (e.g. Leach, 2006), it emerged from this study that many participants previously used food in an attempt to deal with emotions. However, through the ITAND Programme they learned how to identify and express their feelings, thereby separating emotions from a food-related context.

In learning to honour, express and resolve their feelings, they were able to overcome emotional eating and adopt normalised eating behaviours, which enabled the recognition of true, physiological hunger as opposed to emotional hunger. In this process, it was crucial to develop and edify the participants' emotional efficacy, that is, their ability to not eat because of emotional states. The findings in this study thus resonate with the experiences of weight loss maintainers as having the ability to cope with emotions without resorting to food. This is a primary differentiating factor to regainers, as a commonality found in people who regain weight is the tendency to soothe negative emotions and stress with food and eating (Byrne et al., 2003; Gormally & Rardin, 1981; Kayman et al., 1990; Raman et al., 2013).

The participants in this study are aligned with research that indicates that overweight people who learned to cope better with emotions and cravings through implementing direct coping and corrective methods in a relapse situation, are more successful at maintaining their weight loss than those who continue to use food for comfort (Dohm et al., 2001; Ferguson et al., 1992).

Alice describes how the skills she acquired to manage and express her feelings instead of engaging in emotional eating have become an integral part of her lifestyle. She describes now living "an emotionally conscious" life after gleaning early on in the programme "that if I felt emotionally vulnerable or angry then overeating was a great mechanism to not look at the real issue going on and transferring the feeling into self-hate and disgust and remorse, which was more comfortable than having to confront the person I was angry with or sad about. Overeating at that point just

deleted the original trigger. Now, I am so acutely in touch with my emotions that I deal with them immediately and not at my own expense."

She continues, explaining how she has overcome eating in response to her emotions by finding non-food-related processes:

> "So much of my emotional relief now comes from reading books and journals, interacting with my children, working in the garden and listening to wonderful meditations and podcasts."

Lesley illuminates that through the programme she developed the insight that "food eaten for emotional triggers did not satisfy me" and that "chocolate could not solve my problems". In reaching this realisation she was able to use psycho-therapeutic skills to address her emotions, rather than seeking respite in food.

Kate provides affirmation for the importance of recognising and confronting emotional eating:

> "I discovered that my eating patterns were based on expected meal times; socialising, boredom and anxiety, and my need to be nurtured." She continues to say, "I was really stunned to find that the food was not the issue – the real issues were exposed, these being situational and emotional triggers. This was such an eye-opener and ultimately liberating."

It is this awareness of emotional triggers and correct management of them (without food) that factored in the mediation of her long-term weight maintenance.

6.2.7 Cognitive-behaviour modification strategies. Strategies and skills based on cognitive-behaviour therapy (CBT) comprised a significant part of the ITAND Programme. Cognitive behaviour therapy is a treatment approach that focuses on changing how the person thinks, how the person acts, and the circumstances that surround the person. All the participants in this study described the learning and integration of cognitive behavioural strategies as being integral to their initial weight loss and of even more significance in the process of long-term weight loss maintenance. Participants narrated the specific strategies and behavioural changes that were crucial to their weight loss processes, which have been classified in this study as subordinate themes.

The subordinate themes that emerged in this study support previous research findings, demonstrating how the improved outcomes of weight loss treatments that are based on cognitive-behaviour modification can assist people with lifestyle changes through enabling them to develop ways of thinking as well as strategies and skills to achieve and maintain weight loss.

The cognitive-behavioural changes that emerged as being of significance in the attainment and long-term maintenance of weight loss include realistic goal setting, planning, nutritional knowledge, exercise, mindful eating, planning, as well as discarding food.These processes, strategies and skills are explored in the subsections which follow.

6.2.7.1 Mindful eating. Research indicates that through learning and improving mindfulness in regard to food and eating, individuals can alter their eating responses rather than continue habitual behavioural patterns that may be inconsistent with their goals and health needs (Emery, Olson, Lee, Habash, Nasar, & Bodine, 2015). In analysing the mindful-eating behaviour of participants who were successful in attaining long-term weight loss maintenance, mindful eating involving the ability to pay close attention to physiological signals and related eating behaviour emerged as a subordinate theme mediating long-term weight loss maintenance.

Caroline explores mindfulness as a behavioural modification strategy that she acquired through the structured interactive group meal, which she describes as having enabled her to eat mindfully and to permanently change her childhood eating scripts:

> “We needed to taste the food ... The way I eat ... Small bites, savouring each mouthful, putting my knife and fork down between every bite. They stay down until that mouthful is finished, at which point I will pick them up and prepare the next mouthful.”

She further illuminates her practice of mindful eating:

> “Mindful eating. We were instructed to bring some food for our group meal … the experiential meal would provide more skills to understand our relationship with food. There was a banquet of food. Participants brought all sorts of delicious food, no diet food to be seen! The meal engaged all our senses and

> provided real practice with all the tools, including the inner dialogue … We needed to taste the food and eat mindfully, learn to chew and really enjoy the food. This was another ‘aha’ moment for me, as growing up, I learned to eat very fast. I put this skill to practice immediately and had fun leaving food on my plate.”

Linda describes her ongoing implementation of mindful eating, specifically centring herself and engaging all of her senses:

> “Since I’d given myself license to eat a muffin at breakfast that meant I needed to pause and focus my attention on plating the muffin, sitting down, and observing the impending meal for a few seconds to stimulate appetite. It is important to take pleasure in perceiving the sight, aroma and texture of the meal you are about to eat. This simple rule to calmly acquaint oneself with the food is psychologically so satisfying that one might be averse to eating full portions to clear the plate as a course of habit. Some days I only eat half the meal and still feel satisfied; I become so satisfied with the enjoyment of it that only a little goes a long way.”

6.2.7.2 Flexible goal-setting. Once the participants experienced a paradigm transformation and adopted an anti-diet paradigm, they perceived long-term weight loss as an ongoing process and reached the realisation that there is no shortcut to achieving permanent weight loss. As a result, the participants learned to set realistic goals, which constituted a significant behaviour modification strategy for attaining long-term weight loss maintenance. In setting realistic goals, which always involved a weight range rather than an exact weight, participants recognised the need to exercise patience and self-reassurance, which contrasted sharply with their previous diet-based behaviour.

In managing their expectations and setting realistic goals, participants focused on aspects such as improved self-confidence, an internalised locus of control, health, and an improved self-esteem, as well as eating behaviour changes which could be sustained in the long term.

Complementary research suggests that realistic goal setting is an important component in the maintenance of weight loss. Weight loss expectations include a

desired weight, but also aspects such as increased self-confidence, assertiveness, attractiveness, appearance, and health (Ohsiek & Williams, 2011). Unrealistic weight loss expectations have been demonstrated to be highly prevalent among people attempting to lose weight, and negatively impacts their ability to maintain weight loss (Elfhag & Rossner, 2005). People who have successfully managed their weight in the long term have been found to have achieved a self-determined goal weight (Byrne et al., 2003; Jeffery et al., 1998; Marston & Criss, 1984). An important aspect of weight loss maintenance, as reported by Byrne et al. (2003), is that a greater proportion of people who maintained their weight loss reported feeling satisfied with a lower weight even if they had not attained their weight loss goal. This satisfaction resulted in improved appearance, health and self-esteem.

Alice reflects on her satisfaction resulting from improved appearance and self-esteem, along with process-driven, rather than finite goal-oriented, behaviour. She explains, “I have carried with me and loved the concept of quieting the urgency to lose weight. I call it ‘slow and steady’. That is my mantra.”

She continues to illustrate the benefits of short-term goals in maintaining motivation:

> “Instead of setting long-term goals, what works for me is ‘can I manage this moment right now?’ And when the next moment arrives of not being hungry and wanting to eat or standing and picking at food, I just say to myself, ‘You only have to manage the here and now, Alice.’ And that feels manageable.”

Caroline illuminates the effect that the programme’s holistic approach has on her self-esteem, revealing her satisfaction at having a normalised relationship with food rather than having reached a predefined weight:

> “I am not a thin ‘babe’ but that was never my goal. I have strong values and boundaries around food; I am not prepared to be fat for anyone or thing. I have times when I overeat or feel unhappy with my body, but I simply focus on my recovery rate, I engage my Adult as quickly as possible to start asking the right questions and coming up with helpful options and solutions.”

Linda encapsulates the profound effect of realistic goal-setting when she describes how her weight loss journey was not centred on a preconceived number on her

scale, thereby reflecting the way in which the programme's processes are defined by transformation. She explains:

> "I lost the extra kilos and my weight settled at a comfortable place. It may not be the number on the scale I thought I wanted it to be, but it was the number my body feels comfortable with. Consequently, I am enthusiastic and energetic. It is comforting to know that I enjoy what I eat, I am never hungry or deprived and best of all, my body weight is stable."

6.2.7.3 Planning. Although not mentioned frequently in the literature, planning emerged as an important aspect of achieving successful weight loss maintenance (Metzgar et al., 2015). Planning is a skill that takes time to develop and maintain, and is intrinsically linked to mindfulness and an awareness of food choices and energy intake. Although planning is very important for weight loss, participants also acknowledge the time-consuming nature of such preparation. Planning ahead allows for the managing of special events and holidays. People who were able to plan ahead and brought their own food to social events had greater success with weight loss and weight loss maintenance. It was also reported that it was important for the participants to be "mindful" about what they were eating (Metzgar et al., 2015).

The findings of this study are in accordance with existing research findings, for instance Metzgar et al. (2015), that interventions should target planning skills in order to help people become mindful about food intake, energy expenditure, and the nutritional content of food. It is also important that these interventions provide planning skills that are simple, practical, and provide structure (Metzgar et al., 2015). In line with this literature, the ITAND Programme emphasised planning (food shopping, preparation, and planning food intake around social events and holidays) as a strategy for long-term weight loss maintenance.

Alice illuminates how strategies around planning her meals and managing her hunger assist her in mindful eating:

> "I plan to be hungry when I know there's a good meal ahead and I've been cautious in the day to allow me the leeway to eat what I want … What transformed permanently for me in my eating control strategies is that when I am 'on track' I will always plan to be hungry for my food and make every

> single meal that I eat an occasion. I will never ever waste my hunger on a below par meal."

Linda echoes the importance of behavioural strategies around shopping and planning food intake:

> "I got into the habit of planning my weekly shopping ahead of time. I always write down a list of ingredients linked to specific meals and snacks I plan to eat. By planning in advance on how I am going to manage my week, I ensure that I am now prepared."

She also illustrates how planning her eating schedule around social activities and planning her nutritional intake is a key behavioural strategy. In part, she maintains her weight loss by "taking into account my activities for the week and allowing me to carefully assess when I can eat clean and when I need to give myself leeway on my food or alcohol intake".

6.2.7.4 Portion regulation. Portion regulation emerged as an important aspect of weight loss and weight loss maintenance. Once the participants were able to recognise the distortion in their portion sizes, they were able to reduce their portion size, and this resulted in weight loss and weight loss maintenance (Elfhag & Rossner, 2005; Metzgar et al., 2015; Sciamanna et al., 2011).

Brenda describes how she learned to modify her portion sizes by "using a loose fist to compare portion with stomach size". She has applied this strategy in her daily eating behaviour by "only ever using a small plate at home for dinner (fish plate rather than a dinner plate)".

Ruth illuminates the effectiveness of portion regulation to enable her to gauge satiation, which was crucial to enabling her weight loss and maintenance thereof:

> "I learned about portion control, simplified the concept by eating smaller portions; by just using a smaller plate and avoiding eating to the point of feeling full, I started trying to eat to feel satiated."

She continues to illustrate how portion control is helpful in maintaining her long-term weight loss:

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> “I maintained my weight … I don’t ever go and have a big giant portion of something, because I will always choose the smaller plate. It’s just such a natural thing for me.”

Kelly illuminates how learning about portion control has led to a lifelong transformation in her eating behaviour:

> “Significantly, to this day my friends only know me as Kelly who eats 1/3 of a meal and walks out with a takeaway – which lasts for two more meals. I taste my food, savour it; declare I am starving before a meal ... but do not eat the plate empty.”

6.2.7.5 Discarding food. The strategy of gauging satiation and discarding excess food once the point of satiation has been reached, emerged as a significant behavioural strategy for participants in their attainment of sustained eating behaviour change and lifelong weight loss maintenance.

The acquisition of behaviour modification strategies on the ITAND Programme was facilitated through a participative group meal exercise in which participants were guided through a buffet eating experience. This meal provided a real-life learning opportunity where participants were provided a guided opportunity to practise the implementation of intuitive eating principles as well as portion control, discarding food on reaching satiation and mindful eating. Alice explains that the exercise requiring her to empty her leftover food into a garbage bag when she had reached a point of feeling satiated, in spite of it meaning wasting food, marked a turning point in her learning to change her eating behaviour.

She describes the group meal exercise, where the heavy garbage bag that contained all the leftover food disposed of by participants was passed around the group to allow each person to hold and feel the weight of the food that would have been collectively consumed by all participants if they had eaten beyond the point of satiation. The weight of the bag of disposed food was alarmingly heavy and provided a defining moment for participants and enabled their eating behaviour change. Alice expresses this defining moment when she explains how “... the REAL LIFE experience of eating a meal together at this session had the greatest impact on me

of the whole programme. The black rubbish bag filled with leftover food is an unforgettable vision".

Brenda succinctly describes the impact of the concept of discarding food when she was no longer hungry, which she reframed into the adage of "waist or waste".

This concept expressed that once she was no longer hungry, she perceived the food as being no more wasted when discarded into a bin than if it was being discarded into her body, where it would only result in an ever-increasing waist – a reality that she had learned to overcome through behaviour change.

Brenda explains that in the years following her participation on the programme, she has used the simple adage of "waste or waist" to assist other women in overcoming weight difficulties: "Waste or waist. I have even helped a few friends with young children lose their pregnancy weight with this simple concept."

6.2.8 Lifestyle transformation. Lifestyle transformation was experienced by participants as involving an integration of their acquired skills and processes as well as overcoming exercise resistance and gaining nutritional knowledge.

6.2.8.1 Nutritional knowledge. A subordinate theme that emerged in the integration and ongoing implementation of behavioural strategies was the acquisition of nutritional knowledge and the enablement of healthy eating. The ITAND Programme's nutrition education was positioned as a cognitive behavioural strategy to facilitate guidance in regard to selecting the healthiest nutritional option to satisfy hunger through being mindful of food intake, energy expenditure, and the nutritional content of food, as an ongoing process of modified eating behaviour. While the nutritional module encouraged the selection of healthy food whenever possible, it remained accommodating of the principle of no food being forbidden or withheld, and participants were empowered to self-direct their nutrition.

The findings that emerged in this study in regard to nutrition concur with existing research findings that maintainers of weight loss reported feeling more in tune with their bodies and as having an increased understanding of their nutritional needs and food desires (Byrne et al., 2003; Hindle & Carpenter, 2011).

Caroline explains the positioning of nutrition in the context of an anti-diet paradigm:

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> “Having been on so many diets I thought I knew a lot about food, but one session which did appeal to me was run by a nutrition expert and the approach was different.” She continues by saying, “The idea was now that you are not going to give up any foods but be normal around food and start to make better choices that will support your goals … No forbidden list, but instead empower yourself with knowledge about the amount of energy food has, so that when you are hungry you can make more helpful decisions.”

Ruth describes how the behavioural strategies regarding nutrition she acquired edify the anti-diet approach, and assist her in not creating feelings of deprivation: “In the years since I have practised the concept of always eating exactly what I felt like, listening to my body, nourishing myself instead of deprivation, and embracing nutrition instead of being on a diet.” So integrated are the strategies of sound nutrition that she refers to herself as “the go to person, who people ask what is healthy to eat”.

Kate illuminates how improved knowledge of nutrition was significant in assisting the internalisation of her locus of control with regard to the types of food she ate:

> “Now that I had real tools and was in control I began considering healthier options. I ate smaller portions, stopped when I was full and introduced fruits and vegetables into my meals. I ate nuts for snacks, all of which was previously unheard of. Previously, the only vegetables I ate were rice and potatoes – now I find myself looking for and eating broccoli, cauliflower, beans, spinach and butternut.”

Kate’s example also reflects the behavioural changes that occurred; she was consciously seeking foods with higher nutritional values and making healthful decisions.

Through the nutrition education module, Linda describes acquiring the knowledge and skills to enable her “mission” to “incorporate only the best quality, most delicious and healthy foods available”. She has learnt that “if I give my body the right fuel it will perform optimally”.

6.2.8.2 Exercise. The inclusion of exercise to enable improved physical and psychological health, as opposed to the end goal of weight loss and weight loss

maintenance, emerged as a subordinate theme mediating long-term weight loss maintenance.

This result accords with existing literature that states that exercise (all forms of physical activity and not restricted to formal exercise programmes) is considered in obesity research as one of the most critical factors in mediating long-term weight loss maintenance (e.g. Klem et al., 1997; Mann et al., 2007). Research has demonstrated that exercise as a treatment for obesity is more beneficial than diets alone, and that adding exercise to interventions is shown to increase the efficacy of diets in the maintenance stage (Glenny et al., 1997; Paez & Kravitz, 2002). Researchers consider exercise to be one of the most important factors in sustained weight loss (e.g. Klem et al., 1997; Mann et al., 2007).

On the ITAND Programme, the exercise module functioned to assist participants in overcoming exercise resistance so that they could incorporate some form of physical activity into their lifestyle in order to benefit their health. All the participants who attained permanent weight loss maintenance, perceived incorporating exercise into their lifestyles as a health benefit rather than as a weight control strategy, and as being of primary importance. This finding supports the research, which demonstrates that exercise, by facilitating a healthier and more active lifestyle and also promoting other aspects of wellbeing, can lead to positive behaviour changes influencing weight loss maintenance (Phelan, Wyatt, Hill, & Wing, 2006). Elfhag and Rossner (2005) found that the move away from a sedentary lifestyle and having self-efficacy related to exercise was a positive predictor for weight loss maintenance, while perceived resistance to exercise and poor compliance with exercise was related to later relapse (Elfhag & Rossner, 2005).

Alice illuminates the indirect positive impact of exercise as a behavioural modification strategy through mediating emotional vulnerability, which triggers emotional eating. She refers to the release of “feel-good endorphins” and a sense of “self-empowerment” as significant factors in overcoming emotional eating, and explains as follows:

> “Being a medical doctor who works with women suffering from postnatal depression I cannot encourage both aerobic and weight training exercise enough. There is nothing better than having a physically strong body to carry

> emotional vulnerability. You just don’t feel as frail physically and that is huge when you are so emotionally frail. The impact … is immeasurable.”

She continues to illustrate the strategies she implements in overcoming exercise resistance, the result of which is increased self-esteem and feelings of overall health:

> “The first and greatest step towards exercise for me is finding something to wear that feels comfortable. This sounds ridiculous to a thin person but when you are overweight it is a trauma to get dressed for gym. I still find that once I’m dressed, then getting to gym is easy. I have always enjoyed being strong but my exercise goes in cycles of intense commitment, an injury or illness, a hiatus for weeks, and then back to my commitment and rhythm. I am so deeply grateful that my body has the ability to be fit and strong. I absolutely love being strong.”

The way in which she self-corrects her exercise routine after periods of inactivity is evidence of the ongoing application of behavioural strategies around exercise.

Brenda reflects incorporating exercise for health and psychological wellbeing as opposed to weight loss for itself. Key to her implementation is the naturalisation of exercise as part of her daily life. She says:

> “I exercise more to reduce my stress and everything else. I do a lot of walking; I walk the dogs every day, and whenever I’m on holiday I do two or three hours’ solid of walking, just for sightseeing more than anything. I have never used exercise as weight loss. I just use it for de-stressing and I know it’s good for my legs. I’ve walked all my life. I don’t jog or anything. I don’t go to gym.”

Crucial to Brenda’s successful integration of exercise is the absence of all-or-nothing thinking, in which the only exercise deemed valid would be formal programmes or high-intensity activities.

Caroline echoes the behavioural strategy of naturalising exercise for health and disassociating it from weight loss. In the past, she said she was

> “... too ashamed to go to a gym and have people judge me." On engaging in the programme, she says, “I soon connected the positive benefits of exercise and still see this as a very important part of being healthy, not just keeping

> thin. I also connected to the fact that while exercise is important it should not be the method of weight loss. This means that if I could not exercise I am still in control of my weight and body."

Ruth also reflects how the incorporation of exercise is a naturalised behavioural strategy centred on her daily life, rather than a formalised solution to weight loss. She says:

> "It played a role, but not as majorly as when people get on to the whole 'I am going to lose weight and then massively exercising and working out like a mad woman'. My thing is I walk daily, a lot. So it just became incorporated into my lifestyle, as opposed to forcing myself to be at the gym for hours. And I do yoga and do Pilates, and I do all these things, but I don't, I didn't force myself into it. It just became natural."

Kate references how the implementation of behavioural modification strategies in perceiving her body helped her overcome exercise resistance. She says that the elimination of qualifiers, such as clothing, allowed her to enjoy her exercise without negatively impacting on her self-esteem. She says about her starting karate:

> "It was a major step for me, and one of the main reasons I was able to take the plunge, despite my weight, was due to one of the cornerstones of Karate teachings – all students wear the same outfit – the white karate suit called a GI. This is intended to ensure that all students are equal, which was such a cathartic space in the daily 'struggle' of life."

In this way, she no longer perceived herself as inferior in terms of exercising, and she could focus on the principles of karate for health and wellness. She says:

> "There was no competition around clothing; who was the slimmest; prettiest; strongest; it was all about learning the karate syllabus. This gave exercise a purpose and meaning, which I could relate to."

Lesley reveals the significant impact that incorporating exercise had on her life in the long term. She explains, "I discovered just how much I enjoyed exercise." She describes the transformation in her relationship with exercise from what was once a

“nightmare” to being a “passion” – so much so that now her “whole life is health and fitness”.

At 63 years old, she is now a qualified spinning instructor and has transformed her physiological wellbeing to the extent that her “biological age is 48 years”.

6.2.9 Construction of weight loss maintenance as a dynamic process. Reilly et al. (2015) state that due to the nature of society, weight loss maintenance, even for people who are considered to be primary weight maintainers, is no longer a passive process but requires constant cognitive attention in order to maintain a healthy weight. In this study, weight loss maintenance emerged as a dynamic and ongoing process requiring continued self-reflection and ongoing awareness as well as implementation of the appropriate cognitive processes and behaviours supporting weight loss maintenance.

Weight loss as a dynamic process constituted a superordinate theme in this study. This finding is supported by weight loss maintenance research that describes weight loss maintenance as an “ongoing process” (Metzgar et al., 2015, p. 4). In a study conducted by Sarlio-Lähteenkorva (2000), participants viewed constant vigilance and permanent behavioural changes as paramount in weight loss maintenance. In addition, weight loss maintenance has been found to be an unstable state where there is a constant risk of weight regain (Metzgar et al., 2015; Sarlio-Lähteenkorva, 2000).

In this study, the construction of weight loss as a dynamic process comprised a number of emergent subordinate themes, namely cognitive flexibility, conscious and unconscious application of processes and strategies, weighing and self-monitoring.

6.2.9.1 Cognitive flexibility. In this study, the development of cognitive flexibility refers to the enablement of thinking in a fluid, non-binary way that accommodates variation, as opposed to the all-or-nothing thinking characteristic of the diet mentality. The flexibility of cognitive patterns forms part of a different, and far broader, philosophy around weight – a shift that is fundamental to lifelong weight loss maintenance. Flexibility in determining what, when, and how much to eat, as well as developing a flexible maintenance weight range, emerged as an essential mediating process for long-term weight loss maintenance.

The development of cognitive flexibility as an essential mediator of permanent weight loss maintenance accords with current literature that defines cognitive flexibility, in part, as not engaging in dichotomous all-or-nothing thinking. People with a dichotomous thinking style perceive failure to achieve unrealistic weight loss goals as a total failure and any weight loss that has been achieved is considered unsatisfactory. Due to their catastrophic framing of and disappointment with weight loss achievement, people with a dichotomous thinking style are highly unlikely to remain motivated to maintain weight loss (Byrne et al., 2003).

In this study, the development of cognitive flexibility included flexible thinking in regard to what, when, and how much to eat, as well as normalising all food in order to prevent feelings of deprivation. This was recognised as alternating with periods of overeating and as a risk factor for developing a disordered eating pattern.

The development of cognitive flexibility also included the acceptance of a flexible maintenance weight range, whereby participants defined their weight loss across a weight range rather than a set point. As a result of acquiring cognitive flexibility, the participants view weight regain and lapses in eating behaviour as a normative part of the weight maintenance process, rather than failure.

Alice illustrates the dynamic nature of her maintenance journey by explaining how she has allowed her eating to take on a more fluid nature in which she no longer engages in diet-thinking, but instead adopts the principles of Weight-Winners in a holistic manner to self-direct her weight by giving herself leeway (both in terms of her weight and her eating behaviour) without judgement or self-shaming.

The accomplishment of her initial weight goal assisted her in mediating her weight loss maintenance in the long term because she gives herself a weight range rather than a set number. She explains: “I am loving looking at the goals I set 20 years ago and I have truly met them all. I have achieved my goal weight within my 2-kg range. I am now on my 58-kg high but I know it’s well-warranted and I take full responsibility for it … If I expect myself to be perfectly in control around food I will disappoint myself and start my diet destructive cycle.” In this way, she is able to self-manage her eating behaviour in accordance with her lifestyle, reflecting the dynamic nature of her long-term weight loss maintenance.

She describes how she utilises cognitive flexibility:

> “What I allow myself is that during the week I attempt to be 80 per cent ‘on track’ and 20 per cent ‘off track’. On the weekend I allow myself 60 per cent ‘on’ and 40 per cent ‘off’. This is my reality because I live an observant Jewish life and food is so central to it every single Friday night and Saturday morning that I needed to find my personal leeway within it. If I expect myself to be perfectly in control around food I will disappoint myself and start my diet destructive cycle.”

She further describes how this flexibility helps her avoid all-or-nothing thinking:

> “Today I had a slip emotionally and it was a very typical one of my lapses … What I am grateful for is that I no longer go ‘off the rails’. I slip into my 60:40 ratio and then get back to my 80:20 ratio as soon as possible.”

Caroline explains how setting her own parameters around food and weight maintenance assist her in the long term:

> “I have strong values and boundaries around food; I am not prepared to be fat for anyone or thing. I have times when I overeat or feel unhappy with my body but I simply focus on my recovery rate, I engage my Adult as quickly as possible to start asking the right questions and coming up with helpful options and solutions.”

Linda explains her process of setting short-term goals and achieving them:

> “I always remember one day, one week and one kilogram at a time. If I veer off track occasionally, I start my Weight-Winners rules again.”

With regard to a flexible maintenance weight range, it emerged that the majority of the participants realised, and are comfortable with, the natural behaviours of their bodies and weight ranges, reflecting the programme’s long-term, holistic approach.

Alice explains how the processes and skills she has learnt have helped her maintain her weight without fixating on a set number or eating regime:

> “I am so grateful to Weight-Winners for empowering me with the skill of how to love my food and eat it. I have stayed within a 2-kg range of gaining and

> losing the weight for 20 years now. People get amazed how I can eat what I do and not put on weight."

She has also internalised her mantra of "slow and steady" in setting realistic goals and working toward them with flexibility and compassion. She explains:

> "My weight does vacillate 2 kg up and down. The way it works is that I get back to 56 kg and then I think I'm completely naturally thin, then I start eating with total abandon and go up to 58 kg! I have a sense of humour about it even though my anxiety does increase when I hit 58 kg. That's when my mantra of 'slow and steady' carries me."

In this way, Alice reflects the notion that a flexible weight range prevents minor weight gains from becoming complete relapses – a primary characteristic of an anti-diet approach.

Brenda describes this flexibility as follows: "… (my weight) does fluctuate and I have no problem with that," reflecting that the feelings and assumptions that she internalised as a reflection on her character no longer hold true, and she is able to manage her weight without negative self-talk.

Linda acknowledges the natural fluctuations in her weight as a result of factors beyond her control over her eating behaviours, and allows herself to experience her weight range without anxiety. She explains:

> "I allow two to three kilos fluctuation either way. It's always, I mean it's especially for a female because it depends on that time of the month, so your body ranges, and I know my premenstrual cycle, I always eat more, crave more, and post-menstrual cycle, I eat less, crave less. I weigh the most leading up, and weigh the least kind of like afterwards, and somewhere in between it's just, that's probably the range. My body automatically fluctuates, and yes, I go on a December holiday and it ranges out. And then I come back and I hope it ranges back in."

She also illuminates the way in which a flexible weight range allows her to revel in her improved self-esteem, self-care and health, without fixating on a predetermined number:

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> "When I was at my lowest weight… I just couldn't maintain it there. I felt amazing, everything just looked amazing, but I just couldn't maintain it, and then, as the scale climbed, I started losing control of the situation and eating more, weighing more, panicking more. Now I weigh a little bit more, and panic less. It is about just looking at yourself in the mirror and saying, you know what, I am actually okay, I look – I am healthy, I feel healthy, I exercise, I eat my fruit and vegetables every day, I feel like I have lots of energy, so it's about a feeling, not a number."

6.2.9.2 Conscious and unconscious implementation. Participants experienced weight loss maintenance as comprising both the conscious (deliberate) and unconscious (automatic) implementation of processes and strategies acquired through their participation in the ITAND Programme. They describe engaging in deliberate reflection regarding their eating. However, for many participants, the implementation of the processes of transactional analysis, intuitive eating, and behaviour modification strategies has become automatic (unconscious). This deliberate conscious and automatic unconscious implementation of strategies and processes that characterise weight loss maintenance behaviour is reflected in the voices of the participants in excerpts from their narratives.

Brenda expressed the unconscious and automatic nature of her eating behaviour after a period of weight loss maintenance exceeding 20 years, as she explains, "I don't even think about it anymore because I took it properly on board the first time."

Alice echoes notions of unconscious behaviour for long-term weight loss maintenance, especially in identifying true hunger and developing knowledge around nutrition while normalising all food: "What became an unconscious skill is knowing hunger, knowing that I can eat the food I love, not being afraid of food, and making the right choices when I do eat."

She continues to illuminate how the principles and processes she has learned are a simultaneously conscious and unconscious part of her internal dialogue:

> "I have a constant commentary around food in my head. Yes I have developed so many skills that are now unconscious skills but my every waking

> hour has a commentary around food that sometimes has a low volume and sometimes is blaring."

Lesley expresses the unconscious integration of strategies as a mediating factor in long-term maintenance as a result of internalising the programme and relinquishing the diet-mentality for good. She asserts, "This has become like breathing, I've internalised it, it's become my mantra, it's become my lifestyle." That it is "not a mental exercise anymore" reflects that she has adopted the principles on an intrinsic level, behaving naturally like a thin person.

Ruth illuminates how the strategies of self-autonomy and self-direction have become an unconscious process, allowing her to gauge her hunger and listen to her internal nutrition cues. She reflects how her relationship with food has become fluid and is no longer under the dictate of diets and pre-planned eating regimes: "It is very natural; I really do not have to try at it." The result is that her eating is flexible and hunger-driven, as opposed to appetite-driven, and she is able to maintain her weight loss by eating in accordance with her body. She says,

> "I think it is just a switch up, because in winter, I do tend to eat a little bit more carbs, like potatoes, and things like comfort food, because I never quite adjusted to the winter in New York … And in the summer, I don't eat those foods. So, it just comes off. But it really comes from that same thinking of need … eat what you want, and when you are cold, and you just want that plate of pasta, that feeds you and that little bit of extra meat on your bones in winter doesn't hurt … And then in the summer it is just lovely to eat the salads and the fishy meats, and you feel light and it is so hot … So it is really like – I'm like a bear, I follow the season."

Alice reinforces the conscious, self-directed integration of strategies in order to realign her eating behaviours after a lapse:

> "I was pretty confident that I would be able to maintain my weight when we emigrated as I had successfully maintained it for so long. How wrong was I! The portion sizes in Australia are gigantic; you could feed a small African nation on one main course dish, I am sure … I put on ten 10 kgs in the first year. I was so uncomfortable and ungainly in my clothes it was awful. I

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> refused to buy bigger clothes because I kept telling myself it was only temporary. After 12 months I realised there was nothing temporary about it and started implementing the Weight-Winners concepts again. It took six months but I lost the ten kgs plus 2 kgs more. That was eight years ago and I am happy to say my weight is still around 52.5 kgs."

Caroline echoes the self-directedness and strategies for internal dialogue she has acquired in order to practise the processes necessary for long-term weight loss and recover from periods of unconscious eating. She states, "I have times when I overeat or feel unhappy with my body but I simply focus on my recovery rate, I engage my Adult as quickly as possible to start asking the right questions and coming up with helpful options and solutions."

Kate reflects on how she consciously reverts back to the processes and skills she learnt in order to self-regulate and manage her weight in periods of difficulty, "especially during stressful times and family functions". She says that since gaining 7 kgs due to this, "I started putting my Weight-Winners knowledge back into active practice and have since lost ten kgs".

Kate's consciousness of her triggers allows her to manage her weight and rebound from difficult periods. She explains, "I do believe that in general I handle my triggers more effectively and recover much faster if I do 'fall off the wagon'".She continues to say that while she does struggle with body image, she is "relieved and amazed that my weight has stabilised at a comfortable level" as a result of the conscious and unconscious integration of processes and skills.

In her narrative, Ruth reveals how her conscious integration of the processes and strategies began with her recognising and dealing with emotional and situational triggers. Since overcoming those triggers, "(Maintaining weight loss has) just become my lifestyle, it's just a norm for me. It is not a struggle at all and I've never ballooned back up."

She gives further insight into the ways in which she consciously redirects her emotions, having acknowledged and worked through the underlying causes for her overeating:

> “When I was overweight, there was no way I could have lost the weight, because I had to deal with myself and why I had (put on) so much weight, and when that happened for me, then I was able to accept all the rest of that … I no longer needed to do that, that I need to eat to comfort myself, because I recognised it, and I could do something else if I was feeling down. It is even now, with this job thing, my (sister) just said to me, I should just think myself into a tub of ice cream, and you deserve it. And I was like, that is not what’s going to make me feel better. I don’t need a tub of ice cream. Exactly, but that is no longer the go to, in my mind. That had to happen first.”

6.2.9.3 Self-monitoring. Self-monitoring emerged as a subordinate determinant in long-term weight loss maintenance, which requires continual conscious and unconscious dedication to self-reflection, awareness, and the ongoing implementation of eating behaviours acquired on the programme.

Self-monitoring is a person’s ability to autonomously direct and monitor their own eating and weight. This study found that the ability to consistently self-monitor is associated with greater weight loss maintenance. Research also shows, and is supported in this subordinate theme, that maintainers are able to prevent minor weight fluctuations from turning into large relapses (Elfhag & Rossner, 2005).

Self-monitoring includes awareness and regulation of physical activity, nutritional intake, and body weight, among other factors. Recording food intake, regularly weighing oneself, maintaining an attitude of commitment and positive support systems, emerged as means of self-monitoring. The application of conscious and unconscious self-monitoring also emerged as a significant strategy in recovering from lapses in eating behaviour.

In accordance with the literature that postulates that regainers demonstrated a lack of awareness of their eating behaviours (Elfhag & Rossner, 2005), all of the participants expressed that self-monitoring food intake and making autonomous food decisions were important strategies for long-term weight loss maintenance. The findings in this study are also congruent with further research that highlights the importance of continuing self-monitoring after the initial phase of treatment to maintain lost weight (Laitner, Minski, & Perri, 2016.)

While Baugh et al. (2014) found that the self-monitoring of physical activity, fruit and vegetable intake, body weight, and water intake are tantamount to successful weight loss maintenance (Baugh et al., 2014), this study's findings corresponded more closely to previous literature that found that scales, mirrors, and food diaries were some of the tools utilised by participants to monitor their weight (Hindle & Carpenter, 2011; Sarlio-Lähteenkorva et al., 2000). The three primary methods of self-monitoring that emerged in this study as mediating long-term weight loss maintenance are food journals (or tracking), exercise and weighing.

Alice illuminates how she self-monitors her nutritional intake as a means of abstaining from unconsciously eating non-healthful foods. She explains, "My strategy that I try to control this with is when I am not hungry but have a 'compulsion' to just eat I will choose 'free food'. So I will endeavor to have healthy low calorie food available in my kitchen for these moments."

Caroline expresses how the initial experience of recording her food intake was instrumental in her self-monitoring throughout her weight loss and into weight loss maintenance:

> "The first week's assignment was to keep a food journal. The instruction was to make a note of all the food eaten and to look at the possible triggers. We were asked not to really change our eating yet, rather to observe and become more self-aware. I thought it would be easy as I was always under the belief that I did not overeat and that my weight issues were just genetic and there was very little I could do about it. What a shock I was in for! The first day's entry proved me wrong immediately, I ran out of paper! What a shock, how could that be possible?"

Kelly reiterates how the process of self-monitoring through tracking food intake was crucial to the long-term changes in her relationship with food. She explains, "I was then able to reflect on how I felt before and after eating. Recognising satisfaction, and at times guilt, were interesting admissions." In learning to recognise feelings associated with food, she is able to self-monitor her eating triggers effectively.

Lesley acknowledges the autonomy she attained after relinquishing the external monitoring implicit in dieting in favour of self-monitoring. She asserts that, “Weighing your food on a food scale is not freedom.”

6.2.9.4 Weighing. According to Elfhag and Rossner (2005), weight maintenance requires continual dedication to weight loss behaviours learnt in the treatment phase and requires a person to have frequent weigh-ins and to record food intake.

However, in this study, the finding was that weighing was perceived by some participants as contributory, and by others as non-contributory to long-term weight loss maintenance; in fact some participants noted specifically that they do not use weighing as a strategy for weight maintenance at all. This absence of conclusive evidence in favour of regular or irregular weighing has been noted in a previous study conducted by Burke, Sevick and Wang (2011). Theirs is a systematic review of the literature on three components of self-monitoring in behavioural weight loss studies: diet, exercise and self-weighing ranged across 22 previous studies that reported on the relationship between weight loss and these self-monitoring strategies. The results of this study echo Burke et al.’s conclusion that, although there were methodological limitations (to the studies reviewed), there was ample evidence for the consistent and significant positive relationship between self-monitoring diet, physical activity, or weight, and successful outcomes related to post-treatment weight management. The review (Burke et al., 2011) identified several gaps, including the optimal frequency and duration of self-monitoring diet and exercise. This study thus accords more with this conclusion in that there is not sufficient qualitative evidence to support one frequency of weighing over another in mediating long-term weight loss maintenance. Rather, the participants experienced weighing as a form of motivation, to give license to be more flexible or as an indicator of how much conscious awareness they need to apply in order to consistently maintain their weight range.

The following quotations express the variances with regard to the frequency or infrequency of weighing as a self-monitoring strategy.

Kate indicates how her self-monitoring in the form of weighing herself semi-regularly works for maintaining her long-term weight loss: “I weigh about once a month. I try not to weigh too often.”

In contrast, Brenda illustrates how frequent weighing assists in facilitating long-term weight loss maintenance:

> “I weigh every day of my life ... It is for me, until I can see my body as other people see it, and I still can’t. Until I can see that, I’m still seeing myself as fat, so when I get on a scale every morning, it’s the scale that confirms to me I’m not fat and I’m okay.”

Caroline’s experience of long-term weight loss maintenance contradicts the literature: “I no longer weigh myself – it was last done for medical reasons.”

This study found that weighing is useful for some participants and not for others. This is not entirely inconsistent with current literature on this aspect of self-monitoring. The evidence for self-monitoring nutritional intake and eating behaviour strongly concurs with the literature around monitoring nutrition and consumption as a crucial element of long-term weight loss maintenance. The findings for the subordinate theme of self-monitoring in this study, through reflecting the various self-directed and non-prescriptive behaviours around food intake management and frequency of weigh-ins, do support the theory that people who are successful at maintaining their weight have been shown to have more confidence in their ability to manage their own weight, compared to individuals who regained weight (DePue et al., 1995). Successful maintainers are thus able to self-monitor and consistently apply behavioural strategies to achieve weight loss and lifelong weight loss maintenance.

6.2.10 Personal transformation. All of the participants candidly and of their own volition produced expressions that their participation in the Programme transformed their lives and resulted in personal identity transformation. This resounding commonality reflects the attainment of personal transformation as constituting the foundation stone of both weight loss and their subsequent long-term weight loss maintenance. The selected excerpts from the narratives and interviews presented express the process and nature of the personal transformation experienced by participants as well as its impact on every dimension of their lives.

Alice describes her experience of attaining personal transformation, which is identified in this study as the primary psychological process mediating long-term

weight loss maintenance, as a result of her transitioning the six phases of transformational learning:

> “I strongly believe that working on any area of vulnerability that you live with, and committing to work through that problem, creates a template for managing other problems … If one masters or does the real work of managing any behaviour that is hard for one to control then those skills will empower you in every other area. For me, that was the Weight-Winners programme. It empowered me with skills of taking responsibility for my choices in my marriage and friendships, my career plan, how I managed my finances, and of course how I felt about myself and my body … I can safely say that I’m proud to be me and the WEIGHT-WINNERS programme has played one of the most significant roles on this journey.”

Alice echoes the subordinate theme of increased self-esteem as a part of personal transformation, saying, “I've learnt it's not the most important thing in the world to be thin and magnificent looking. I am actually beginning to believe that beauty comes from within.” To this end, she has overcome the psychological correlation between overweight and being “seen”. She says,

> “What I know for sure is that I am no longer a fat person … I am a petite person with a large energy. I no longer have to be large to be seen. I can be small AND significant at the same time.”

Caroline explores how the process of transformative learning, which is identified as the overarching theme mediating long-term weight loss maintenance, enabled transformative change in all the dimensions of her identity:

> “I’ve expressed to you many times that it changed my life. And yes, I don’t know, I often think of the reality if I hadn’t met you and I hadn’t done it because there wasn’t any other way I would’ve found this methodology and diets literally didn’t work for me. So, if I do a thought experiment and I imagine I stayed that weight and I didn’t meet you, where would my life be right now? It would not be where it is at all in all spheres. So, it’s just amazing how it impacts, you know, all areas of your life I think.”

In terms of permanent change in her relationship with food and her body, Caroline asserts,

> “I can honestly say I am at peace with food, I have worked with this approach for the last 24 years, been through three pregnancies and have only grown in my commitment to maintaining an internal locus of control and self-acceptance.”

Kate shares her experience of personal transformation:

> “Thank you for the amazing and wonderful programme. As mentioned at the outset, it fundamentally changed my life.”

Kelly refers to the transformative learning process as enabling multidimensional change: “Simply put: Weight-Winners changed my life. And in so many dimensions.”

Ruth asserts the personal transformation she attained and how the transformation has fortified her self-esteem and capabilities in all areas of her life. In going through the programme’s processes, she had to “really take a good, long look” at herself and could then “completely change”. She was able to reassert her independence, become more “self-aligned” and able to “tackle any challenge on (her) own”.

Lesley reflects on how the process of transformative learning and the attainment of personal transformation shaped the course of her life. She also expresses the will to help other overweight people, which is viewed as a component of transformation:

> “Destiny was at hand. I dread to think what if I had not signed on. Scary thought. Would I still be bingeing today? I’ve been free from bingeing (for 23 years) and counting. Waiting for the ‘burn’ has become like breathing. Long gone are those days when I was in jail with no compass to freedom. My sincerest wish is to help others. On Internet forums I’ve seen desperate ones resigned to their captivity. Diets have broken their spirits. They’re held captive by the lies I used to believe.”

Lesley illuminates the lifelong transformative nature of the programme by describing that her Weight-Winners manual has been placed next to her Bible for the past 23 years: “You asked me, have you still got your manual. It is next to my Bible, girl. I’ve

still got it right here," thus illustrating how the principles of transformation are raised to a sacred level, aligned with her spirituality.

Linda describes the all-encompassing nature of her personal transformation:

> "Having experimented with many diet plans, Weight-Winners changed my life forever ... The Weight-Winners programme … enabled me to take charge of my life and health … It also gives me the opportunity to come to terms with who I am so that I may embrace innate talents and capabilities, without wanting to be someone else ... This process of losing excess weight took me on a journey of self-discovery; I followed simple yet effective rules on how to become naturally thin, and it changed my approach concerning the value I place on my body, health and self-worth. Thank you Weight-Winners for changing my life and my relationship with food."

Brenda echoes the ways in which the transformative learning on Weight-Winners mediated her overcoming self-destructive patterns, thereby changing her entire life:

> "What I learnt there completely changed my life. In fact, I would go as far as to say it saved my life! It certainly saved me from the old destructive me."

6.3 Conclusion

The data from this study point to the continuous practice and reinforcement of an intuitive eating, transactional analysis, anti-diet framework in the participants' attainment and maintenance of weight loss. It emerged that as participants experienced physical, emotional, and social evidence of efficacy through the implementation of the processes and strategies of the anti-diet paradigm, it facilitated the further reassessment of their prior assumptions, improved self-efficacy, and motivated actions that reinforced the new behaviours and paradigm.

The continued awareness, assessment, and proactive adaptation of their behaviour also occurred in response to the challenges and opportunities they encountered through their life journeys. It emerged that participants experienced recurrent experiences of mini-episodes of perspective transformation, which allowed them to successfully navigate the continuing personal and environmental challenges that occur beyond the specific context of the initial transformation (Bass & Davis, 1992). I

propose that the specific context of perspective transformation thereby provides a post-transformative capability, which endures beyond the initial weight loss behaviour change, and that this competence enabled participants to attain lifelong weight loss maintenance.

The development of the conceptual framework was based on participants' understandings of the processes that emerged from the ITAND Programme. This conceptual framework facilitated lifelong weight loss maintenance. It is evident that transformative learning is the principal process, and that transformation does not end after the participants experience personal transformation, but instead, for most participants, the ability to maintain weight loss is an emergent, active, and dynamic experience, which involves the co-emergence of new and reinforcing behaviours with changing life and environmental influences.

An examination of the nature of the capability for personal transformation through the analysis of data in this study suggests that autonomous self-directedness in learning, which is developed and enhanced through perspective transformation, is a significant mediating process for influencing the development of personal transformation, which is essential to lifetime weight loss maintenance. In addition, this study revealed that the drivers for losing weight emerged as differing from the drivers for maintaining weight loss. While the initial drivers, which were the result of perspective transformation, focused almost exclusively on weight loss, the participants experienced the drivers of weight loss maintenance as being factors such as a changed worldview, enhanced self-esteem, and self-empowerment. The drivers of long-term weight loss maintenance thus generalised to other dimensions of their lives. The results of this study revealed that the process of attaining lifelong weight loss maintenance is both proactive, dynamic, and recursive.

CHAPTER 7: CONCLUSION, LIMITATIONS, RECOMMENDATIONS AND REFLECTION

7.1 Introduction

I will begin this chapter with a presentation of the study's conclusions as well as its limitations and contributions to the understanding of long-term weight loss maintenance. I will proceed to discuss the implications and recommendations for future research in the treatment of overweight and obesity which emanate from this study. Finally, I will share my reflections on my experiences in conducting this research which provide closure to this study as well as to my thesis.

There is an emergent recognition that overweight and obesity constitute a growing pandemic, resulting in a global health crisis. Despite the multitude of destructive consequences of overweight and obesity, research has failed to offer long-term solutions to these problems. While there has been extensive research into both the causes and consequences of obesity, the studies have focused on short-term weight loss and have applied a quantitative design. There has been little qualitative research into models of treatment interventions and the outcomes regarding long-term weight loss. The long-term research that has been conducted is largely limited to a follow-up period of six months to two years.

This study addresses the problem of the paucity of qualitative studies as well as understanding of the psychological processes, theoretical frameworks, strategies, and skills that enable the long-term maintenance of weight loss. The aim of this study is to inform and enhance the efficacy of treatment interventions for overweight and obesity.

This study is positioned as a qualitative exploration into the weight loss narratives of eight previously overweight and obese female participants who attained long-term maintenance of weight loss for a period exceeding 20 years, following their participation in an Integrative, Transactional Analysis, Anti-Diet Programme (the ITAND Programme). Since weight loss maintenance of more than two years is

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considered to constitute long-term weight loss (Lowe, Miller-Kovach, & Phelan, 2001; McGuire et al., 1999), the participants selected for this study, all of whom had maintained their weight loss for more than 20 years, are considered to have accomplished lifelong weight loss maintenance.

A qualitative phenomenological approach was used; data was obtained through participants' written narratives regarding their relationship with food, eating, their bodies, their weight, and their "self", in the years preceding, during and following their participation in the ITAND Programme. Data was also obtained through semi-structured, telephonic interviews.

The narrative analysis and IPA analysis of the data uncovered a non-diet paradigm shift as well as the following four principal processes mediating lifelong weight loss maintenance:

1. The adult learning process of transformative learning
2. The psychological process of transactional analysis
3. The physiological processes of intuitive eating
4. The behavioural process comprising cognitive-behavioural modification

An unexpected and significant outcome of this study is that the process of transformative learning emerged as constituting the learning process essential to the attainment of lifelong weight loss maintenance. This suggests that treatments for overweight and obesity require, as the cornerstone to their long-term success, the direction provided through a process of learning, which in this study emerged as the process of transformative learning.

In this study, transformative learning may be regarded as facilitating a paradigm shift that resulted in participants' adopting an anti-diet paradigm. Paradigm transformation from diet to anti-diet in turn facilitated both lifestyle transformation as well as personal identity transformation, which in this study emerged as the overarching theme for enabling the attainment of lifelong weight loss maintenance.

The nature of the process of lifelong maintenance of weight loss, which is illuminated in this study, is the reliance on the dynamic, co-evolving and recursive nature of the transformative learning process. The findings of this study suggest that

transformative learning provides a recursive experience of movement forward from change to transformation, thereby enabling lifelong weight loss maintenance.

Participants' adoption and application of the transactional analysis process to restructuring the nature of their relationship to food, eating, and self, emerged as the principal psychological process mediating lifelong weight loss maintenance. The relevance of applying a non-diet paradigm as well as transactional analysis to the treatment of overweight and obesity, in this study was derived from my personal experience in overcoming overweight as well as from my clinical experience as a psychologist specialising in the treatment of overweight and obesity. My application of transactional analysis to overweight and obesity, which is central to the ITAND Programme, is derived from my perception that the power dynamics between the internal sub-personalities of Parent (critical and nurturing), Adult (rational), and Child (adapted and rebellious) is imbalanced in people with overweight and obesity. The skewed power dynamic is evidenced through the participants' monitoring of their internal dialogue in regard to food, eating and weight. It emerged that for most participants, their internal critical Parent and internal rebellious Child were overdeveloped, while the internal Adult as well as the nurturing Parent were underdeveloped. The modification of the problematic internal personality dynamics was assisted through the acquisition of accessible processes from transactional analysis theory. Weight loss as well as weight loss maintenance was viewed as being significantly enabled through the empowerment of the Adult sub-personality, and correcting of the imbalance in dynamics between the critical Parent and Child sub-personalities.

The paradigm of eating, which participants acquired through the ITAND Programme is the anti-diet eating framework, which guided their learning to eat intuitively in response to their body's signals of hunger and satiation, combined with the freedom to select any food their body needed, emerged as the principal physiological process mediating weight loss and weight loss maintenance. Nutrition education was perceived as important in the process of autonomous self-direction of food choices inherent in the anti-diet intuitive eating paradigm.

The mastery and integration of cognitive-behavioural modification strategies, specifically portion control, mindful eating, weighing, self-monitoring, exercise, and cognitive flexibility, emerged as the principal behavioural process supporting the anti-

diet weight loss treatment. This behavioural process provided the strategies and skills essential to the attainment of lifelong weight loss maintenance.

In conclusion, my inquiry into the long-term weight loss narratives of participants who attended the ITAND Programme reveals that the attainment of weight loss maintenance involves the transformation from a diet-based paradigm to an anti-diet paradigm. The paradigm transformation is in turn directed through the process of transformative learning and the integration of the following psychological and physiological processes and skills: transactional analysis, intuitive eating, and cognitive-behavioural modification strategies. These processes become intricately interconnected over time, thereby constructing weight loss maintenance as a dynamic, self-reinforcing, and continuous process, which relies on a continual process of self-awareness, autonomous self-direction, and co-evolving personal transformation.

7.2 Strengths and limitations of this study

This study is an original piece of research that has the potential to contribute new and original thinking to the treatment of overweight and obesity. The ITAND Programme on which this study is based was illuminated as providing a successful, multidisciplinary, and integrated treatment for long-term weight loss in overweight and obesity.

The strength of this study lies in the rigour with which it was undertaken. As the sample was homogenous, generalisability across the eight participants was possible within the study. Theoretical generalisability is thought to be possible when considering the impact of the ITAND Programme in mediating lifelong weight loss maintenance. This was largely due to the considerations that I requested participants to reflect on in the writing of their narratives, and the enthusiasm of the participants to contribute their experiences to the understandings which this study sought to uncover. The semi-structured telephonic interviews also served to elicit relevant data, further enriching the understandings and accounts gathered from the participants, as evidenced from the depth and scope of the data elicited. This provided the quality of data required to enable a detailed and complete narrative and interpretive phenomenological analysis.

As with any body of research, there were some limitations to this study. The first limitation relates to the qualitative nature of the research. The quality of data elicited in using qualitative methodology is dependent on the skill level of the researcher and possible biases held. This limits the validity of the generalisability of qualitative research results to a larger population.

This study purposively selected a small number of female participants who had all participated in the ITAND Programme in the years 1990-1993. Owing to the lengthy period of follow-up of weight maintenance, which exceeded 20 years, as well as the retrospective nature of the research, memory distortions also become a relevant consideration in interpreting the data. Owing to the sample comprising only white female participants, the sample lacks diversity and the results may reflect views of a dominant white female culture. Important demographic information such as income, educational level, and marital status, were not captured; without the collection of these demographics it is difficult to make associations regarding maintenance of weight loss experience as it relates to social class, educational level, and other demographics. Taking cognisance of these demographic limitations, as well as the fact that the sample is not random and is gender specific, the results of this study cannot be generalised to the general population.

7.3 Contributions and recommendations for further research

The findings of this study suggest that an integrative multi-disciplinary approach may be crucial to better understanding and treatment of the complexity of interrelated considerations in overweight and obesity. The findings of this research reinforce my thinking that no single theoretical framework is likely to adequately explain the complex web of weight loss or weight loss maintenance.

This study contributes an integrative, transactional analysis, and intuitive eating, anti-diet treatment model, which is enabled by the process of trans-active learning to the field of lifelong weight loss maintenance, relevant to the treatment of overweight and obesity. This model may inform future research into anti-diet weight loss maintenance interventions in the treatment of overweight and obesity.

This study identifies the process of transformative learning as the learning process enabling long-term weight loss maintenance, thereby encouraging a new field of

research into the relevance of learning theory for the treatment of overweight and obesity, in order to attain sustained weight loss.In addition, the study provides qualitative validity to the relevance of the process of transactional analysis for the treatment of overweight and obesity, thereby encouraging further research into the application of transactional analysis in enabling sustained weight loss in treating overweight and obesity.

This study contributes new understandings to the paradigm of intuitive eating and its relevance in the treatment of overweight and obesity. It also provides an innovative application for the learning of intuitive eating, which may inform further research.

The validation of the ITAND Programme through the experiences of participants in this study suggests the relevance of the model in its present form to successfully treat overweight and obesity as well as to inform the revision of existing treatments for overweight and obesity. The modulized nature of the ITAND Programme may be used to support and enhance the efficacy of existing treatments.

The systematised nature of the ITAND Programme, on which the outcomes of this study are based, provides easily accessible and transferable knowledge to primary health care professionals in treating overweight and obese patients in both an individual as well as a group setting.

This study is also relevant to health care decision makers who are confronted with a significant increase in the prevalence of obesity. It contributes new and innovative interventions enabling the management of obesity in the first line setting, thereby influencing improved attainment and sustainment of health behaviour change in the treatment of overweight and obesity.

Research, such as the study conducted by Butryn, Phelan, Hill and Wing (2007), has identified the strategies that are essential in maintaining weight loss; however, an understanding of the processes that drive these behaviours is lacking. This study provides insight into the processes of transactional analysis, transformative learning, and intuitive eating as processes mediating lifelong weight loss maintenance.

The study contributes to answering the question of what influences successful weight loss maintenance. It reveals that beyond the behaviours that are critical for maintaining weight loss, an understanding of the processes that drive continual and

sustainable weight loss is essential in enabling treatment outcomes and facilitating sustained maintenance of treatment outcomes. Given that there is little known about the psychological as well as the adult learning processes involved in weight maintenance, it is important to further examine the psychological processes of transactional analysis as well as of transformative learning, which are illuminated in this study as enabling successful weight loss maintenance.

The findings suggest that psychological and learning variables may influence success with maintaining weight loss following treatment of obesity. Further examination of the interplay between these processes is needed to better understand their relationship to weight loss maintenance and may be explored in future research.

The results of the study may contribute to improving weight loss maintenance, which continues to be a priority, given the problems associated with the overweight and obesity epidemic. There should be a continued emphasis on understanding the processes that drive the strategies which facilitate weight loss maintenance. Further examination of the processes of learning as well as the psychological variables related to engaging in the strategies may provide a more comprehensive understanding of what leads individuals to engage in weight loss maintenance behaviours.

Given the significant consequences associated with obesity along with the problem of weight regain following weight loss treatment, the outcomes of this study encourage continued research to examine the learning processes, psychological processes and physiological processes associated with successful weight loss maintenance behaviours.

This study revealed that there is a complexity of psychological, learning and physiological processes involved in the treatment of overweight and obesity which enable the maintenance of weight loss. The ITAND Programme emerged as providing a systematised programme, which successfully treats the complexity of causal and reinforcing factors contributing to obesity management. The themes identified in the study through participants' experiences of weight loss through the ITAND Programme merit further investigation in order to facilitate the further development of successful sustained weight loss treatments. Taking cognisance of

the findings of the study, successful treatments of necessity have to address the learning process guiding health behaviour change, which in this study is transformative learning.

The ITAND methodologies may be used as a systemised or modulized programme by primary health care practitioners. The programme may be offered in a group or individual setting. This could provide necessary support for primary care practitioners who engage mainly in didactic interaction with patients, and through the provision of diets, which have very poor long-term efficacy.

7.4 Concluding self-reflection

Having developed and facilitated the ITAND Programme on which this study is based, I felt aligned with researchers who considered the necessity of a multi-modal and interdisciplinary approach in order to understand and treat the complex condition of overweight and obesity. I strongly believed that each theoretical paradigm addressing overweight and obesity could contribute only a partial understanding and insight to the complexity of successfully treating overweight and obesity.

My journey in uncovering the complex and interconnected processes and themes mediating the successful long-term treatment of overweight and obesity has been intriguing and exciting. It has provided me with opportunities for a level of growth and personal development that I did not anticipate. Through immersing myself in this research I discovered that rather than performing a phenomenological inquiry, I lived it! If ever there was an experience of transformative learning “living” within an inquiry’s methodology, then this study defined it for me!

I close this research and thesis with a feeling of fulfilment in having had the privilege to make a meaningful contribution to the understanding and treatment of overweight and obesity.

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APPENDIX A: CONFIRMATION OF PARTICIPATION LETTER

TO PARTICIPANTS

Dear_____,

Thank you for agreeing to participate in my doctoral research which I am conducting with my supervisors Dr. Elsje Cronjé and Prof. Johan Nieuwoudt in the Psychology Department of UNISA.

As we discussed telephonically I require you to please write a personal narrative regarding your relationship with food, your body and your weight before, during and in the years following your participation on the Weight-Winners Programme until the present date.

There is no structure or content prescribed for your narrative as I would like it to comprise the free-writing of your story. I would like you to include your experiences of change in your relationship with food, your body and your weight as well as an exploration of the concepts from the Weight-Winners Programme which you used to accomplish and maintain these changes. The length of your narrative will be determined by your story and no limit is imposed.

All the information you share in your narratives and interviews will be confidential. Your name will not be recorded in any way which connects it to the information you gave. Data will be reported in a sanitised manner, thus none of your individual responses will be identifiable. All data reported will be given a unique code that has no link back to you. Your narratives, or parts thereof, will be included in the thesis; however, your identity, or information that could lead to you being identified, will not be reported on.

Only myself as the researcher, my supervisors, my research assistants, my personal assistant and my data analysts will have access to the information you share. Myself and all these assistants will be bound by a signed confidentiality agreement.

Your answers may also be reviewed by people that are responsible for making sure that research is done properly, including reviewers, markers and members of the Research Ethics Committee. These people will however only see the sanitised data, and not any identifying information. Otherwise, records will only be accessible by

people working on the research, unless you give written consent for other people to see the records.

I may also use your data for purposes of writing research reports, journal articles and conference presentations. This data will at all times remain anonymous unless you provide me with written consent to link the information to your name and identity.

Your participation in the study is also voluntary and you are free to withdraw at any time without providing a reason.

When you have completed your narrative please e-mail it to my personal e-mail address: mkark@mkwellness.co.za. Once I have received and read your narrative I will arrange to interview you in order to allow me to further explore your “story”.

Please would you keep a record of the hours you spend writing your narrative as I expect you to invoice me at your hourly professional rate for your time invested in the writing as well as the interview. I have attached a copy of the original participants’ Weight-Winners Manual for you to reference if you so require.

Please find attached a Biographical Form as well as a “Letter of Consent” for you to complete and sign. Once completed please return a signed copy of both forms to my e-mail: mkark@mkwellness.co.za or to my fax no on 086 596 2698.

Please contact me if there is any further information or assistance you require. If you have any concerns about the way in which the research is being conducted and are not comfortable discussing this with me, you may contact my supervisor Dr. Elsje Cronjé at cronjem@unisa.ac.za.

Thank you once again for participating in my research. I am really looking forward to receiving your narratives.

Kind regards,

Maureen

APPENDIX B: LETTER OF CONSENT

UNISA university of south africa

Letter of Consent

I, _____ (name of participant) hereby agree to take part in the research on exploring the concepts of the Weight Winners Programme which I perceive as having assisted me with changing my relationship with food, my body and my weight and facilitated my maintenance of these changes over the years following my attendance of the Programme.

The purpose of this study has been explained to me and I understand that I can stop my participation at any point should I not want to continue. I also understand that the information I reveal will be treated confidentially. I also understand that my name will not be mentioned in any research report. I am also aware that excerpts from my written narrative and interview with me may be included in the thesis and/or publications to come from this research, with the understanding that the quotations will be anonymous.

I hereby give permission that the narrative that I have written may be used for the research purpose of Maureen Kark's doctoral thesis and subsequent academic publications.

I hereby also give permission that the interview with me may be voice recorded and transcribed for the research purpose of Maureen Kark's Doctoral thesis.

Signed at _____ on this _____ day of _____ 20___

Name of Participant: _____

Signature: _____

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
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APPENDIX C: BIOGRAPHICAL FORM

Biographical Form

Kindly complete this form by filling in all the information you are able to recall. Please indicate approximate figures with the word "approximately"

Name: _____

Date of Birth: _____

Country of residence: _____

Nationality: _____

Year of participation on the Weight Winners Programme: _____

Did you do the weight winners Programme on an individual base or in a group? (Please tick)

Individual ☐

Group ☐

Name of person facilitating the Group or Individual sessions: _____

Weight or BMI at start of the Weight Winners Programme: _____

Weight or BMI on completion of the Weight Winners Programme: _____

Amount of weight lost during attendance of the programme: _____

Current weight: _____

Current height: _____

Signed: _____

Date: _____

Thank you for completion of this form.

APPENDIX D: REFLEXIVITY

Reflexivity was described by Mead (1934, p. 134) as “turning back of experience of the individual upon her- or himself”, and by Delamont (2002 p. 8) as “a social scientific variety of self-consciousness”. It is a complex process which takes many forms. The relationship between social constructionism and reflexivity are integral to accounts of social epistemology. My reflexivity aims to illuminate the inseparability of research, epistemology, and ontology, and also to describe the influences that shaped my research and the impact of these on my data analysis as well as my interpretative practice. As a result of IPA and narrative analysis being reliant on my interpretations, it is important for me to describe where I am currently positioned in my profession, my orientation and my views regarding the management of obesity to accomplish long-term weight loss maintenance.

In qualitative research, I, as the researcher, do not act merely as an observer but also as a participant (Speer, 2002b). Acknowledging this and treating both the interview and the narrative as an interactional product allows for the elucidation of the contours of both the participant’s and the researcher’s agendas and the examination of my involvement is possible (Holstein & Gubrium, 1995; Larkin & Thompson, 2012; Larkin et al., 2006; Speer, 2002a; 2002b). Although I have minimised my influence on the writing of the narrative, I acknowledge that the participants are still writing in a particular context. Since I am positioned as the author of the ITAND Programme on which the participants experienced weight loss, it is possible that this might have influenced how the participants write their stories (for instance, emphasising positive aspects of the programme and minimising negative aspects). In addition, since my research focused on participants who succeeded in weight loss and long-term weight loss maintenance, these participants may be more willing to participate than those who did not. Through the examination of the interview and narrative as an interactional process, the respondent assumes an active role in the research process.

I am a counselling psychologist specialising in corporate wellness programmes. I am the author of the Integrative Anti-Diet Programme which was named the “Weight-Winners Programme”. As outlined in Chapter 1, I have personally overcome an overweight problem using an anti-diet methodology and I

have maintained my weight loss for 40 years. Following years of clinical practice and research in the field of treatment for overweight and obesity, I position myself within an anti-diet framework and within a paradigm shift to intuitive eating, within a holistic theoretical framework which includes transactional analysis, psychoanalysis, cognitive-behaviour modification, mindfulness, and positive psychology, which is further complemented by a multidisciplinary approach which includes exercise and nutrition education. I believe in self-awareness and self-determination as well as the importance of people being educated and free to choose their own life orientations, including their relationship to food, eating, their bodies, and weight. As I am aware that my personal and professional experience in the field of weight management would be likely to influence my interpretative lens, I placed much importance on maintaining a reflexive position throughout my research.

To accomplish reflexivity I arranged regular meetings with two qualitative experts who are Master's graduates in Research Psychology. This fostered reflexive dialogue and allowed for the development of complementary as well as divergent understanding. These meetings significantly enhanced my ability to be reflexive throughout my research and analysis. However, I do recognise that even in applying a profound level of self-awareness and self-consciousness in reflecting the perspectives through which I view the world, it remains out of reach to grasp the unconscious filters through which I experience and process this research. As Grosz (1995, p. 13) points out that despite how reflective we try to be, "the author's interactions, emotions, psyche and interactivity are not only inaccessible to readers; they are likely to be inaccessible to the author herself". Thus there are limits to the extent of my awareness of the influences on my research, which I acknowledge.

I report my research perspectives, positions, values and beliefs underpinning the ITAND Programme inchapter 3 section 3.2 of this thesis. These personal experiences, preconceptions, beliefs, values, and theoretical orientations may have influenced my interpretation of my data. In an attempt to reach the higher degree of transparency I have illustrated all my interpretations with relevant quotations from participants.

I experienced the IPA process as fitting well with my personal epistemological standpoint: the analysis of the data was an organic and natural experience for me.

The interactive nature of the IPA process was natural for me and I found that the more times I read the participants' narratives, the more interrogative of the experiences I became. This allowed for me to probe the participants' experiences and meanings attached to these experiences with greater clarity and depth.

I consider my position as author of the ITAND Programme on which this research is based as well as my personal weight narrative which was shared with the participants before they participated in the Programme, to influence both my data collection and analysis. My closeness to the experiences while enabling my understanding may have limited my "open curiosity" to the participants. However, at the same time I consider it to have benefited both my interrogation and analysis of the participants' narratives as well as my interview style.

Over the course of my professional career I considered my compassion to constitute my principal therapeutic strength. This is highlighted in my participants' narratives and interviews. I have experienced my engagement in this research as having a number of personal effects on me. My own embodied experience came into my conscious experience much more acutely over the course of my research and writing of my doctoral thesis. I am aware that the choices in my research in regard to ontological and epistemological positioning is intricately interconnected to my personal and professional biography and not motivated exclusively by intellectual concerns.

I hope to have illustrated the significance of reflexively and my own "challenge-of-competency" in conducting qualitative research. In my review I hope to have demonstrated how research that explores human experience benefits from and demands reflexivity. Unanswered questions remain, which may guide future research.

I have chosen to write this thesis in the first person to reflect that I developed and facilitated the ITAND Programme on which this thesis is based and that I am inextricably connected to the work.

Taking cognisance of my process as well as my authoring and directing the programme, I feel it still would be incongruent for me to present the research in a manner which distances me from the essence. In addition, my experience as a clinician and my interest in qualitative research has informed my critical realist

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epistemological standpoint. My interest is in how my individual participants subjectively make sense of their experiences. I believe that as soon as I try to make sense of this myself, I am inextricably connected in the work and the meaning-making process. Over the course of my professional career, I consider my compassion and analytical insight to be my primary therapeutic strength. This influences the way I approach interviews and analysis.

As the author of the programme, the researcher, and being known to the participants, the responses from the participants may have put particular emphasis on the positive factors. In analysing the findings, they support the ITAND Programme but they have to support it as that is what is being investigated. This may have silenced other aspects relating to weight loss maintenance. What mitigates against this is that seven of the eight participants contacted me over the years to relay their success stories and thank me. They also asked if they could use the programme to help other people. Additionally, their weight loss maintenance is indicative of the programme's success and although the participants may have leaned to a more positive description, it does not mean that the study has been invalidated.

Although some of the technical terms researched and utilised by the study were defined only after the development of the ITAND Programme, they are utilised as they are useful theoretical constructs for enabling further research based on this study. I have thus adopted the terminology. An example of this is the paradigm of "Intuitive Eating", which my participants have used to direct their eating for over 20 years, and have not replaced their learnings with newer concepts. In terms of weight control research, few concepts have emerged that extend the boundaries of this integrative programme.

APPENDIX E: PARTICIPANT PORTRAITURES

Portraiture of Caroline

Caroline attended the ITAND Programme in 1991, which allows for a 24-year follow-up. Her age was 25 at the time of participation and she is now 49 years old. When she participated in the programme she weighed 90 kg, had a height of 1.61 m, and a BMI of 34.7. During her participation in the ITAND Programme, she achieved an initial weight loss of 5 kg, which represents a 5.6% reduction in initial weight. In the 24 years following the programme, she lost a further 23 kgs, with a resultant weight loss maintenance of a total of 28 kg. Her current weight is 62 kg and her current BMI is 23.9, reflecting her lifelong maintenance of a 31% loss in weight over 24 years.

Phase 1: Facing a disorienting dilemma. It emerged from Caroline's narrative that her 'disorientating dilemma' occurred at the age of 23 when she had "settled into all the melancholy that comes with feeling fat and unlovable and had created really bad habits around food and avoiding exercising". Looking back, she attributes her success to, at this point, having "really done diets to death".

She continues to say, "On one of my many reconversions to being a dieter I can remember very clearly being weighed and the lady telling me I had put on 0.8 kg. I decided in that moment that maybe G-d just decided that some people can be thin and others fat. I was going to just have to accept that mine was the latter."

In the midst of this 'disorienting dilemma,' Caroline came across an article in a lifestyle magazine about an anti-diet programme and decided to attend an introductory talk because at this point she "had nothing to lose".

Phase 2: Experiencing a defining moment. Caroline experienced her 'defining moment' at the anti-diet programme's introductory talk. She explains that she experienced a moment of clarity upon learning about the inherent destructiveness of diets and the failure of diets as a methodology for weight loss and weight loss maintenance. She expresses her 'defining moment' as follows: "I was like, what? What do you mean? Are you saying that I'm ... that there's a possibility

that it's not my fault?" She continues to explain, "… the impact was immediate and profound … I felt normal not like a failure or freak."

This was Caroline's moment of realisation: "There was no public weighing and humiliation. Going to dieticians or diet programmes has always left me feeling like I was not good enough and bad in some way." For the first time, she heard "there's another way and it's not you that's failing".

Phase 3: Self-reflection and psychological insight. Caroline begins her narrative by sharing her reflections and insights regarding the complex and multi-layered causes for her developing a weight problem. This process reflects her engagement in the phase of transformative learning, which comprises the attainment of self-awareness and personal insight with regard to unconscious causes, which she needed to resolve in order to attain weight loss and maintenance thereof.

Childhood trauma. Caroline begins her narrative by describing her childhood as "idyllic" up until her father's tragic death, which resulted in an abrupt disintegration of her secure and happy family life. His death and the subsequent loneliness she felt were the primary causes for her becoming overweight. "I had no memory of my weight being an issue before his death. My mother and older sister were both overweight; I remember being put on my first diet when I was 9, and Weight Watchers (a conventional weight loss programme in which participants are required to weigh their food and attend weekly meetings where they are weighed, assessed and publicly acknowledged or dis-acknowledged in regard to their progress or lack thereof) was my first attempt and first failure."

Maternal neglect. Caroline proceeds to speak about experiencing feelings of guilt and embarrassment, which are closely linked to her seeking approval from her mother: "It was so shaming and humiliating. I don't recall my mother ever saying it was a problem but she kept taking me with her and my sister, almost as if it they were family outings." Caroline remembers that it was at this time that others began commenting on her weight. "I remember clearly when the teasing started: a friend of my mother's started the nickname 'Collie-wobbles'. It was very hurtful, but I just laughed along so no one would suspect the shame and pain I was feeling." Reflecting back on this as a mother herself, Caroline ponders on her mother's neglect in failing to address this teasing and protecting her.

She acknowledged how closely food, love and comfort are tied into her narrative, saying, “I just know that I learnt these habits too, I can remember my mother eating a lot, I remember her eating a lot and we used to eat very fast and there’s definitely some connection to mother and food and love ...”

In an especially deep instance of self-reflection, Caroline connects her relationship to food with her father’s death, saying “perhaps the connection with the loss of my father is more just all the deprivation that followed. So maybe it’s more around deprivation and loss. Really, it was around making it feel better. I’ve got to do something about this fear of losing out more.”

Significant life change. Caroline explores how these feelings were intensified when her brother was sent to boarding school. She says, “Again another devastating loss for me, as I was very close to him. I figured out if I asked to get sent too, I would be better off and near him again.” However, “sharing a room with six other girls provided many opportunities for self-conscious body shaming moments”. The loss of connection to her brother and her move to boarding school were major causative factors in escalating her weight problem.

The psychological connection between food and love was further entrenched in boarding school, which only created other complexities around food. “Boarding school brings with it additional complexity with food. It was here also that the “whole idea that it’s not enough: took firm grip – “You’re going to eat fast because if you want seconds, it’s not going to be there.” She continues, “The meal can take over the role of the family. Missing out on food meant losing out on love.” She continues: “Rituals around packing large tuck supplies from home also connected emotion to food which was there to provide a sense of comfort when the emotions came up.”

After boarding school, Caroline’s self-care deteriorated as a result of “no more exercise, bad nurses’, res food and a very stressful and highly emotional job. I was constantly on and off Weigh-Less”. By the age of 23, Caroline says she had “created really bad habits around food” and was “avoiding exercising” because of the shame of going to the gym.

Her disordered eating and skewed perspective of food meant she was “living on and off diets, gaining more and more weight”. She describes how her romantic relationships exacerbated the problem: “I found myself in a relationship with a guy

who kept telling me to lose weight and overtly said he could not love me because I was overweight." This fear of loneliness and the deep connection she held between loneliness and food only compounded her ceaseless cycle of dieting.

Phase 4: Paradigm transformation. Caroline describes her shift from a dieting paradigm to an anti-diet paradigm. As a serial dieter, one of the most powerful shifts in Caroline's thinking pattern was that "this approach did not rely on willpower but rather slowly claiming back one's own sense of natural boundaries – hunger. I did not need to eat if I was not hungry, oh what was hunger? I had always just eaten whenever there was food." Crucial to this "internal process" she says, was learning to "trust that it's fine, you don't need to have it all. You don't need to finish it all."

Caroline shifted the locus of control internally by acknowledging that, "I thought it would be easy as I was always under the belief that I did not overeat and that my weight issues were just genetic and there was very little I could do about it. What a shock I was in for!"

Caroline used behavioural changes to find alternatives to pre-existing, normalised patterns, saying, "Coming up with options other than just eating in the absence of hunger was the real breakthrough for me."

Her paradigm shift extended to her actively negating underlying assumptions that she had held about herself. She transformed her thinking by repeating the affirmations: "I am fit, slim and looking good" and "It is safe to be thin."

Phase 5: Acquisition of knowledge and skills. Caroline sequentially describes the significant knowledge, skills and processes she acquired in order to lose weight without dieting. Through the theoretical paradigm of transactional analysis, Caroline restructured her internal power dynamics around eating. She says she acquired "a language to better understand my inner world" and that "the inner dialogue helped me to stop, think, remember and act differently." She learned to "engage my 'Adult' as quickly as possible to start asking the right questions and coming up with helpful options and solutions".

The second most important skill she mastered was intuitive eating. She learnt to identify true, physical hunger. Before, she says, "I had always just eaten whenever

there was food." She continues, "I also realised that I ate when I was stressed or bored, or just because it was meal times. I also learned that I finished everything on my plate always and went back for seconds." Caroline describes her experience of the Mindful Eating practice meal (as part of the programme) and says, "We needed to taste the food and eat mindfully, learn to chew and really enjoy the food. This was another 'aha moment' for me as growing up, I learned to eat very fast. I put this skill to practice immediately and had fun leaving food on my plate."

She gained the insight that "FOOD IS HERE FOR THE REST OF MY LIFE!" and decided that "I would never deprive myself of anything but would aim to feed myself healthy nourishing food. I also made peace with food and gained insight that food can do nothing for me except stop my hunger."

The internalisation of her locus of control as well as the normalisation of all food constituted other significant lessons in her journey. She explains: "Having been on so many diets, I thought I knew a lot about food, but one session which did appeal to me was run by a nutrition expert and the approach was different." She continues by saying, "The idea was now that you are not going to 'give' up any foods but be normal around food, start to make better choices that will support your goals. I was curious – so no forbidden list but instead empower yourself with knowledge about the amount of energy food has, so that when you are hungry you can make more helpful decisions."

She recalls a time when she scraped butter off of a pre-bought bagel and left just the right amount butter ("which I love – no diet will ever take that away again"). She realised then that in scraping off the butter, "this choice seemed mine, authentic and not just because the forbidden food list said so".

In the past, Caroline "was too ashamed to go to a gym and have people judge me". However, she "soon connected the positive benefits to exercise and still see this as a very important part of being healthy, not just keeping thin. I also connected to the fact that while exercise is important it should not be the method of weight loss. This means that if I could not exercise I am still in control of my weight and body."

Phase 6: Lifestyle and personal transformation. Caroline explains how the now-entrenched processes, skills and behaviours have become fundamental to her

lifestyle, resulting in a normal relationship to all food: “I’m not scared of food. I’m not scared to go and try a piece of cheesecake … I don’t feel overwhelmed by food.”

She explains how the programme was “a game changer. I had been in the world of diets my whole life and (this) was the only way I was ever shown that I could possibly get out of the cycle ...”

She also expresses how her overall value system has changed, saying that, “One needed to be much more attentive and aware in the beginning to shift and to create more of a habit with it. And now it just feels more like a value system and it just feels normal.”

She acknowledges that in the past “I would stuff down my feelings with food,” but now realises that it is “critical to process” those feelings rather than “keeping them buried” with food. She further confirms the long-term transformation of her lifestyle by saying, “I have worked with this approach for the last 24 years, been through three pregnancies and have only grown in my commitment …”

A powerful example of her lifestyle transformation is the anecdote Caroline recounts: “I clearly remember a meal at the famous Ma Cuisine restaurant in Rosebank; I ordered the chocolate mousse and it was delicious. Halfway through the serving I realised that did not need any more. I sent the rest back; the chef came to find out what was wrong with his chocolate mousse. He was so offended, ‘no one ever leaves this chocolate mousse,’ he said! In that moment, I realised my relationship with food had changed forever! I had taken back the control, this felt like something I could do for the rest of my life.”

Phase 7: Personal transformation. The skills Caroline has acquired reflect on her lifestyle in a holistic way. She asserts that the internalisation of the locus of control is “... Absolutely crucial as it affects other areas of your life. Not just the food.”

For over two decades she has remained committed to “maintaining an internal locus of control and self-acceptance”.

She concludes her narrative by detailing her paradigm and personal transformation through the programme: “I’ve expressed to you many times that it changed my life. And I often think of the reality if I hadn’t met you and I hadn’t done it, because there wasn’t any other way I would’ve found this methodology. Diets

literally didn't work for me." She continues with a "thought experiment": "I imagine I stayed that weight and I didn't meet you, where would my life be right now? It would not be where it is at all in all spheres. It's just amazing how it impacts all areas of your life."

Portraiture of Lesley

Lesley attended the ITAND Programme in 1991 which allows for a 24-year follow-up. Her age was 42 at the time of participation and she is now 66 years old. When she participated in the programme she weighed 84 kg, had a height of 1.72 m, and a BMI of 27.8. She achieved an initial weight loss of 10 kg during the eight-week ITAND Programme, which represents an 11.9% reduction in initial weight. To date, she has lost a total of 17 kg (10 kg in the programme and 7 kg in the subsequent years). Her current weight is 67 kg and her current BMI is 22.2, reflecting her lifelong maintenance of a 20.2% loss in weight over 24 years.

Phase 1: Disorienting dilemma. Lesley's 'disorientating dilemma' was her despair at having "an addiction to food" and having tried and failed at every diet attempt.

Lesley's second husband was an alcoholic and it was in this relationship that she realised her addiction to food was comparable to his addiction to alcohol. At this stage, she had "joined and re-joined diet clubs". She was hopeless and unhappy because "despite sticking to diets religiously," her "losses were small, 200 – 500 grams per week". She had "done every diet known to man" and her bingeing pattern had her trapped in a "prison of hell". Lesley goes as far as to say that before participating in the Weight-Winners Programme she was "close to suicide".

Phase 2: Defining moment. Lesley "answered an ad in the local paper about a programme to lose weight forever". By the time she had heard the introductory talk, she "was convinced that this was the way". The defining moment occurred when Lesley heard and accepted that "diets had been my problem all along" and that "it's not my fault". She described this realisation as "revolutionary". After reaching her "wit's end with diets," she describes her defining moment when she exclaims that the programme "came into my darkness like a beacon of light".

Phase 3: Self-reflection and psychological insight. Lesley begins her narrative by explaining the deep psychodynamic issues she perceives as underpinning her binge-eating, including neglect, abuse and deficit of love and security.

Maternal neglect. She describes her early-life trauma of being separated from her mother at birth as a result of her mother developing septicaemia and having to be hospitalised. Lesley explains, “I was deprived of my bonding during breastfeeding. As an infant I believed that my mother had gone forever. I was bereft. My scream was how I expressed my rage at not having food. There was not enough.”

Paternal abuse. She was bottle-fed by her father but says that “formula was all that stood between me and endless starvation”. She attributes the start of her binge-eating pattern to this fear of physical and emotional starvation as an infant. From this young age her father shamed her about her relationship to food. She recalls that he would “regale others with: ‘She was a guts from birth. She would scream for food, grab her bottle out of my hand and down it.’”

Lesley’s unhealthy relationship with food is inextricably linked to her seeking (but never gaining) love and affirmation from her father. The birth of her sister resulted in a further rejection and the onset of self-esteem issues. She felt that her father “had one daughter and that was my sister”. Her experience of paternal abuse through emotional rejection was compounded by the fact that her sister “was petite, blonde and blue-eyed,” while Lesley perceived herself as “a big girl – not cute”. She attributes her father’s withholding of love to her physical appearance, saying “that was the reason I was not loved like her. The more I wanted to conform the less I was able to. A force beyond my comprehension was driving me to eat myself into oblivion”.

She recalls a particular scene from her teenage years: “Being fat my father despised me even more. His cruelty towards me became very public one night … He scolded me for asking the waiter for another potato. He caused such a scene that I left the table and ran to my room. Nobody came after me. I was utterly consumed with self-hatred at my lack of control. My family were now discussing how fat and ugly I was, obsessed with food. I felt so ashamed of this wild hunger for more.” At

this stage she believed that if she could “only get this hunger under control maybe my father would love me”. She acknowledges that from infancy her “hunger was fraught with emotion”.

By the age of 15 her “binge-eating had a life of its own”. She used it as a “survival strategy learnt from birth” to dull the “pain, loneliness, boredom and stress” associated with the paternal neglect and self-esteem issues she faced. She says that “food numbed the pain and prevented anyone else hurting me the way my father could. I was powerless then to make him love me”.

Lesley recounts how throughout her childhood she felt “abnormal,” saying that, “my ever-widening frame only accentuated the chasm between my family and me. They were normal. I was not.” This exacerbated her confusion, she was “unable to understand why (she) was not loved as her sister was”. She was deprived of “kindness and mostly, love and acceptance” and so she “drowned” her heartache in food, her only source of “love and comfort”.

Intimate partner’s abuse. Lesley’s reliance on food to fill the emotional emptiness she felt was compounded by her relationships with men who were, as she says, “exactly like my father: abusive, overbearing, unloving, unappreciative and selfish”. She says that “because those who loved me did not, I used food to fill that void”. For Lesley, food had always been a replacement for love.

Phase 4: Paradigm shift. It was at university that Lesley was introduced to diets, a cycle that would continue even after she graduated. She tells how she and her friends would “fast, have liquid days … would eat high-protein for weeks on end”. This severe restricting led to an all-or-nothing mind-set and they would “break out for double portions of slap chips, devoured before we got back to res, defeated”. After university, Lesley’s dieting cycle continued. She tells how “diets would always start on a Monday. I would polish off all contraband that could scuttle my chances of success”. She engaged in “Last Supper eating” to the point where by Monday she was “too nauseous to eat anything”. She “ran the gauntlet of diets” for years, “yo-yo dieting big time” but only losing “the same 25 kgs over again – yet remaining fat”.

The new methodology she was taught on Weight-Winners resonated deeply with Lesley and she experienced a fundamental change in her approach to food, eating, her body and her weight. Through self-reflection and critical thinking, Lesley

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shifted from a diet-based paradigm to an intuitive eating paradigm that enabled autonomous self-directedness, hunger awareness and mindful eating.

Before joining the programme, she had been a persistent dieter. She says that she was on a new diet “as soon as it hit the market” and “would follow each one religiously”. Scarsdale was her “mantra” and she was on “high-protein for years” before “blood group diets were the ‘new way’”. However, on the ITAND Programme she embraced the anti-diet approach.

Lesley expresses her paradigm transformation when she describes how she identified with other people for whom “diets have broken their spirits” but continues to say that she is no longer “held captive by the lies” she used to believe. Her rejection of the diet-mentality came with the realisation that “health is at hand. Diets failed you but so did they fail the rest of us”. She challenged underlying assumptions about her relationship with food by replacing her ‘Scarsdale mantra’ with the mantra of: “You can succeed. Stop believing the lies.”

Lesley shifted her locus of control internally by reclaiming control over her eating and her emotions. She was no longer “powerless” and made to feel “helpless” over her “craziness with food”. Instead, she acknowledged that she had to “become the master over food”. She realised that she was “deluded” and that “we’d rather blame an outside force than acknowledge we have no control over food”. Lesley says that armed with this revelation, “I came to realise that I gave food the power it had over me,” and that “bingeing was a choice”.

This new paradigm was entrenched and she began to behave in her own interests, saying “nobody was on my case but me” and “Weight-Winners was for me”.

Phase 5: Acquisition of knowledge and skills. Lesley describes the significant knowledge, skills and processes she obtained in order to develop a normal relationship with food and lose weight without dieting. She refers to these principles as “the tools to get out of that (dieting) prison” and states that they have become “part of my psyche”.

She begins illuminating these strategies by exploring how the “anti-diet paradigm” was the most important piece of knowledge she acquired. “When I’d learnt

all the ways in which a diet actually sabotages your weight loss, I realised only a merciless money power could be behind such a con." She learned to take back the power that diets had previously held over her, realising now that "diet is just a four-letter word" and that "weighing your food is not freedom".

The second process she describes is the normalisation of all food. She says that "all food being permitted" was a "foreign concept, yet it made perfect sense". She continues to say, "All I ever wanted to be was 'normal' around food." Through internalising her locus of control and normalising all food, she realised that she "gave food the power" and that the "feast or famine" mentality she had grown up with contributed significantly to her binge-eating. The normalisation of all food and her embracing the anti-diet paradigm are reflected in her saying, "I learnt to side-step the diet syndrome by not depriving myself of any food."

The third skill she mastered was "eating only when hungry," which "was the easiest principle". On the programme, she "learnt the difference between appetite and hunger. Meal times were artificial events".

Lesley found that she "became quite adept at delaying gratification" – another process that worked exceptionally well for her. Through exercising patience until she was moderately hungry, she learnt "that food eaten for emotional triggers did not satisfy me" and that "chocolate could not solve my problems". Whereas in the past Lesley would "stuff" her body with food she "didn't even taste" in a "haze of warmth and pleasure," she was now eating intuitively, trusting her hunger and disassociating food and emotion.

In learning to rewrite her past food-scripts, she learned that "constructive thoughts could replace the negatives" and that she could "reinforce success" by using the newly-acquired visualisation skills to envision herself as "slim". She cites this as another important tool used to "see through the delusions" that had kept her "trapped".

The programme's Gestalt therapy technique (using the 'empty chair' approach) allowed her to confront the "unfinished business" which she "wanted to clear up". It was during this process that she began to make peace with her father, first telling him that she "felt unloved and side-lined for years" and then trying to

“verbalise forgiveness”. It was also a key skill because she learnt to “own” her feelings and “did not stuff them down with food”.

Through the theoretical paradigm of Transactional Analysis, Lesley began to successfully re-parent herself. She recognised that her “Critical Parent and Rebellious Child had been in a battle for years” but could “believe” that “diets actually foment this very struggle”. On the programme, she “was taught to re-educate her Child to be more flexible and spontaneous. As the Child became less demanding, the once Critical Parent became more caring and nurturing.” She also learnt to self-correct so that she could make healthier nutritional choices – another skill she learned in the nutrition section of the course. She “had to make this switch to healthy meals each time” so that she could “become the Adapted Child, so that the Internal Adult – rational and unruffled – would be in agreement”.

The last and most profound learning was Lesley’s discovering “just how much I enjoyed exercise”. Despite her “aversion to PT at school,” which was a “nightmare,” she now describes her enjoyment of exercise as “passion, pure passion”.

Phase 6: Lifestyle and personal transformation. Lesley illustrates how the process and skills learned on the programme have “become like breathing,” resulting in an overall lifestyle transformation. She is now “free … like a normal person”. She confirms this further by saying that she has “internalised it,” that it has “become (her) mantra and (her) lifestyle”. It has, as she says, “freed (her) from hell”. It is “no longer a mental exercise,” but rather a set of “principles fixed in your mind”.

Phase 7: Personal transformation. Lesley describes her personal transformation vividly when she recalls that she was almost suicidal at the time she enrolled in the programme and has now reached a place where she has “been free from bingeing for 23 years and counting”. She says that “as far as food is concerned, there is no more warfare”.

She describes the transformation in her relationship with exercise from what was once a “nightmare” to being a “passion” – so much so that now her “whole life is health and fitness”. At 63 years old, she is now a qualified spinning instructor and has transformed her physiological wellbeing to the extent that her biological age is 48 years.

Lesley says that her father is “not a factor anymore” and that even though “he failed her as a father, (she) still made good”.

Lesley concludes her narrative by referring to the programme as a gift “… to save a person’s life and give them freedom like I’ve got”. Through these victories and her subsequent transformation, she stands firm in the belief that she “can conquer anything now”.

Lesley closes her interview by confirming that she still has her original Weight-Winners manual, 24 years later, and that it is in fact “next to (her) Bible”.

Portraiture of Brenda

Brenda attended the ITAND Programme in 1992 and 1993, which allows for a 22-year follow-up. Her age was 36 years at the time of participation and she is now 58 years old. When she participated in the programme she weighed 72 kg, had a height of 1.67 m, and a BMI of 25.8. She achieved an initial weight loss of 8 kg during the eight-week ITAND Programme, which represents an 11.1% reduction in initial weight. She continued to lose a further 11.7 kg in the years following her participation in the programme. Her current weight is 52.3 kg and her current BMI is 18.6, reflecting a new lifelong maintenance of a 27.4% loss in weight over 22 years.

Phase 1: Disorienting dilemma. During her adult years Brenda faced the disorienting dilemma of being married to a man who was very critical regarding her weight but would not validate or affirm her when she lost weight. Brenda writes “my weight became increasingly unacceptable – he wanted a thin wife”. Brenda reached her lowest point when she realised that no matter how much weight she lost, her husband “just found other things to criticise [her] about”. She therefore “gave up worrying about [her] weight” and went back up to 72 kilograms.

While facing this disorienting dilemma of not ever feeling acceptable to her husband, and feeling stuck in her struggle with her weight, Brenda decided to address her weight in order to improve her sense of self and join a friend who was experiencing similar marital dynamics in regard to her weight, by enrolling to participate in the ITAND Programme.

Phase 2: Defining moment. Brenda's turning point came when she heard about Weight-Winners. She expresses that "what I learnt there completely changed her life". She goes on to say that "it saved [her] life and it certainly saved her from the old destructive self". During a period of 8 weeks Brenda lost 8 kilograms and continued to lose weight and maintain her weight loss in the months and years following her participation in the ITAND Programme.

Phase 3: Self-reflection and psychological insight

Scripting and obesogenic environment. Brenda recalls being "born into a family with a longstanding heritage of using food for all occasions – to sympathise, to celebrate, to drown sorrows, to be sociable, to commemorate events", suggestive of a home-based obesogenic environment.

Brenda reflects that these factors predisposed her to being overweight from before birth. Brenda believes that her predisposition to becoming overweight was, compounded by having a very close attachment to her maternal grandmother who "seemed to have a relationship with food that actually defined her".

Brenda further explores her food-oriented home life and the food scripts she was taught as a child and explains that her father "believed in finishing all the food on your plate" while her mother, who was "constantly on some diet or another and ate like a bird" would step in to defend her when her father was displeased with her eating pattern.

In spite of these conditions Brenda recalls having an intuitive relationship to food as a child, saying, "I listened to my body and only ate if I was hungry and then only until I had had enough."

School. Brenda recounts that, "this carefree, thin life lasted until the year I turned 11," which ended when she had to change school as a result of her family moving home, causing her to become separated from her close group of friends. She blames the loneliness she experienced as being a significant cause of her weight gain. Brenda reflects that she "would take (her) packed lunch to school, eat it all at recess and then go home at lunchtime where the maid would make (her) another lunch" and that consequently her "weight just ballooned". She feels her weight gain

was further exacerbated by her mother relating to other people that if Brenda “just lost some weight she would be a very pretty girl”.

Diets and disordered eating. At the age of 16 Brenda was put on her first diet by her mother. She reflects feeling “useless and worthless” and experienced the process as “torture”. Although she reports losing weight, she also remembers not only regaining the weight but gaining excess weight. She continued “yo-yo dieting” throughout university. Following her university years Brenda’s weight reached 85 kgs. After seeing herself in video looking like “the Queen Mary in sail” she developed Anorexia, binge/purge type, and her weight dropped to 48 kgs. With the threat of being sent to a psychiatric hospital, she slowly started eating again. Brenda continued weight cycling as well as bingeing and purging throughout her young adult years until she reached a decision to enrol in the ITAND Programme.

Phase 4: Paradigm shift. Through Brenda gaining insight into the destructiveness of diets which she became aware of on the ITAND Programme, she was able to shift to an anti-diet paradigm and she acquired, applied and practised the strategies and skills she learned. She “applied the principles” in the months and years following the Programme and “finally got down to an acceptable 58 kilograms”.

Phase 5: Acquisition of knowledge and skills. Brenda acquired many strategies, processes and skills which she has internalised and “uses to this day on a daily basis:

1. Gauging my level of hunger
2. Eating and thinking like a ‘thin’ person
3. Using a loose fist to compare portion with stomach size
4. Only ever use a small plate at home for dinner (fish plate rather than a dinner plate)
5. I do the hunger vs. thirst test before I decide to eat anything
6. The way I eat:
    a. Small bites
    b. Savour each mouthful
    c. Put my knife and fork down between every bite. They stay down until that mouthful is finished at which point I will pick them up and prepare

> the next mouthful. (It takes ages to eat but allows me to more easily gauge how full I am…")

Phase 6: Lifestyle transformation. Brenda's lifestyle reflects that her new behaviours are now entrenched, natural and intuitive. Brenda's lifestyle reflects autonomous self-directedness and trust in herself. Brenda has normalised her relationship with all food and her lifestyle reflects an integration with healthy nutritional understanding and regular moderate exercise for health benefits. Furthermore, the way she eats has changed completely.

Phase 7: Personal transformation. Brenda expresses her experience of personal transformation when she writes, "We went to the full course … and what I learnt there completely changed my life. In fact, I would go as far as to say it saved my life! It certainly saved me from the old destructive me."

Aligned with transformative learning theory, Brenda describes her willingness to share her knowledge in helping others. "Waste or waist – I have even helped a few friends with young children lose their pregnancy weight with this simple concept".

Brenda concludes her narrative in a voice resonating with positive relationship transformation: "I am now engaged to a wonderful man whom I have been seeing for the last three and a half years; he thinks I am perfect and beautiful. He tells me multiple times a day how beautiful I am – no wonder I love him so much."

Portraiture of Kate

Kate attended the ITAND Programme in 1991 which allows for a 24-year follow-up. Her age was 30 years at the time of participation and she is now 54 years old. When she participated in the programme she weighed 99 kg, had a height of 1.58 m, and a BMI of 39.6. She achieved a weight loss of 20 kg in the years after participating in the programme. Her current weight is 79 kg and her current BMI is 31.6, reflecting her lifelong maintenance of a 20.2% loss in weight over 24 years.

Phase 1: Disorienting dilemma. Kate can be considered as facing her 'disorienting dilemma' when she realised that "after everything else (she) had tried," she had reached a point of defeat and felt she had "nothing to lose" by trying an anti-

diet approach to her weight dilemma. She explains, “I was serious about tackling my weight” and at this stage, the alternative of “diving into the nearest packet of chips or buying out all the chocolates in the shop” was “terrifying”.

Phase 2: Defining moment. Kate says that joining the programme constituted “a fundamental change in (her) life”. Her ‘defining moment’ can be considered as occurring when she attended the introductory talk and realised (through what she learned there) “once and for all, that diets do not work and are inherently set to fail”. She elaborates on this defining moment by describing that hearing this was “music to my ears” and “opened (her) eyes and changed (her) world”.

Kate validates the definitive restructuring qualities of the introductory talk by saying “for the first time in my dieting life, I heard about eating strategies for life”.

Kate acknowledges that her weight problem stemmed partly from an obesogenic environment. Coming from a “Jewish home,” she learned eating scripts that came into play “as soon as you stop eating”. Questions of “what’s the matter,” “why didn’t you have a bigger potato?” and statements like “you haven’t had enough” were common. She continues to say “eating was part of the time” she spent “socialising and going out with friends” and that she would be “anxious” that finishing her meal “was going to be the end of good times”.

History of dieting. Kate describes having been “on every imaginable diet.” She recounts how she has “taken pills, counted calories and had injections, all of which were extremely successful”. However “it did not take long” before she “regained the weight and then some”.

Phase 4: Paradigm shift. Kate’s paradigm shift occurred when she was reassured and her beliefs confirmed that diets are inherently flawed and had always set her up for failure.

“Within the first week” Kate began “completing diary charts” and because she was “always very conscious of the food (she) was eating,” found this particularly troublesome. However, her underlying assumptions about the “‘right’ food” and “‘wrong’ food” were challenged and she “was really stunned to find that the food was not the issue”. Her paradigm shift occurred when “the real issues were exposed” and

she identified that “situational and emotional triggers” were the root of her weight problem and dieting mentality. She refers to this as a “liberating ... eye-opener”.

In realising that diets treated the symptoms and were inherently flawed, she internalised the anti-diet paradigm. This process of reassurance countered her pre-internalised belief that she was a failure due to her inability to maintain weight loss, and she could now see clearly the inherent failure of the dieting cycle. She realised, “I do not have to measure every piece of tuna and every piece of chicken I eat, and if I don’t like tuna, there are other options. I never had to count calories.” She realised that dieting is “just not normal,” and this realisation further solidified her shift to an anti-diet paradigm.

She refers to “recording levels of hunger” as a “breakthrough”. She realised that she “honestly did not know what hunger felt like” and “for the first time in (her) life experienced what (it) felt like”. This was a fundamental change in her approach to eating as a source of comfort because she realised that her “eating patterns were based on expected meal times, socialising, boredom, anxiety and (her) need to be nurtured”.

Kate says that the shift was “psychological” and “in my head, more than anything else”, This is a significant cognitive shift, considering she had previously battled with such a skewed mental perception of herself and her weight issues.

Another significant change Kate experienced as a result of her anti-diet paradigm shift was the internalisation of her locus of control. She was “taught to take control” and, having “uncovered (her) eating triggers,” could “manage food” and “make choices as opposed to the imposition of eating plans”. She continues to say, “Giving me choice and allowing me to make the decisions was liberating.” She attained the “authority” to eat what she wanted on what she calls “*my* journey”.

Phase 5: Acquisition of knowledge and skills. Kate refers to the knowledge and skills she acquired as “tools” that comprised “eating strategies for life”. She does express that she faced some challenges during her weight loss journey, such as overcoming exercise resistance, learning to leave food on her plate and manage her portions, and confronting her fear of being thin. However, she was able to acquire the skills and processes to overcome these challenges and mediate her weight problem.

She narrates the primary processes that mediated her weight loss and maintenance.

The first key process was the normalisation of all foods through the programme's anti-diet approach. Kate refers to "the fact that it was my choice" as a key motivational driver. Learning that "nothing was off limits" was "empowering" and she began to disassociate moral values such as 'right' and 'wrong' from food. She refers to the "idea that nothing was barred" as a "godsend".

She recounts how she "ate O'Grady's crisps for three solid months, for lunch and supper" and "was in heaven". However, because all food was normalised, she says "the difference was that I knew what I was doing and I enjoyed them without any feelings of guilt – the freedom of choice was empowering". This process was crucial for Kate because during this time she actually lost weight and could begin trusting herself around all foods. In normalising all foods, she had "broken dieting rules and lost weight without feeling degraded and humiliated".

This normalisation also allayed her fear of deprivation because she "knew she could have them later or tomorrow". This also "freed" her to "stop when (she) felt full".

The second key skill Kate acquired was the awareness of the causes and triggers of her weight problem. Through psychodynamic interrogation, she learnt that the key to weight loss and weight management was not looking at what she ate, but rather *why* she ate. In learning to identify "what hunger felt like," she discovered that her "eating patterns were based on scheduled, social and emotional eating". Through learned processes of behaviour modification, she learned that "it didn't take much food to satisfy (her) hunger".

In recognising the psychodynamic underpinnings behind her relationship with food, Kate was able to separate her "head" and her emotional state from her appetite and eating habits. Through this process she also learned skills of intuitive eating and mindfulness to "consider if (she) wanted savoury or sweet, and stop when (she) was full".

The third significant process Kate acquired was the set of behaviour modification techniques such as "portion control," "using a smaller plate" and "leaving

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some food on (her) plate". She also "got used to stopping when (she) was full" and pausing to gauge her level of satiety. This was a critical lesson for Kate and helped her "to get comfortable in a social setting without the constant need to eat".

Closely linked to the normalisation of all food and the behaviour modification techniques she learnt, was the nutritional tools she acquired. She "began considering healthier options and introduced fruits and vegetables into (her) meals" and "ate nuts for snacks," all of which were "previously unheard of". She says, "Previously, the only vegetables I ate were rice and potatoes, and now I find myself looking for and eating broccoli, cauliflower, beans, spinach and butternut."

The next significant skill that emerged from Kate's narrative is her ability to mediate what she refers to as "whips". She refers to her insecurities and self-consciousness around exercise as a "*whipping* feeling" and says that weighing herself "has always been a *whip*". Through the paradigm of Transactional Analysis, Kate's "whip" can be considered her 'Critical parent," while her tendency to rebel and say, "I'll show you who's boss!" is the voice of her 'Rebellious Child'.

Kate acknowledges that her ability to mediate the 'voices' within, through Transactional Analysis, is dependent on "phases". She says, "If I am in a good place then I can talk myself down" and reason with the 'Rebellious Child,' but she is also aware that this process is closely tied to her ability to "manage food around her triggers" and that she can mediate her fear of deprivation and being a "bad person" by empowering the 'Adult' voice and taking control.

Phase 6: Lifestyle transformation. Kate describes how the psychological processes, skills and behaviours that she adopted have become a normalised part of her lifestyle and are reflected in a normal relationship with all food. She illuminates this transformation by sharing how she is "so impressed" with herself because previously "there was no way (she) could open a slab of chocolate and take only two bars". She says it "was unheard of" but she learnt to self-manage her behaviour around food to the point that she is "amazed and proud" to add that she has "accumulated a cupboard full of crisps and chocolates, for when I want". However, they "inevitably land up in the cupboard" instead of eaten all at once. She says, "The freedom of choice was not only empowering but also helped with control."

Her lifestyle transformation is also reflected in her comfort with socialising around food. Whereas before she “was anxious” about social meals, she says now, “I have learned that a salad for lunch is fine. I don’t have to have a steak for lunch and a steak for supper”. She is “far more comfortable” in these situations and once she has decided she is full, can “sit back, relax and chat” normally and “take a doggy bag home”.

Kate has also integrated exercise in her lifestyle transformation. In the past, exercise “was not something (she) enjoyed,” and she “struggled to maintain an exercise routine” since it “had always been a sore point”. She held the belief that exercise was her “punishment for being fat.” Since completing the programme, she is able to “acknowledge its value” and now she is “training in the gym, full time, and it’s a regular part of (her) lifestyle”.

Phase 7: Personal transformation. Kate expresses her experience of personal transformation when she confidently asserts that Weight-Winners is “an amazing and wonderful programme” that “fundamentally changed” her life, implying a holistic change that extends beyond her physical appearance. She says that “psychologically, in (her) head, it’s honestly the winner,” a transformation which reflects that she “has gotten to a point where (she) won’t go crazy again”.

Kate describes herself as feeling “relieved and amazed” that her weight has “stabilised at a comfortable level”. For her, “losing the weight was such a win” and she “just felt that everything was coming together”.

Her sense of control and self-directedness is reflected in her being able to “maintain 80% of (her) weight loss and autonomy in regard to food choices”. She says that “the new skills, being involved in an exercise routine, the freedom and ability to choose what food (she) ate) and dealing with her triggers” led to one of her “greatest successes” in which she “ultimately lost 20 kgs”.

Portraiture of Kelly

On commencing the ITAND Programme, Kelly’s BMI was 25.56. Through her participation in the Programme, Kelly attained a BMI of 21.30, reflecting a 15.9 % weight loss maintenance for a period exceeding 20 years.

Phase 1: Disorienting dilemma. Kelly can be considered as facing a ‘disorienting dilemma’ when she “rolled back to South Africa,” and realised that “at the age of 30,” she had “spent half (her) life overweight”. She says: “I was now determined to change my life and Weight-Winners would be the way!” Her ‘disorienting dilemma’ came at a time when she had hit her lowest point, realising that although she had been on a cycle of diets for most of her life, they had continuously failed her.

It was at this low point that Kelly found out about Weight-Winners. She says, “The PR around the project was enough to catch my eye, hook my emotional state, and reel me in.” She describes that Weight-Winners resonated for her “when there weren’t pinnacle media voices” and that what she found in the programme was “amazing”.

Phase 2: Defining moment. Kelly’s ‘defining moment’ can be considered as occurring when she heard the “few choice phrases” at the introductory talk that were powerful in both helping her realise that diets had failed her and in renewing her hope. She says that “the opening speech sealed the deal,” and that hearing “from today onwards you can eat whatever you want, whenever you want” resonated deeply with her. She says she “remembers vividly” my saying that “you will never have to eat cardboard again”. Weight Winner’s “cognitive approach was supreme” and she refers to it as “brilliant”. Her ‘defining moment’ was therefore a culmination of hearing about the anti-diet approach, the “positive reinforcement” on the programme and the fact that “everything (I) said about eating appropriately made sense” and that she “would eat like thin people eat”. She says, “I have been a proselyte since the day I went with you”.

Phase 3: Self-reflection and psychological insight

Trauma as causal effect. Kelly begins her reflection into the causes of her weight problem from the age of 12, when she was “incarcerated in a restrictive Milwaukee back brace” for a “slightly visible scoliosis”. It was also around this time that her “brother had died in a car accident” and she sustained a serious injury to her foot. She refers to this as “trauma” when she was a teenage child. This combination of traumas formed a strong emotional basis for eating and she acknowledges that her “eating started by way of recreational healing”

She recognises that this trauma “plays a preliminary role in one’s self-consciousness,” and she “became a comfort eater” as a result. She recalls how “every day” she would “come home from school, read the newspaper and stuff (her) face” as a means of consoling herself during this time of emotional and physical upheaval. She says that from this time, her “body expanded” as her “confidence plunged,” a dilemma that would perpetuate itself into her adult years.

Awareness of the exacerbation of her weight problem due to dieting. Kelly says that her weight problem “remained until 1991.” In that time, she had “been fat and been thin”. She went through university as a “round human” and “got very thin to get married”. She had “done the Atkin’s diet religiously and did not lose a *pound*”. She then “committed to the Beverley Hills Diet” but found herself having a “tantrum on the floor” one day after only losing only “1 kg in eight weeks.” She acknowledges that her “neurochemistry had hit a major deficit of ‘something’” and that even when she eventually did reach her goal weight, “the weight always crept (back) on”. She had “been through them all” without any lasting success, “always living in those yo-yo spacers”.

Weight problems compounded by emigration. The year before joining Weight-Winners, Kelly returned from New York, were she “had literally starved” as she “could not find work”. Her weight had climbed to her “heaviest” as she “lived on cup-a-noodles, pizza slices and catering at events”.

Phase 4: Paradigm shift. Kelly narrates that from the introductory talk onwards, “the methodology just resonated for me”. Because it was “so logical and easy,” it facilitated her ‘paradigm shift’ from a “yo-yo spacer” diet mentality to an anti-diet paradigm. She fundamentally changed her approach and decided that she “would never ever diet again”. The “reversion to a formal diet” was something she came to “fear”. She realised that it “is just so much easier for people to commit to a diet of restriction for a limited period of time … and hope (the weight) stays off forever,” but she learnt that the Weight-Winners “method WORKS” as a sustainable alternative to the diet-mentality.

Kelly shifted her locus of control internally and acquired “the ability to be in control”. She learnt to self-direct her hunger and eating, relinquishing eating “according to regimens”. She learnt that by internalising the locus of control, she

“had no reason to adhere to the illogic of eating traditions” and “continued to be a maverick” in her self-directedness. This internalisation of control is closely tied to her learning what true hunger is. She “internalised the mantra: Are you hungry?” and began to eat intuitively and in accordance with her hunger scale.

So great was her paradigm shift, she says she “wanted (me) to start a global revolution,” reflecting how deeply she “believed in it”.

Phase 5: Acquisition of knowledge and skills. Kelly narrates that during the process of acquiring weight management skills, “cognitive reasoning interrupted behavioural patterns,” thereby allowing her to self-direct her relationship with food. She found the methodology “so logical and easy” and was able to “internalise many behaviour patterns,” resulting in a transformation in her relationship to food. She says that she was taught what she “needed to know” to “remain thin for the rest of (her) life”.

She lists four processes and skills that were significant in her weight loss. The “most significant” process she “remembers vividly” is the “big feast,” which was “the most gob-smacking event ever”. In this chapter of Weight-Winners, she learnt to choose the food she “most desired to eat,” and in listening to her body and tasting the food, was able to stop and assess her hunger. After the meal, a “black garbage bag was passed along the table … weighed down with food”. It dawned on her that the “food could have been in (our) bodies” and she says, “That was IT!” The example was “literal, it was real” and she realised that “it was either stuffing the food in your mouth or not”.

From then on, she “never finished a plate of food”. Through this learned process of behaviour modification, Kelly became known as “Kelly who eats 1/3 of a meal and walks out with a takeaway”. She learned to eat intuitively and mindfully, saying, “I taste my food, savour it, declare I am starving before a meal … but I do not eat the plate empty”.

The second skill was the Weight-Winners ‘trigger tapestry’. She says she “loved working through the diary” and that “every question peeled back the layers of psychodynamic triggers”. “More importantly,” she says, “the process didn’t just interrogate: it provided clear, logical and totally intelligent methodology.” Through the process of recording and interrogating her eating triggers, Kelly was able to identify

the emotions and external factors that contributed to her eating patterns. This was closely related to identifying her true hunger and assisted her in eating intuitively. She was also able to recognise the external and psychodynamic factors that had led to her weight problem.

The third skill Kelly acquired was the paradigm of Transactional Analysis. In mediating through this cognitive framework, she was “in control” and learnt to “outwit the irrational, harsh and judgemental parent”.

Phase 7: Personal transformation. Kelly describes her attainment of personal transformation by saying, “Weight-Winners changed my life, and in so many dimensions.” She says that the “journal and process is phenomenal” and through “personal exploration, behaviour modification and sustained support,” she was able to manage her weight. The methodology, she says, “stayed with me forever”.

“Significantly, to this day” whenever she dines out she “comes home with two thirds of (her) bodyweight in takeaway”. She has learned what she needs to know “to remain thin for the rest of (her) life”.

Portraiture of Linda

Linda attended the ITAND Programme in 1991, which allows for a 25-year follow-up. Her age was 18 years at the time of participation and she is now 43 years old. When she participated in the programme she weighed 60 kg, had a height of 1.64 m, and a BMI of 22.4. She achieved an initial weight loss of 5 kg during the eight-week ITAND Programme, which represents an 8.3% reduction in initial weight. Her current weight remains at 55 kg and her current BMI is 20.5, reflecting the lifelong maintenance of an 8.3% loss in weight over 25 years. Although Linda was not classified as overweight by her BMI, she met the criteria for binge-eating disorder and was experiencing significant discomfort with her weight and body.

Phase 1: Disorienting dilemma. Linda’s “disorienting dilemma” was the amalgamation of her unhappiness with her body, binge-eating and being trapped in the ceaseless cycle of dieting “spiralling up and down: you’re eating and gaining

more weight and then you're gaining more weight, then you're wanting to lose weight and then you're dieting again".

On turning 17 she reached the decision "'NO MORE DIETING." She "had tried every other diet already" and upon reading about the Weight-Winners anti-diet programme she thought, "I need to try it out!"

Phase 2: Defining moment. On engaging in the programme, Linda describes her defining moment as a "revelation" that "allowed me to change the course my body shape was taking". She felt empowered by having "taken the first step to losing weight naturally" and achieving her ideal body weight.

Phase 3: Self-reflection and psychological insight. Linda begins her narrative by explaining that as a child she had a healthy relationship with food, and that she was "healthy, energetic and thin". She was not deprived of "the so-called forbidden treats" and her family's "cupboards were stacked with all sorts of biscuits, sweets and chocolates".

Linda recalls that her "struggle with weight gain" began in her early teens with the onset of puberty. She "wanted to remain petite with slim hips" and was "utterly unhappy" with the way her body was changing. As she began to go through puberty, she gained "excess fat" and "went from this petite little girl to a voluptuous woman overnight". Unequipped to properly understand the changes that were happening, Linda "didn't interpret the hips and fuller figure as part of (her) genetics". Instead, she just thought she was "getting really fat". She felt abnormal, asking, "Why did my friends not have wide hips; why did my sister not have wide hips?"

She became "so self-conscious" about her physical appearance and "became even more focused on food". She "began binge-eating and constantly turned to food as a means to comfort (her) poor self-esteem". She recounts how she "used to sneak into the kitchen late at night when everyone was sleeping and eat a whole box of … cereal". At this stage she admits she was "definitely bingeing" and she gives us an insight into the psychodynamics of her binge-eating disorder, saying, "the moment you start to feel fat, you start to eat fat, and then you do become fatter."

Up until she reached puberty, no foods were forbidden in Linda's mind – as evidenced by her love of vegetables and the non-restricted cupboard full of "treats"

at home. However, when she became conscious of her weight, these foods “really became forbidden”. She goes on to explain how eating one bowl of cereal “for breakfast in the morning wouldn’t have been a forbidden treat, but eating box after box all of a sudden became a forbidden treat”.

Introduction to diets. Linda had reached the point where she was “desperate” to lose weight. A friend from school gave her a “calorie counter book that indicated a sure way to lose weight was to follow a 500 calorie-per day eating plan”. She says, “Thus my dieting days began …”

“Determined to slim down,” Linda counted calories “every time (she) consumed anything”. She “even stopped drinking water, fearing it would cause abdominal bloating”. The sense of deprivation inherent in this diet-mentality meant she “was always hungry and obsessed with food”. On this restrictive diet, her “energy levels plummeted,” meaning that even though she was “chuffed” that she could fit into jeans from when she was a pre-pubescent child, she “had no energy to do anything or go anywhere” to show off her “trimmed down figure”.

Linda continues to elaborate on her cycle of “yo-yo dieting” and weight fluctuation. So determined was she to “get it right” that she “bought every book on every diet” she could find and “took laxatives,” watching her weight rise and fall with each new attempt.

She tells how every supper became her “last meal,” but the problem was that “the quantity of food consumed during (her) two-hour-long suppers was equal to that of a normal person’s consumption for a week”. Rather than trusting her internal hunger cues and eating what she intuitively wanted, she “ate around the edges of chocolates, nibbled at the corners of biscuits, scraped the bottom of ice cream tubs, picked out the big pieces of granola and only ate the bread crusts” in an attempt to wean herself off “nutrition-poor food”. However, because her eating was fuelled by deprivation and the fear thereof, she consequently “got fatter”!

Phase 4: Paradigm shift. Linda’s paradigm shift began with the title of the magazine article, “Finally you can have your cake and eat it too!” which sparked her interest in the Weight-Winners programme.

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Linda explains that “the important thing” was that she no longer “wanted to obsess about food and, above all, (wanted to) enjoy eating without feeling deprived or guilty”. She explains that it changed her “approach concerning the values (she) places on (her) body, health and self-worth”. It was this conviction that contributed to her shifting from a diet-mentality to an anti-diet paradigm. She describes this phase as a “complete shift” and she converted to a dieting “non-believer”. The new methodology resonated deeply with her and she broke the “normal cycle” of dieting and deprivation. The course “finalised” that for her it would be “no more dieting”.

After joining the programme, her underlying assumptions about food and weight were changed. She came to the conclusion that “contrary to what long-term dieters believe, it’s neither chocolate nor bread, nor the vast list of tasty forbidden foods, which make us fat. The cause of weight gain is a set of problems that arise when you feel deprived, which results in over-compensating and bingeing to satisfy cravings.”

In this paradigm shift, Linda adjusted her focus away from her physical appearance, realising that “it is about the mind more than the body,” and that “it’s about a feeling, not about a number”. She also realised that the programme “was not based on a belief that the goal of rapid weight loss is at the forefront of everything”.

Linda’s paradigm shift involved her moving from a diet paradigm to an intuitive eating paradigm in order to “meet the requirements of (her) own metabolism”.

She says she learned to “listen to when you’re hungry” rather than “eating for the sake of eating”. She learned to undo being a “creature of habit” and could “stop eating when (she) was satisfied”.

The internalisation of her locus of control enabled autonomous self-directedness, which is a crucial mediating factor in the intuitive eating paradigm, and resulted in shifting Linda’s thinking around weight and her relationship to food. She became “in control of the situation” and says, “I know what I need to do and I know how to do it.” She realised that “it is about a feeling of self-control” and that “overeating correlates to that lack of control”. By claiming back the locus of control, Linda “takes responsibility for (her) actions”. She learnt that by listening to her body and “not following anybody else’s rules,” she could manage her weight without dieting.

She admits, “at first, it was difficult to stop the cycle of craving and bingeing” but that “within a short space of time” she recognised the “many benefits” of planning her meals and “mastering” her “obsession with food”. She “rejoiced” at the fact that she was no longer enslaved by “food cravings that spiral out of control”.

Phase 5: Acquisition of knowledge and skills. Linda realised that the programme was “not prescriptive and not a diet that must be followed inflexibly”. She resonated with the fact that it was “an eating philosophy and organisational tool to facilitate healthy eating”. She records the specific skills, knowledge and processes that were fundamental in allowing her to lose weight without engaging in dieting behaviours.

She learnt to set meal times “according to (her) own time constraints” and she began to practise intuitive eating, placing utmost importance on “meeting the requirements of (her) own metabolism”. The newly acquired awareness and intuitiveness allowed Linda to realise the importance of stopping to “pause and focus (her) attention” on the food in front of her. She learnt the “simple rule to calmly acquaint oneself with the food (which is) psychologically so satisfying that one might be averse to eating full portions to clear the plate as a course of habit”.

This process extended to her second “mantra” of “only eating the kind of food (she) found most palatable” and that made her feel “mentally and physically satisfied”. This was a particularly important breakthrough when considered alongside her bingeing habits that arose from her previously held diet-mentality.

During the nutrition education module, Linda learned to “follow a nourishing, balanced, self-satisfying eating plan” and was able to make it her “mission” to “incorporate only the best quality, most delicious and healthy foods available”. She has learnt that “if I give my body the right fuel it will perform optimally”.

In analysing her relationship with food through the theoretical model of Transactional Analysis, Linda began to acknowledge the conflicting ‘voices’ within her that had been sabotaging her weight loss and her relationship with food until this point. She observes that “when you overeat, the only person you’ve got to answer to is yourself. When we do overeat we tend to tell everybody else … it’s almost like we’re trying to get the parent’s approval”. She says now that she has learnt to try and “stay in the adult voice” and “take responsibility” for her own actions.

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Phase 6: Lifestyle transformation. Linda says that the “positive guidelines” will stay with her “every day”. Even now, “many years later,” she says: “the programme is still clear in my mind”. Consequently she is “healthy, energetic and on the road to a feel-good future”. She is “never hungry or deprived and best of all, (her) body weight is stable”.

With the “tools” she acquired, Linda says she is finally able to control her “obsession with food,” control her “conflict and self-doubt about dieting,” look after her physical health by losing excess weight and finally able to normalise her relationship with food, “eating regularly without guilt”.

She has transformed her lifestyle to be in harmony with her lifelong eating pattern: she can now “organise” her food intake around her “social schedule, work and home environments”. She has made a habit of “planning (her) weekly shopping ahead of time,” and has fully incorporated the saying “If I fail to plan, I plan to fail” into her lifestyle.

Phase 7: Personal transformation. Linda says that the programme took her “on a journey of self-discovery” and provided her the “opportunity to come to terms with who I am so that I may embrace my innate talents and capabilities, without wanting to become someone else”.

She confidently exclaims, “Weight-Winners changed my life forever!” Being enabled to “take charge” of her “life and health” has had a “positive effect” on “all spheres” of her life.

Portraiture of Ruth

On commencing the ITAND Programme, Ruth had a BMI of 32.50. Through her implementation of the Programme, Ruth attained a BMI of 21.90, reflecting a 32.62% weight loss maintenance for a period exceeding 20 years.

Phase 1: Disorienting dilemma. Ruth may be considered as having faced a ‘disorienting dilemma’ when she describes her continuous self-destructive cycle with diets and reaching a dead-end in regard to losing weight. Ruth recounts that she had “tried some of the fad diets of the day” but realised that she was consistently setting

herself up to fail. She had fallen victim to, and was increasingly frustrated by, her "unrealistic expectations and frustrations" that she had created by "wanting to be the person (she) knew (she) was inside" but who "was buried under layers of guilt and self-loathing".

During her time of deepest despair Ruth was introduced to the Weight-Winners anti-diet approach. She describes the impact of the approach when she writes "my life changed for ever when I met Maureen Kark" and refers to me as her "lifeline". She describes identifying strongly with me as a positive role model at a time when she decided that she had to break the "cycle of deprivation, bingeing and feeling like a failure".

Phase 2: Defining moment. Meeting me may be considered Ruth's experience of a "defining moment". She exclaims that through meeting me her "life changed forever" and that she felt "inspired and encouraged".

Phase 3: Self-reflection and psychological insight. Ruth shares the importance of self-reflection and self-insight when she writes that there was "no way" she could have lost the weight because, as she says, "I had to deal with myself and why I had picked up so much weight". Upon "taking a good long look at herself," her underlying beliefs about her body shifted, she was able to self-reflect and only then was she "able to accept all the rest".

Ruth begins her exploration into the causes of her weight problem by sharing that she was born into what may be considered an obesogenic environment when she describes herself as being "born into inherited food issues" as a result of her parents "being children of Holocaust survivors".

In her home, "meals were always tinged with repressed issues" that her parents developed and perpetuated from their own parents who had "been deprived and starved". Her parents' upbringing and the eating scripts that they had learned from *their* parents "impacted how they approached nourishment and nutrition for the rest of their lives". Ruth's familial eating scripts, which were "hammered" into their subconscious, comprised the "guilt of not finishing your plate or wasting food".

As a baby, she was "quite a fussy eater" and recalls how her grandmother and mother would "force-feed" her. She says that even from her infancy "their need

to have a ‘happy fat baby’” countered her “natural inclinations to be a thin person”. She recalls her constant “battle” with her mother in determining which one of them knew better whether she “was hungry or felt like eating”. Despite this, Ruth was a “thin, active child” and “generally ate three meals a day”.

Maternal eating disorder. Ruth explains that her mother had an “eating disorder that was never discussed”. Her own “struggles” with her weight and appearance were projected onto her daughters. She “filled the house with baking” but criticised their outward appearance. Ruth recognises that her mother’s “own issues with her body profoundly impacted” her and her sisters.

Parental divorce and emigration as causal factors. Ruth attributes the start of her “battle with weight gain” to her parents’ divorce, which resulted in her being “uprooted from home,” at the age of 15, and relocating to New York with her mother. Leaving behind her friends and lifestyle, Ruth found herself in “a world of extreme Orthodox religion that was repressive, restrictive and resulted in (her) rebellion”. In a new city, she was “no longer swimming, dancing or running around and was eating a lot of fast food”. She also had to take care of her younger siblings when her mother was “in the throes of post-divorce depression” and would prepare meals based on the few things she could cook: “fried chicken cutlets, macaroni and cheese or spaghetti and meatballs”.

Ruth recalls that at this stage she began “comforting” herself with food “at all hours, eating entire pies and chocolate bars” in an attempt to comfort and nurture herself when her mother was absent, “locked in her room” and trying to cope with her recent divorce. She also attributes her weight gain to the larger portion sizes of food in the U.S., which was also “processed, high in sodium, fats and sugars”.

Awareness of the exacerbation of her weight problem due to dieting. Ruth relays that she eventually “escaped back to South Africa” to live with her father but arrived home “overweight, hiding behind baggy clothes and stuffing my face in private”. People who had not seen her since she left exacerbated her “shame” by commenting how they remembered her “dancer’s body” and “suggested a diet”.

Her feelings of shame were intensified as her father continually introduced her to another diet – “the three-day plan, the cabbage soup diet, Atkins” – and made her feel “ashamed” for what she terms “losing myself”.

She explains that, “the shame just made me hate myself and feed my pain”. The cycle of dieting and failure continued.

Phase 4: **Paradigm shift.** Ruth explains that from the moment she engaged in the Weight-Winners way of thinking, she began “shunning fad diets” and internalising an anti-diet approach by relinquishing her reliance on diets which had previously set her up to fail.

She says the “psychology was the trigger” which provided the “psychological break” she “needed at the beginning to get (her) onto the path”. This breakthrough was a “high” and allowed her to reconsider “the relationship with food” and how she ate. “Comprehending the psychology” behind her weight issues “felt like an epiphany”.

She recalls how one of the defining principles she “will never forget” is that “if I wanted to have a piece of chocolate, I should allow myself to savour a small portion instead of eating the empty calories of diet foods and anything other than the chocolate which I really wanted, instead of consuming hundreds of calories in ‘permitted foods’ only to inevitably cave and end up eating chocolate and feeling badly for not having the discipline to stick to a diet that was not working”. This principle allowed her to internalise the anti-diet approach and she finally realised, “if you want one little piece of chocolate and you’re on a diet, you will eat all these fat-free, sugar-free foods and at the end of the day you will end up bingeing on a whole slab of chocolate”.

Crucial to Ruth’s paradigm shift was the paradigm of intuitive eating, the concept of eating like a naturally thin person (eating what her “body wanted”), and her claiming back directorship of her weight and lifestyle.

Her paradigm shift began with the realisation that “we are all naturally thin people”. This resonated with her and she was able to negate preconceived beliefs about her weight and also question her inherited family food scripts.

Through adopting the intuitive eating paradigm, Ruth practised autonomous self-directedness and made the slogan “what I want when I really want it” her “mantra”. In the past, she described her mother’s food as a “bowl full of power control,” but became empowered to “know what I need to do for *me*”. She was able

to embrace the type of person she is “naturally,” and, as she asserts, “do what I want, when I want to do it”. It “worked for (her) independence” and allowed her to be the “self-aligned” person she knows she is. This was a revelation because it “made sense to make (her) diet that way too”.

Phase 5: Acquisition of knowledge and skills. Ruth narrated four primary processes that facilitated her weight loss. The first was “changing my relationship with food and the way I eat” through acquiring the strategies to eat intuitively and normalise all food. Ruth learned “simple concepts” about “eating like a naturally thin person” and began to listen to her body, “feeding it what it needed and wanted”. She rejected dieting and the “permitted foods” they prescribed.

The second skill she acquired was hunger awareness and portion control. Through behavioural strategies, she “simplified the concept by using a smaller plate” and “avoided eating to the point of feeling full”. Instead, she started “trying to eat to feel satiated,” listening to her body and her natural hunger and satiation cues.

The third powerful process she learned was the application of Transactional Analysis to change her internal dialogue with regard to food and eating. Through applying Transactional Analysis, she came to “understand that I was feeding the deprived child and the damage of a critical parent and punishment had been inflicted by an angry teenager on herself”. In realising this, she was equipped to internalise the locus of control and be “able to take control over food instead of allowing food to control me”. She recognised that previously she “needed to eat to comfort myself” but through acknowledging the comfort-seeking teenager, she was able to constructively converse with the ‘voices’ of the parent and child. In this way, she learnt she could “do something else if I was feeling down” and refrained from consoling herself with food.

The final piece of significant knowledge she lists was the acquisition of nutritional knowledge. She learnt to “nurture” herself and her “health became so important”. Ruth recounts that this information was “very interesting” and became “something I love”.

These skills and processes were transformative and she continues to practise the learned “concepts of always eating exactly what I feel like, nourishing myself instead of deprivation and embracing nutrition instead of being on a diet”.

Phase 6: Lifestyle transformation. Ruth maintains her weight by eating whatever she wants when she wants it and says that it has “become (her) lifestyle”. It is “not a struggle at all” and has become “such a natural thing” for her, to the point where she “really doesn’t have to try at all”. She has become “the go-to person, who people ask what is healthy to eat”.

She has “incorporated exercise into (her) lifestyle and “didn’t force (her) self into it” – “it just became natural” and “part of (her)” lifestyle.

Phase 7: Personal transformation. Ruth expresses her attainment of personal transformation by describing the Weight-Winners programme as “life changing” and asserts that she “never looked back” after having participated in the programme.

In going through the programme’s processes, she had to “really take a good, long look” at herself and could then “completely change”. She was able to reassert her independence, become more “self-aligned” and able to “tackle any challenge on (her) own”. She attributed the “incredible effectiveness” of the programme to suiting people like herself who have an “independent spirit”.

Ruth’s weight “melted” off of her, “pound by pound, week after week, month after month until eventually (she) returned to the naturally thin size (she) was always meant to be”. In the 20 years since her introduction to the programme, her weight “never ballooned again”.