Motivations for lifestyle change to achieve weight loss: An interpretative phenomenological analysis

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Abstract

Purpose

Being obese or overweight has negative health implications and is a growing problem in Australia with 62.8% of the Australian population now overweight or obese. The objective of this study was to examine in detail examples of individuals who had achieved healthy lifestyle change, in the form of a 10% weight reduction, and what prompted their efforts to change. By understanding the motivators that trigger successful weight loss in those who have been able to maintain weight loss, more effective health promotion campaigns can be developed to address the obesity epidemic in the broader community.

Methodology

An in-depth qualitative methodology was utilized in order to obtain rich data regarding the motivations to embark on a weight loss journey.

Participants who had lost 10% of their body weight following the implementation of a changes diet and exercise regime were invited to participate via posters placed in the campus of the University of Newcastle, local gyms and community health centres. Six participants were interviewed (3 men and 3 women), ranging in age from 29 to 55 years. Face-to-face semi-structured interviews were conducted by the female author, [KR] at the University of Newcastle. Each interview was audio recorded and transcribed verbatim. Interviews took place over a six month period in 2013 and ranged in duration from one hour to just under two hours. Interview transcripts were analysed using Interpretative Phenomenological Analysis (IPA) (Smith, 1996).

Results

Five main themes were identified from the research in relation to motivation for lifestyle change for weight loss. These themes were identified as 1) Motivational Kickstart; 2)
Staying on Track; 3) Challenges to Ongoing Motivation; 4) Future Concerns; and 5) The Self and Others.

**General Conclusions and Implications**

The current study identified that a trigger to action, whether it be internal or external to the participant, as a key motivational factors in prompting behavioural change relating to diet and exercise. Additionally, challenges and facilitators of ongoing motivation to continue new dietary and activity related behaviours are identified by participants. Concerns for possible future selves were identified as motivating sustained behaviour change enabling weight loss. Changing social interactions were identified as both supportive and potentially posing a threat to sustained motivation for weight loss.
Critical Review

Obesity

Over the last two decades the rate of Australians who are overweight or obese has rapidly increased from 56.3% in 1995 to 62.8% in 2011 to 2012. Seventy percent of men and 56% of women were found to be overweight or obese (Australian Bureau of Statistics, 2013). This increase has been seen as a consequence of a reduction in physical activity due to changes in technology and lifestyle (for example, increased screen time and the use of labour saving devices), and the increased availability and consumption of energy dense foods (Stanton, 2009).

Obesity is associated with adverse health including the development of type two diabetes, cardiovascular disease, certain cancers and osteoarthritis (Australian Government Preventative Health Taskforce, 2009). Physical inactivity is the second largest contributor to the burden of disease and injury in Australia in terms of modifiable health risk factors. It is a factor in the prevention of, and conversely, the development of, a number of chronic health conditions including obesity (Australian Institute of Health and Welfare, 2010). Obesity and the many chronic illnesses it can lead to threaten to decrease the life expectancy of Australians and will substantially increase the costs to health care systems (Australian Government Preventative Health Taskforce, 2009). Public health officials and the medical profession encourage weight loss due to the notion that it is unhealthy to be overweight or obese and obese individuals are encouraged by these groups to be mindful of their calorie intake and to increase physical activity (Bacon & Aphramor, 2011). In addition to the physical health implications of being obese or overweight, individuals are stigmatised by others who perceive them as lazy, self-indulgent and lacking in self-control, among other
negative moral judgements (Malterud & Ulriksen, 2010; Throsby, 2007). Poorer mental health outcomes are linked to obesity, as is discrimination by others (Garip & Yardley, 2011). A study, conducted in the United States, found that obesity, as measured as having a BMI equal to or greater than 30 was associated with a 25 percent increase in the chance of having a mood or anxiety disorder (Simon et al., 2006). This study, which included 9125 participants, found a moderate correlation (odds ratios of 1.2 to 1.5) between obesity and the mental health conditions studied, however it did not indicate causation or directionality. A further limitation of this study was that weight was self-reported by participants, rather than objectively measured by the researchers. Utilising regression analysis, Pickering et al. (2011) found that overweight and obese women were at an increased risk of developing major depressive disorder, however the same relationship was not found for men. The strength of this research was that it was a three year prospective study involving a large representative sample of 34653 participants from the United States. A limitation of the study was that weight was again self reported. In a nationally representative study conducted in New Zealand, Scott, McGee, Wells, and Oakley Brown (2008), found a stronger association between anxiety disorders than mood disorders and obesity. An association between obesity and mood disorders was only found for women and those without educational qualifications. An association between anxiety disorders and obesity was found for both men and women. For this study height and weight was self-reported. Psychotropic medications were not accounted for, which may be a factor in the causation of obesity.

Research into the moderators of behavioural change related to nutritional choices and physical activity, two of the core behavioural domains that lead to obesity, is early in its development. However, what has been identified is that research is needed into the reasons why people make the choices they make with regards to food consumption and physical
activity, so that effective interventions to reduce the incidence of obesity can be developed and implemented (Baranowski, Cullen, Nicklas, Thompson, & Baranowski, 2003).

**Fear Appeals**

Whilst there are a number of general health behaviours change models, such as the transtheoretical model (Prochaska & DiClemente, 1982), fear evoking communication messages, fear appeals, are frequently used by public health organisations to promote health behaviour change (de Hoog, Stroebe, & de Wit, 2005; Ruiter, Abraham, & Kok, 2001). These messages aim to evoke fear in the individual viewing them, by describing or showing an image of a negative undesirable health outcome, with the intention of thereby motivating them to partake in the positive health behaviour described in order to reduce the state of fear (Witte, 1992).

A number of theories underpin the use of fear appeals to promote health behaviour change, one of the most recent being the Extended Parallel Process Model (Witte, 1992). The EPPM is based on the earlier Parallel Response Model described by Leventhal (1970). This model viewed fear arousal as a potentially motivational or inhibitory construct. The model suggested fear appeals produce two processes, danger control and fear control. Danger control processes are an individual’s efforts to control the perceived threat (e.g. via engaging in a recommended health action) and fear control processes are the individual’s efforts to control their fear. Fear control was seen as potentially inhibitory to engaging in adaptive threat control behaviours. The theory did not explain when danger control or fear control strategies would be activated and thus was deemed untestable as it was unable to generate precise hypotheses. It should be noted though that the originator of the theory, Leventhal (1970) acknowledged that his model was merely a first step to constructing a theory (Beck & Frankel, 1981; Rogers, 1975; Witte, 1992).
The Protection Motivation Theory (PMT) (Rogers, 1975, 1983) has also contributed to the development of the EPPM. According to this theory, when presented with a fear appeal, the individual engages in threat appraisal and a coping appraisal. Threat appraisal is an evaluation of the undesirable health behaviour in terms of its rewards and threat. This incorporates assessment of susceptibility and severity of the feared health outcome. Coping appraisal is an evaluation of response efficacy and self-efficacy in relation to the health behaviour prescribed by the fear appeal (Floyd, Prentice-Dunn, & Rogers, 2000). High threat coupled with high efficacy was thought to create the best conditions for desired health behaviour change. However studies testing this theory were evaluated in a meta-analysis conducted by Floyd et al. (2000). The meta-analysis which included 65 studies found moderate support for the theory, with an overall effect size of 0.52. Limitations of the meta-analysis include the heterogeneity of studies included, and that the meta-analytic method is not as well suited to the examination of multi-variable theories with the detail of the model being lost (Floyd et al., 2000). Studies testing the utility of the Protection Motivation Theory since the meta-analysis conducted by Floyd et al. (2000) have produced varied findings. Plotnikoff, Trinh, Courneya, Karunamuni, and Sigal (2009) investigated the utility of the PMT with regards to predicting uptake of physical activity in patients with Type 2 Diabetes. Their study found that self-efficacy was significantly associated with aerobic physical activity and intention to undertake aerobic physical activity and response efficacy was significantly associated with intention to engage in aerobic physical activity. Threat appraisal variables such as perceived vulnerability, perceived severity and fear, concepts key to the PMT model were not significantly associated with physical activity intention or behaviour. This calls into question the applicability of all components of the model. Ralph et al. (2014) found in their study of women with moderate to high risk of developing breast cancer that the PMT accounted for 40% of the variance in the intention to take Selective Estrogen Receptor
Modulators (SERM), which can potentially reduce the risk of going on to develop breast cancer. Interestingly in this study self-efficacy was not found to be significantly predictive of intention to take SERM.

The EPPM also incorporates drive theories, such as the fear as acquired drive model (Hovland, Janis, & Kelly, 1953) which proposes when individuals view a fear inducing message, they are driven to reduce their fear. Any behaviour which reduces the fear is said to be reinforcing. Drive theories propose a U-shaped interaction between fear and persuasiveness, which suggests that moderate levels of fear promotes action rather than high or low levels of fear (Witte & Morrison, 2000). However this u-shaped relationship has since been rejected because a number of studies conducted since this relationship was proposed have produced results indicating that increases in fear aroused consistently relate to increased acceptance of the proposed health behaviour (Sutton, 1992). Beck and Frankel (1981) noted that the drive theories have not been well supported by research findings, with only one study supporting the theory (Krisher, Darley, & Darley, 1973). Of this study, Beck and Frankel (1981) highlight that whilst it supported the inverted U relationship between level of arousal and persuasiveness, that study did not shed any light as to whether this relationship was due to defensive avoidance.

An alternative theoretical framework examining why individuals may, or may not, respond to fear inducing messages encouraging behaviour change is the stage model (de Hoog, Stroebe, & De Wit, 2007). This model incorporates both cognitive based fear appeal theories and dual processing theories of attitude change. The stage model assumes that attitudes to a protective action, such as a recommended health related behaviour, are based, in the main, on an objective evaluation of the information supplied in the health communication. Those viewing the communication will have a positive attitude to the protective action if it is supported by robust arguments; however they will only engage in the protective action if they
feel personally vulnerable to the health threat. According to this model, fear based communications can lead to either intensive or biased defensive message processing. Respondents to a fear based health behaviour change communication engage in threat evaluation and coping strategy appraisal. Coping appraisal can influence the threat evaluation. The perceived vulnerability to a threat, and the severity of that threat, impact the mode of processing the communication, and motivation behind processing the communication. When the perceived threat severity and vulnerability is low, heuristic processing is engaged in, with the motivation being the ability to arrive at an accurate conclusion. When the severity of the threat is low and the vulnerability to the threat is high, accuracy motivated systematic processing is engaged in. This is the case when vulnerability is low and severity of the threat is perceived as high.

The foundation of the stage model is outlined in the situation where the processing of fear based messages results in respondents perceiving high severity of threat and high personal vulnerability. In this situation the model highlights that the respondent’s self-belief around health is threatened, which results in defence based processing. In stage one of processing, defence motivation leads to biased systematic processing of the content of the fear appeal to allow criticism. However, criticism is constrained by evidence and therefore the respondent eventually accepts their personal risk. This, it is argued, leads to stage two whereby the processing of the action recommendation is processed in a positively biased manner, because in doing so it gives the respondent a sense of security. This processing leads to a heightened motivation to engage in the action prescribed (de Hoog, Stroebe, & de Wit, 2008).

There has been some discord in the research community as to whether fear appeals are an effective means of changing health behaviour (Witte & Allen, 2000). Witte and Allen (2000) conducted a meta-analysis which found a reliable but weak effect of fear appeals on
behaviour, attitudes and intentions to engage in positive health behaviour change. They also found a significant interaction whereby the stronger the fear appeal the more effective it was in changing attitudes, intentions and behaviours. Casting some doubt regarding the effectiveness of fear appeals in generating positive health behaviour change, a meta-analysis conducted by Peters, Ruiter, and Kok (2012) found that fear arousing health promotion messages were only significantly effective in leading to behaviour change when participants had high self-efficacy in their ability to carry out those behaviours. Without high efficacy, this meta-analysis suggested that the use of fear appeals may be potentially dangerous in that they found a negative, yet not significant, interaction between fear appeals and target health behaviours where low self-efficacy was associated. Unfortunately because of the strict inclusion criteria applied to this meta-analysis, only eight studies were included to observe main effects and six included to examine interaction effects. The strict inclusion criteria also represents a strength of the research in that only those studies that manipulated threat and efficacy, and used behaviour change as an outcome measure were included. The fact that actual behaviour change was included and not intention to change is important because studies indicate that intention to change behaviour does not consistently lead to actual behaviour change (Godin, Conner, & Sheeran, 2005; Reuter et al., 2010). Brown and Smith (2007) studied the effect of fear arousing messages of varying intensity on smokers’ perceptions of personal risk to negative health outcomes associated with smoking. These authors found that those participants who viewed the more distressing health promotion message evaluated their personal risk as lower than those who viewed the less distressing message. This led to the suggestion that defence processes may have been triggered. This study is limited by the fact that baseline measures of risk were not taken prior to message viewing and it is possible that the defensive responses of participants was due to the messages or a general level of distress. As shown, it is not clear whether fear appeals have
consistent desired impacts on health behaviour change, and what moderators (such as self-efficacy) are important to creating change. Whilst much research into the effectiveness of fear appeals uses intention to change as an outcome measure, intention to change is not consistently related to actual behaviour change, which in the end is the outcome measure that will lead to positive health outcomes for individuals.

**Self Determination Theory**

Many studies have found higher motivation prior to taking part in weight loss interventions (pre-treatment) as relating to actual weight loss. A few studies have found no relationship. Elfhag and Rossner (2005), in their literature review, found few studies examining the direct measures of initial motivation for weight loss and weight maintenance. The authors propose a model whereby individuals are motivated to lose weight by internal factors such as the autonomous decision to lose weight to achieve positive outcomes such as increased confidence. A sense of responsibility, ability, a capacity for flexible control and style of coping that allows them to handle relapses in a balanced way and to manage cravings are seen to facilitate weight loss.

Self determination theory (SDT) (Deci & Ryan, 1985) describes two types of motivation. Autonomous motivation relates to behaviour regulation which is perceived by the individual as chosen and originating from the self. As such, the chosen behaviour has an internal locus of causality. Controlled motivation relates to the notion that rather than being chosen by the individual, behaviour regulation is somehow coerced or as a result of pressure from an external interpersonal or intrapsychic force, thereby having an external locus of causality (Williams, Grow, Freedman, Ryan, & Deci, 1996). Self determination theory, as related to weight loss, proposes that successful weight reduction will occur when an individual carries out behaviours to achieve weight loss, such as a change to diet or
introducing exercise, because it is viewed as personally valuable to them and therefore having a perceived internal locus of causality (Williams et al., 1996).

In a review conducted by Teixeira, Going, Sardinha, and Lohman (2005) pre-treatment predictors of weight loss, in particular psychological predictors were examined. The study highlighted that individual responses to weight loss protocols have been highly variable. The authors attribute this to the heterogeneity of obesity as a health condition with its varying contributing factors including individual physical, psychological and genetic factors, along with environmental factors. These coupled with the lack of standardised weight loss protocols used across studies reviewed were thought to account for the highly variable responses in terms of individual participants’ weight loss. The authors explain that researchers have not been able to soundly determine why some people adopt behaviours and attitudes necessary for weight loss and others don’t. However, the best prospective predictors of weight loss in overweight and obese individuals are a cognitive style that is autonomous and self-motivated, and having had fewer previous weight loss attempts.

Their review revealed that self-motivation is most often assessed in studies by the Self Motivation Inventory (SMI). The SMI has been shown to correlate with eating variables and exercise behaviours during weight loss. Following their review of moderators of weight loss, (Teixeira et al., 2005) surmised that self-motivation is one of the strongest predictors. However, the authors state that most predictors of successful weight loss are understudied and they suggest that among the areas in which further research is needed is self-motivation. These authors also highlight a need for more qualitative analysis of the moderators of effective weight loss.

Williams et al. (1996) found that autonomous motivation, as described above, correlated positively with participants’ attendance of a weight loss program, losing weight during the program, and maintaining the weight loss for 23 months. Valuable insights can be
gained by exploring the individual reasons motivating successful weight losers to engage in weight loss facilitating behaviours. It should be noted that in this study only 52 participants out of the starting 128 were included in the follow-up stage, thus calling into question the assertion that autonomous motivation relates to successful weight maintenance.

A study examining the motivations for weight loss for restrained and unrestrained eaters (Vartanian, Wharton, & Green, 2012) found overall that health concerns were cited above appearance as motivation for weight loss. Restrained eaters were more likely to be motivated to lose weight for appearance reasons than unrestrained eaters. Restrained eaters were more motivated to lose weight than unrestrained eaters and were equally motivated by health and appearance. Appearance driven weight loss was associated with body image concerns. Conducted in the United States this study is limited in its generalizability because the participants were young women (mean age 22.65) attending college, thus the findings may not be applicable to older women, men or individuals of lower educational status.

Motivation at the time of embarking on a weight loss intervention has been seen to be predictive of weight loss and maintenance. In a study conducted in the United States, 66 female participants took part in a 16 week online weight loss program. In addition to the online component, an initial face-to-face motivational interviewing session was delivered by the researchers. Motivation was measured by the autonomous and controlled motivation subscales of the Treatment Self-Regulation Questionnaire. Across the whole sample autonomous motivation did not change from baseline to week 16. Controlled motivation however decreased over the course of the program. Participants who had lost at least five percent of initial body weight were compared to those who had not. A significant increase in autonomous motivation for those who had lost the five percent of weight was noted from baseline to week four. Autonomous motivation did not increase significantly for the group who did not lose five percent of weight over this period of time. Autonomous motivation was
maintained for those who achieved five percent weight loss from week four to 16, but significantly declined for those who did not attain this level of weight loss (Webber, Tate, Ward, & Bowling, 2010). It is unclear from the study whether the increase in motivation from baseline to week four was due to the initial face-to-face motivational session or due to early weight loss success, as measures of motivation were not taken immediately post the session. Limiting the generalizability of the study is the small sample size and that the sample was of highly educated women only. Weight was self-reported at four weeks, whereas the other measures (baseline and week 16) were taken by the researchers.

In examining the link between regular exercise and the maintenance of weight loss, Silva et al. (2011) examined motivation as related to exercise participation across a one year behavioural weight control intervention based on the principles of self determination theory, with two years of follow-up. The intervention sought to increase autonomous motivation with regard to exercise and weight management. This randomised controlled trial included 221 female participants aged between 23 and 50 years. Overall, they found that autonomous motivation is crucial to long term exercise participation, weight loss and maintenance and suggest that making regular exercise meaningful and positive for women is vital to encouraging long term participation. Unfortunately the study only included women, so it is unclear as to whether the findings are applicable to overweight and obese men. A further limitation of the study is that the researchers did not assess behavioural regulators at assessment. Thus it is possible that the intervention and control group differed on this aspect. Exercise participation was self-reported by participants, leaving open the possibility that actual exercise behaviours were misrepresented.

In a study examining the difficulties in establishing reliable predictors and correlates of weight loss and its maintenance, it was highlighted that predictors and correlates across research in this area are heterogeneous and predictively weak due to a highly variation in the
types of populations studied, interventions, constructs measured, and the typically small sample sizes used in research. The authors suggest that due to these factors the research in this area is limited and a more individualised approach to weight loss is proposed. The authors affirm the importance of self-motivation for weight loss and suggest that further research is needed to determine the influencing factors that impact pre-treatment motivation, and motivation throughout the course of weight loss due to the wavering nature of motivation (Stubbs et al., 2011).

Building on the notion that motivation is an important factor in achieving and maintaining weight loss as identified in the quantitative studies examined above, a number of qualitative studies have examined aspects of this concept in the in-depth manner that the methodology allows. In a study examining what motivates self change in the form of weight loss, Granberg (2006) suggests that possible selves are a potent motivator. This study was particularly interested in the discrepancy between an anticipated self and the actual self after weight loss. Granberg (2006) suggests that the identities which motivate and sustain self change behaviour, are said to be a part of self concept, as is body image. Losing weight and maintaining weight requires considerable effort, and affect a number of behaviours and relationships if pursued actively.

Semi-structured, in depth interviews were conducted with 46 participants who had lost at least 15 pounds (6.8 kilograms) of weight and sustained it over at least a 3 month period. Interviews were coded for the role of possible selves as motivators for weight loss. The results of the study found when describing what motivated participants to lose weight it was almost always linked to benefiting other aspects of self, for example attractiveness. Weight loss was viewed as a vehicle through which a fundamental self dilemma could be resolved. For the participants the possible selves that motivated and maintained weight loss were reflective of beliefs about the changes it would bring to the individual’s life. Weight
loss was commonly linked to benefiting other important aspects of personal or social identity. Some participants linked weight loss to transforming their lives for the better. It was expected to lead to participants becoming more physically attractive, popular, charming and secure. Thus weight loss was expected to lead to enhancement of both personal and social identity. However, many participants reported that this idealised self was not attained despite having sustained weight loss. Whilst possible selves are said to be commonly seen as motivators for change, this study proposes that they can impede motivation when the idealised self is not validated (Granberg, 2006).

Kwan (2009) conducted a study involving 42 overweight individuals who participated in semi-structured interviews. There was a diversity in weight, sex and race across interview participants, and they were aged 24 years and over. Across the majority of participants, health was cited as a key motivator for weight loss with fears associated with medical risk for conditions such as heart disease and diabetes identified. Weight loss was also seen as a way to fulfil social desires and lead meaningful lives. Being healthy was seen as being able to function in life as they would like.

Appearance was cited as motivator for weight loss by participants in this study. Health and beauty motives were seen to operate in tandem, however whilst health was embraced, beauty ideals were criticised. It emerged that behind weight loss driven by motives of beauty and attractiveness was a desire for beneficial psychological or social change. Weight loss was viewed as achieving positive social and psychological change by leading to increased self-esteem and elevation of social status, and avoidance of weight related stigma. It was found that for participants ideals of beauty and health overlapped, in that what was viewed as beautiful represented health. In terms of evaluating their own levels of health, physical appearance, using indicators such as the existence or non-existence of fat rolls, and weight were used to determine the participants’ own levels of levels of healthiness (Kwan,
Again this study highlights the notion that weight loss is motivated by the notion of a better self in a number of domains, alongside the desire for improved health.

Focus groups were used to examine the motivations and perceived barriers to weight loss in a study of men in Denmark. A total of 22 overweight men, of low educational level were included. Using a projective technique, motives for weight loss were assessed. The authors propose that the participant’s perception of possible dietary changes in order to lose weight, such as a reduction in meat eating and alcohol drinking, were seen as a threat to their masculinity. Additionally, the authors suggest that public health campaigns emphasising good health and a leaner body are perhaps ineffective with men of lower socio-economic status because these themes are seen as relating more to the female world. Rather than general health being a motivator for weight loss, avoidance of death and illness was seen to motivate the participants to attain weight loss. Drive for slimness was not seen as a salient theme for these men, as again this was seen as a feminine ideal rather than a masculine one. In this study the themes of effectiveness and performance, particularly in the workplace, were motivating factors for weight loss for the men interviewed (Sabinsky, Toft, Raben, & Holm, 2007).

A study conducted in the United States examined adolescents aged 14 to 19, who were both overweight and those who had been able to substantially reduce their weight and maintain this reduced weight for a number of years. The study included interviews and focus groups for data collection. These were transcribed and analysed using a constant comparative approach between researchers and used a descriptive content analysis to identify themes. Transformative experiences were found to be important in initiating weight loss for those who had reduced their weight and maintained this for a long period of time. Sport and medical related conversations were commonly at the core of these transformative
experiences. These transformative experiences were suggested to lead the individual to change their view of themselves in the world (Lieberman, Robbins, & Terras, 2009).

Australian researchers utilizing a qualitative methodology examined obese individuals' experiences of losing weight (Thomas, Hyde, Karunaratne, Kausman, & Komesaroff, 2008). Seventy six people with a body mass index of 30 or more were interviewed using an open-ended interview schedule. A constant, continual comparative method of analysis was used. In addressing motivation for dieting to achieve weight loss, participants mentioned motives such as improving overall health and well-being, preparation for weight loss surgery, increasing mobility, being able to participate in their children's lives, enhancing participation in social activities, avoiding weight related stigma, gaining social acceptance and for some, being able to establish a romantic relationship. The authors found that in order to lose weight participants were more likely to diet than increase exercise and suggest that the reason for this is that the community is socially conditioned to believe that dieting will result in weight loss. Participants reported short-term weight loss as a result of dieting, however results were not maintained, leading to participants engaging in self blame for the failure to maintain weight loss rather than the diet used to achieve the weight loss. The authors expressed the view that this engagement in self blame perpetuates dieting as participants were seen to engage in a search for an alternative diet that would work for them, having seen themselves as failing with the previous diet (Thomas, Hyde, Karunaratne, Kausman, & Komesaroff, 2008).

As an adjunct to a larger randomised controlled study conducted in the United Kingdom, a qualitative study was undertaken which included an examination of why participants chose to take part in the larger randomised controlled study which compared commercial diet programs. Focus groups were conducted at the beginning of the diet trials and at the end, over a period of six months. The focus groups held at the end of the dieting
trials were grouped according to the particular diet (one of four diets) the participants were assigned to in the RCT. Within the topic areas of motivators, expectations and experiences, emerging themes were identified. In terms of motivation to participate in the weight loss study, particular motivators mentioned included a desire to increase self confidence and self esteem, to fit into old clothing or fit into smaller sized clothes. Improving health and fitness were other motivators identified. Overall the authors suggest that the intrinsic factors of self efficacy and motivation are very important to achieving weight loss. A limitation of the study was that only 14 participants of the original 32 participated in the final round of focus groups (Herriot, Thomas, Hart, Warren, & Truby, 2008).

Byrne, Cooper, and Fairburn (2003) conducted a study examining the experiences of people who had maintained weight loss, those who had lost weight then regained it, and those who had maintained a healthy weight with no previous experience of obesity. The two phases of the study included indepth interviews and focus groups. The focus groups involved weight loss maintainers and those who lost and regained the lost weight. Overall participants mentioned a desire to improve self esteem, appearance and health as motivators to achieve weight loss (Byrne et al., 2003).

A meta-ethnography was conducted by Garip and Yardley (2011) whereby 17 published qualitative studies were examined. These studies focused on the experiences associated with participation in weight loss programs of overweight and obese individuals, and spanned a time period of 1990 to 2010. These authors found for obese and overweight people, improvements in body image and self-perception were motivations for losing weight, as well as health concerns, and in one study stigmatization was mentioned as a motivator.

Chapman and Ogden (2009) used Interpretative Phenomenological Analysis (IPA) to explore how people achieve dietary change. Twenty participants took part in semi-structured interviews. Four mechanisms of dietary change were identified including those in which the
participants actively participated in and those the participants described as imposed. Those mechanisms of change for which the participants viewed themselves as actively participating in were seen as driven by an accumulation of evidence indicating a poor sense of well being and self image, and a trigger to action. The trigger to action was identified as taking the form of internal thought processes or an external event (e.g a medical consultation). Accumulation of evidence was proposed to potentially proceed a particular trigger to action, thus sensitising the participant to a point where there was a readiness to take action. A potential limitation to this study was the larger sample size used, as IPA studies typically use a smaller, homogenous sample. This may have limited the depth of analysis achieved by the researchers.

Given the lack of consensus around why people change their health behaviours, this study will examine in detail examples of individuals who have achieved healthy lifestyle change, in the form of weight reduction, and what prompted their efforts to change. By understanding the motivators that trigger successful weight loss in those who have been able to maintain weight loss, more effective health promotion campaigns can be developed to address the obesity epidemic in the broader community. It may be that current health promotion campaigns targeting weight reduction are focusing on mediators of change that are rational, but not the most salient for individuals who could obtain health benefits through weight reduction. An alternative finding might be that the reasons individuals embark on sustained weight loss are highly individualised and that mass health promotion campaigns are not the most appropriate mediums to prompt health behaviour change in this domain. In-depth research is needed to get to the bottom of why there are those able to embark sustained weight loss before these questions can be answered and appropriate evaluation and modification of health promotions strategies in this area can be undertaken.
Motivations for Lifestyle Change to Achieve Weight Loss: An Interpretative Phenomenological Analysis

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Bios

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Abstract
Given the growing rate of overweight and obese individuals in Australia, this study examines in detail examples of individuals who have achieved healthy lifestyle change leading to weight reduction. The participants in the study included men and women aged 18 years or over, who had lost 10% of their body weight. Semi-structured interviews were conducted and analysed using Interpretative Phenomenological Analysis. Five main themes were identified, including 1) Motivational Kickstart; 2) Staying on Track; 3) Challenges to Ongoing Motivation; 4) Future Concerns; and 5) The Self and Others. Findings suggest a complex interplay between barriers and facilitators of motivation to continue new dietary and exercise behaviours. Concerns for possible future selves were identified as motivating. Changing social interactions were recognized as supportive and potentially threatening to sustained motivation for weight loss. This research provides information on how clinicians can provide a trigger-to-action for weight loss by highlighting in personalised interventions, the reasons for change.

Key Words
behavior change; Interpretative phenomenological analysis (IPA); motivation; obesity / overweight; weight management
Over the last two decades the rate of Australians who are overweight or obese has rapidly increased from 56.3% in 1995 to 62.8% in the period of 2011 to 2012, with 70% of men and 56% of women found to be overweight or obese (Australian Bureau of Statistics, 2013). This increase has been attributed to changes in technology and lifestyle which have led to increased consumption of energy dense foods and a reduction in physical activity (Stanton, 2009).

Obesity is associated with adverse health conditions including type two diabetes, cardiovascular disease, certain cancers and osteoarthritis (Australian Government Preventative Health Taskforce, 2009). Physical inactivity is the second largest contributor to the burden of disease and injury in Australia in terms of modifiable health risk factors. It is a factor in the prevention, and conversely, the development, of a number of chronic health conditions including obesity (Australian Institute of Health and Welfare, 2010). Obesity and associated chronic illnesses threaten to decrease the life expectancy of Australians and will substantially increase costs to health care system (Australian Government Preventative Health Taskforce, 2009). Public health officials and the medical profession encourage weight loss by being mindful of calorie intake and increasing physical activity (Bacon & Aphramor, 2011).

In addition to the physical health implications of being obese or overweight, individuals are stigmatised with others perceiving them as lazy, self-indulgent and lacking in self-control, among other negative moral judgements (Malterud & Ulriksen, 2010; Throsby, 2007). Poorer mental health outcomes are linked to obesity, as is discrimination by others (Garip & Yardley, 2011). More specifically, being overweight or obese has been associated with increased risk of developing anxiety and mood disorders (Pickering et al., 2011; Scott, McGee, Wells & Oakley Brown, 2008; Simon et al., 2006). There is no doubt that for many, being overweight or obese can lead to serious physical and mental health outcomes.
Research into the moderators of behavioural change as related to nutritional choices and physical activity is early in its development. It has been identified that research is needed to determine the reasons why people make the choices they make with regards to food consumption and physical activity, in order to develop and implement effective interventions to reduce the incidence of obesity (Baranowski, Cullen, Nicklas, Thompson & Baranowski, 2003).

Fear evoking communication messages, fear appeals, are frequently used by public health organisations to promote health behaviour change (de Hoog, Stroebe & de Wit, 2005; Ruiter, Abraham & Kok, 2001). A recent Australian example is the graphic ‘toxic fat’ advertising campaign by the Cancer Council Victoria (https://livelighter.com.au/The-Facts/About-Toxic-Fat). These messages aim to evoke fear in the viewer, by describing or showing an image of a negative undesirable health outcome, with the intention of thereby motivating them to partake in the positive health behaviour described in order to reduce the state of fear (Witte, 1992).

A number of theories underpin the use of fear appeals to promote health behaviour change, one of the most recent being the Extended Parallel Process Model (EPPM) (Witte, 1992). The EPPM draws on earlier models explaining behaviour change in response to fear evoking messages including the Parallel Response Model (Leventhal, 1970), the Protection Motivation Theory (PMT) (Rogers, 1975, 1983). Also drive theories, such as the fear as acquired drive model (Hovland, Janis & Kelly, 1953). According to the EPPM, when an individual encounters a fear appeal, they evaluate how personally threatening the feared outcome is. This involves determining the perceived severity and their susceptibility to the proposed negative outcome. If the threat is evaluated as being high, then fear will be evoked and the individual will be motivated to process the fear appeal message. Next the individual evaluates their ability to engage in the recommended action (self-efficacy) and the perceived
ability of the recommendation to reduce the threat (response efficacy). If efficacy is perceived as high, then the individual accepts the message and engages in adaptive behaviour, if efficacy is perceived as low the message is rejected and the individual engages in avoidant coping.

An alternative theoretical framework examining why individuals may, or may not, respond to fear inducing messages encouraging behaviour change is the stage model (de Hoog, Stroebe, de Witte, 2007), a model that incorporates both cognitive based fear appeal theories and dual processing theories of attitude change. There is some discord in the research community as to whether fear appeals are an effective means of changing health behaviour (Witte & Allen, 2000), with some studies finding weak effects and others cautioning that the use of fear appeals may be potentially dangerous in that they found a negative, yet not significant, interaction between fear appeals and target health behaviours where low self-efficacy was associated (Peters, Ruiter & Kok, 2012). Other studies, such as Brown and Smith (2007) found that viewing a more distressing health promotion message lead to participants evaluating their personal risk as lower, suggesting that defence processes may have been triggered. It is not clear whether fear appeals have consistent desired impacts on health behaviour change, and what moderators (such as self-efficacy) are important to creating change. Whilst much research into the effectiveness of fear appeals uses intention to change as an outcome measure, intention to change is not consistently related to actual behaviour change (Godin, Conner & Sheeran, 2005; Reuter et al., 2010) which in the end is the outcome measure that may lead to positive health outcomes for individuals.

Many studies have found higher motivation prior to taking part in weight loss interventions (pre-treatment) correlates with actual weight loss. Self Determination Theory (SDT) (Deci & Ryan, 1985) describes two types of motivation. Autonomous motivation relates to behaviour regulation which is perceived by the individual as chosen and originating
from the self. As such, the chosen behaviour has an internal locus of causality. Controlled motivation relates to the notion that rather than being chosen by the individual, behaviour regulation is somehow coerced or as a result of pressure from an external interpersonal or intrapsychic force, thereby having an external locus of causality (Williams, Grow, Freedman, Ryan & Deci, 1996). Self determination theory, as related to weight loss, proposes that successful weight reduction will occur when an individual carries out behaviours to achieve weight loss, such as a change to diet or introducing exercise, because it is viewed as personally valuable to them and therefore having a perceived internal locus of causality (Williams et al., 1996). Support for this theory as related to weight loss, and weight loss facilitating behaviours, has been found in a number of studies (Silva et al., 2011; Teixeira, Going, Sardinha & Lohman, 2005; Webber, Tate, Ward & Bowling, 2010; Williams, et al., 1996).

It has been highlighted that establishing reliable predictors and correlates for weight loss and maintenance is difficult. Predictors and correlates identified in research in this area have been found to be heterogeneous and predictively weak due to a high variation in the types of populations studied, interventions, constructs measured, and the typically small sample sizes used in research. The authors suggest that due to these factors the research in this area is limited and a more individualised approach to weight loss is proposed. The authors affirm the importance of self-motivation for weight loss and suggest that further research is needed to determine the influencing factors that impact pre-treatment motivation, and motivation throughout the course of weight loss due to the wavering nature of motivation (Stubbs et al., 2011).

Building on the notion that motivation is an important factor in achieving and maintaining weight loss a number of qualitative studies have examined this topic. Possible motivating factors found in the qualitative literature include the notion of ‘possible selves’
(Granberg, 2006), feared health outcomes, desired social and psychological outcomes, and desired change to appearance (Byrne, Cooper & Fairburn, 2003; Garip & Yardley, 2011; Herriot, Thomas, Hart, Warren & Truby, 2008; Kwan, 2009; Sabinsky, Toft, Raben & Holm, 2007; Thomas, Hyde, Karunaratne, Kausman & Komesaroff, 2008).

Chapman and Ogden (2009) used Interpretative Phenomenological Analysis (IPA) to explore how people achieve dietary change and found mechanisms for change were seen as driven by participants accumulating evidence indicating they had a poor sense of well-being and self-image. A trigger to action was also salient especially when taking the form of internal thought processes or an external event (e.g a medical consultation). Transformative experiences were also highlighted as important to initiating weight loss by Lieberman, Robbins, & Terras (2009).

Given the lack of consensus around why people change their health behaviours. This study aims to examine the experiences of individuals who have achieved healthy lifestyle change resulting in weight reduction, and importantly what prompted their efforts to change. By understanding the motivators that trigger successful weight loss in those who have been able to maintain weight loss, more effective health promotion campaigns can be developed to address the obesity epidemic in the broader community. This study will utilise interpretative phenomenological analysis (IPA) to explore exercise and dietary change achieved by individuals who have lost 10% of their body weight, in order examine the motivating factors leading to these changes.
Method

Participants

Individuals who met the inclusion criteria of being 18 years of age or over, having lost 10% of their body weight were invited to participate in the research. All participants self-reported that they did not have a mental illness at the time of the interview. A total of seven participants were recruited for the study including three men and four women. However, within one of the interviews, it was learnt that one woman did not meet the inclusion criteria for study participation due to her having a previous history of Anorexia Nervosa and was therefore excluded from the analysis; as IPA requires a reasonably homogeneous sample and her experience of an eating disorder meant that she differed considerably in profile from the other participants. The ages of participants ranged from 29 to 55 years of age (mean=37.7, SD = 9.7). All participants had either completed or were completing tertiary level studies. Participants had all lost at least 10 percent of their body weight through lifestyle change such as increased exercise and/or change in dietary intake. Three of the six participants had been guided by a commercial weight loss program. Participants had a duration of weight loss over a period ranging from 6 months to 2 years. Recruitment of participants ceased as saturation of themes occurred.

Procedure

Ethics approval for the study was gained from the University of Newcastle Human Research Ethics Committee. Recruitment took place via flyers advertising the study appearing in local gyms, the university campus and a community health centre. These centres of recruitment were located in regional New South Wales, Australia.
Face-to-face semi-structured interviews were conducted by the female author, [KR] on a one-to-one basis at the University of Newcastle. Each interview was audio recorded and transcribed verbatim. Interviews took place over a six month period in 2013. Interviews ranged in length from one hour to just under two hours. Prior to the interview being undertaken, each participant was given an information sheet to review with information about the research topic, requirements of participants and privacy considerations. Having reviewed the information sheet participants signed a consent form to indicate they agreed to take part in the study.

Analysis

Transcripts were analysed using Interpretative Phenomenological Analysis (IPA) (Smith, 1996). IPA is a qualitative method of data interpretation that uses a phenomenological approach to facilitate a detailed investigation of research participants' world. It focuses on the meanings participants attribute to particular experiences, events and states of being. IPA was chosen over qualitative methods as it is an experiential method, rather than a discursive method, which seeks to uncover the participants cognitive and emotional reaction to what is happening to them during the experience being investigated (Smith, 2011). IPA recognises that the researcher is a participant in the research process and his or her interpretations of information derived from the research participant are important for understanding the participant’s view of the question being researched (Willig, 2008). Thus IPA involves a two stage process of allowing the participant to express their point of view concerning a particular experience followed by the researcher conducting a critical interpretive analysis of the text (Smith & Osborn, 2003).

It should be noted that the researcher (KR) approached the analysis of the data from the viewpoint of her own lived experience which in turn may influence the way the data is viewed.
The researcher is a practicing psychologist who works in the specialist field of eating disorders. From this standpoint weight loss is not always viewed through a positive lens in terms of physical and mental health. Personally, in the past the researcher has experienced dissatisfaction with her weight, being in the overweight BMI category at the time of conducting the research, and has attempted weight loss diets. She has experienced weight loss and regain over a number years. Prior to commencing the research project the researcher has focused on body acceptance and making healthy lifestyle changes such as increasing exercise and eating more fruit and vegetables, which has not led to weight loss. With this in mind the following steps were undertaken in analysing the interview transcripts.

The initial interview transcript was read and re-read approximately three times with emerging themes identified. With each subsequent interview the preceding transcripts were reread and re-examined in order to note similarities and differences between cases, and to identify emergent themes across interviews. Emergent themes were reviewed and verified by the second author (MPJ) to ensure trustworthiness. As each interview was transcribed, and themes noted in tables, copies of such were sent to the second author for review and confirmation of the existence of the themes and subthemes noted. Only those themes and subthemes agreed to by the second author were included for further analysis. The authors met to review the emerging data on a fortnightly basis.

**Results**

Five main themes were identified from the research in relation to motivation for lifestyle change for weight loss: Motivational Kickstart; Staying on Track; Challenges to Ongoing Motivation; Future Concerns and The Self and Others.
Theme 1: Motivational Kickstart

Participants had been contemplating weight loss and researching the topic for some time prior to actively engaging in a behaviour change. They were prompted into action by a particular event or experience. For Participant L, the trigger to engage in physical activity had come from a psychologist he had been seeing for problems he was facing with study:

Participant L (PL): I’ve been, I’ve been checking out those sorts of things [fitness websites] for a month or so before I joined [the gym] and I sort of thought about joining it, and she [the psychologist] told me to go and do it. But without that, that little push I, I wouldn’t of, I probably wouldn’t of joined. It was just, it was just that little bit extra that got me there.

It appears that personal motivation and desire to engage in physical activity was not enough to lead to action by Participant L. While he had been researching and thinking about making these changes for at least a month, his own dissatisfaction with his physical appearance was not enough to prompt actual engagement in physical activity. It is interesting to note that when his psychologist encouraged exercise for mental health reasons that this “little push”, was the final link in the chain that led to action. It could be that Participant L had created barriers for himself that were overcome by the confirmation from a valued individual that what he was contemplating was a good thing to do. Perhaps his psychologist had used therapeutic techniques such as motivational interviewing to encourage action. He refers to the psychologist’s encouragement as a “little push”. It could be posited that this gentle encouragement was successful, where more forceful encouragement may have led to resistance to taking action.

Another trigger to action was attendance of a motivational talk given by a prominent fitness industry figure:
Participant M (PM): I s'pose saw an ad for the Michelle Bridges, actually I saw an ad for Michelle Bridges program and also that she was giving a talk in Newcastle. And I went and listened to her talk before I signed up, because I thought if this motivates me more, I hear her and think yep this might be good. And listened to her and it was very motivating. I signed up, but also before that, seven months prior to that I’d tripped over at home and hurt my neck and shoulder. And that was just a real eye opener. You know if you don't look after your health and fitness, what your life going to be like…

For Participant M, she had become increasingly concerned about her health and weight following an injury she had sustained to her shoulder seven months prior, yet it was attending the motivational talk that spurred her into action with regards to both diet and exercise. Again it appears that Participant M was already engaged in thinking about her future and contemplating the benefits of engaging in exercise and reducing the calories in her dietary intake, however required one final experience to take action. It seems like the outside confirmation that weight loss driven behaviours were a positive change to make, put thoughts into actual behaviours. She gives the impression that she was waiting for that last piece of the puzzle that would propel her to making the changes she was contemplating. It is noteworthy that for both Participants L and M that advice from an “expert” in their field made the difference. Could it be that participants lacked confidence in their ability to make change and therefore expert confirmation was needed to convince them that they could do it and that it would lead to beneficial outcomes?

One participant was prompted into action, to increase his physical activity, via a health promotion campaign that was being implemented at his workplace:

Participant G (PG): When they were doing the Measure Up 4 Health I was very concerned, cause I was surprised when I put the tape measure around myself I came
up as ‘hazardous waist’… so I thought I’ve got to do something about that, and that’s about roughly when I picked up swimming, probably is more than two years ago. And anyway, so then so that was kind of more of an exercise thing and I lost a few kilos there.

Whether it took the form of advice from another, a health promotion campaign or a particular experience or change in life (e.g. return to work) that led to a thought to make change immediately, for all participants a prompt to action took place after some time of contemplating lifestyle change.

**Theme 2: Challenges to Ongoing Motivation**

Despite a commitment to positive diet and exercise lifestyle changes, participants cited ongoing barriers to maintaining these changes. For some, a barrier to overcome was juggling competing time commitments:

> PL: The only problem is, is time, with Uni. Cause Uni is all different hours, so I can’t set it up so I can go (to the gym) every day at the same time so. I can’t make it in at all on Wednesday cause I’m at Uni all day, and Tuesday I really don’t feel like it cause I have to be up here (university campus) at eight. So that class finishes at ten and I’m home at 11, cause it’s no, not much sleep. It’s sort of I don’t feel like going so I won’t go in on Tuesday.

Participant L conveys a real sense of having competing priorities. He expresses a struggle to accommodate two important domains of his life, exercise and university studies. Attending university means that he is unable to attend the gym at times he would prefer and creates tiredness that makes it harder to summon the energy needed to participate in physical activity.
In terms of priorities it appears that the exercise is determined to be a lesser one compared with the demands of university. It is in his fitness schedule that accommodations are made. He appears frustrated with this circumstance, describing it as a “problem”.

For other participants using food as a method of providing positive emotional experiences whilst being mindful of energy intake presented a challenge:

Participant C (PC): I don’t think emotional problems are causing my food problem. I just think I really like food and I like the feeling of treating myself and sometimes that outweighs that long term desire to be healthy and you know and a nice size, whatever. I just think it’s as simple as that for me. It’s like immediate gratification. I don’t think it’s for any kind of emotional trauma or anything, I just think it’s like yum, food tastes good now, I’ll sort out the rest later.

Participant C conveys a real sense of enjoyment of food. She reveals that she has engaged in considerable thought and analysis of why overeating is something she has struggled with. She comes to the conclusion that enjoyment of food is more rewarding in the moment than efforts to reduce calorie intake in order to lose weight. She describes this as transitory, only occurring sometimes, perhaps explaining why she has been able to lose weight over time. When she indulges in enjoyable food, she is able to refocus her energies to limit her dietary intake. This appears not without considerable effort.

Other challenges and barriers mentioned by participants included the costs associated with attending gyms and participating in commercial weight loss programs, health and injury setbacks, and challenging environmental conditions such as the onset of winter, making it uncomfortable to exercise in the outdoors. Commencing exercising and making dietary
changes at the outset of lifestyle changes to achieve weight loss was voiced by some as quite challenging:

Participant J (PJ): Probably when first started it was difficult getting rid of pastas and rice and bread. Probably missed it a lot at that point. But now you know we still have bread now and again. And a little pasta and cous cous, and other cereals and rices.

For Participant J it was initially difficult to reduce his intake of certain foods. A part of his weight loss strategy included reducing the amount of carbohydrates in his diet. He talks about having “missed” these foods, indicating that after greatly reducing them from his diet that he thought about them frequently with a feeling of loss. Whilst these foods continue to be reduced in his diet, he still eats them and this may be important to the reduction of thinking in terms of loss of these foods and thus being able to maintain his dietary modifications. Perhaps if he had eliminated these foods totally the feeling of loss may have been more intense and therefore much harder to maintain the dietary change.

Exhaustion and physical discomfort associated with increasing intensity and frequency of exercise was a significant barrier:

PM: I was just exhausted and tired a lot of the time because the gym, I was putting a big effort into the gym. A big effort in and I think there was a lot of, yeah “I just need to get through today”. I need to get through today without any, any Tim Tams [laughs]. And um just so sore and so tired. Like I was just constantly, yeah constantly had muscle soreness of some description [laughs].
Participant M engages in an internal dialogue in order to push through the feeling of physical exhaustion in order to maintain her new exercise regime, and the desire to avoid higher energy, yet very appealing food. She broke the task down to focusing on one day at a time. This approach appeared to contribute to her continuing, rather than giving up on the exercise plan. Had she not taken this approach, the anticipated continued physical discomfort may have been overwhelming and lead to a cessation of exercise.

Despite the challenges and barriers identified by participants, they had still been able to continue behaviours which allowed them to lose weight. In the main, participants reported finding it difficult to keep up the new lifestyle changes:

PM: With the last, the last few week of, you know, not much exercise and just study. It’s like, first priority was passing this exam, and you know, I know that now I can hit the gym hard and, you know I don’t have anything standing in my way for that.

In describing time off the behaviours, participants almost always refer to getting back on track again, a process of refocusing on weight loss behaviours following a period of time where thought and energy is being directed to other tasks. These other tasks were deemed to be of higher priority than exercising. It appeared as though lapses are only ever viewed as short lived:

PC: Like I thought I was there with eating and exercise and just I think “oh shit no, no, no” I’m not there, it’s just hard, it’s ongoing, I’ve got lots more to learn. You know you can’t really just relax. You know, I do have a fear of slowly, slowly just putting the weight back on. I’ve got to be mindful of that.

Participant C alludes to the constant need for focused attention on carrying out weight loss behaviours. There is a sense that complacency can occur and that relying on the knowledge
that the behaviours have been carried out in the past and is rewarding is not enough to rely on it occurring in the future. Cognitively speaking, thought to engage these behaviours needs to be at the forefront of the mind. There is also an element of fear of resuming past eating habits, leading to weight gain, if this is not done.

Maintaining a constant focus on diet and exercise to enable further weight loss or weight maintenance appears variable. Continued focus on these factors appears to be dependent on life’s circumstances and events, as well as mental focus. It seemed that participants had developed an awareness that constant evaluation and refocusing on lifestyle change was needed as intensity of effort wavered along with the constant changing circumstances of life.

Theme 3: Staying on Track

Participants acknowledged a number of factors that assisted with maintaining their motivation to continue with dietary or physical activity changes they had made to achieve weight loss, despite the many challenges they faced.

The use of technology emerged as a subordinate theme that was a salient factor in keeping participants engaged in change to a healthier lifestyle. Participants regularly used computers, diet and fitness websites, internet based forums, and apps (applications) on their computers, tablets and mobile phones to guide and facilitate their weight loss process. Three of the six participants used an online delivered weight loss program to instruct them on dietary and activity changes required for weight loss.

Participant T (PT): Basically she’s (spokesperson for internet weight loss program) appealing to a generation who are using technology a lot more. And I think that’s what appealed to me is that everything is there. I can click on the recipes, I can click on the shopping list. I can put it on my Ipad and cook in the kitchen. There’s forums
that you can see what other people’s hints are for different foods and recipes. And you get that support from the forum if you want it, but if you don’t need it you don’t have to engage in the forums.

Participant T emphasises the convenience that using an internet based weight loss program offers. More than that she identifies that the use of technology is a characteristic of her age group and therefore a weight loss program that supports technology use could be said to fit with her sense of self in the context of her peers. A technology based program is seen to offer ease of information needed to cook lower calorie meals by accessing program recipes or recipes suggested by program participants on mobile devices. There is no doubt that this easily available information is time saving. This feature is particularly important as participants have identified a barrier of competing priorities for time and effort, making weight loss efforts difficult to maintain at times.

For those who did not participate in a structure weight loss program, it was researching health and fitness websites that helped guide the changes made to diet and exercise:

PJ: Yeah I probably did start reading a lot more on the internet, and magazines and probably became more you know aware of where I should be going and what things are healthy and the best way to lose weight, build muscle and…

Participants used apps to monitor and record their dietary intake, check the energy content of food, and embark on guided activity such as running or cycling programs. Interestingly none of the participants engaged the service of a dietitian to guide their dietary
changes. The guidance from internet websites appeared acceptable to participants in relation to this matter despite the obvious lack of individualisation of dietary advice and in some cases the acceptance of ideas of eating that may not be considered desirable by the dietetic profession, for example elimination of carbohydrates.

Participants stated that the new behaviours they were engaged in were associated with a sense of enjoyment and interest:

PC: I guess I never lost that desire to exercise. That had become such a part of my life that I was really enjoying, that I felt like if I could get the exercise back on, you know at the right level, eating would hopefully flow.

Following a setback in her ability to engage in physical activity as a result of sustaining a broken toe, Participant C was able to return to exercise when healed due to her enjoyment of exercise. Despite her inability to exercise due to her injury, Participant C had incorporated exercise into her life, so much so, that its absence was meaningful. It can be speculated that this was achieved due to the reward of the sense of enjoyment that accompanied participation in regular exercise. Interestingly, Participant C expressed a hope that resuming regular exercise would facilitate resumption of eating behaviours necessary for weight loss. It could be argued that the modification of diet needed to facilitate weight loss is less immediately rewarding than that of exercise. It is notable that the participant links both the diet and exercise behaviours, so that one facilitates the other. The impression is given that modifying diet alone would be more difficult to maintain for this participant.

The enjoyment of cooking and creating new meals was rewarding to some participants:
PT: So I actually am excited about the food that she (weight loss program spokesperson) puts out so I will definitely do the program cause it will have been nearly a year and a half since I last did the program so she will have heaps of new recipes and it will be really fun to see what she’s putting out as her next lot of food.

All participants mentioned a sense of enjoyment in the exercise they were engaging in, whether it be due to enjoyment of the activity itself or the environment it created:

PJ: Um, I think it’s time alone. Having kids you generally don’t get much time when they’re awake and you’re awake. So yeah, time alone and listening to music you want to listen to and just, especially running you sort of get into a bit of a zone and listening to music you want to listen to and not thinking about anything else. It’s almost a meditation in some ways.

Here exercise is seen to create permissible ‘alone time’. This is a time where the participant does not need to accommodate the needs and desires of others, for example, his children. He talks about creating a meditative mental state, where the focus is directed to the enjoyment of his music and the running action of his body. It could be suggested that in this moment his world narrows and he becomes mindful. Here the exercise meets dual desires, alone time where he is able to achieve the mental state that he finds relaxing, and as a facilitator of weight loss.

Enjoyment and interest in exercise and or dietary change no doubt facilitated continued change in order to pursue weight loss. The incorporating variety was important to participants in keeping exercise and diet fresh, interesting and enjoyable.
Participants approached their lifestyle changes in terms of what they found acceptable, and enjoyable for them. For some it was choosing to engage in exercise but not dietary change or vice versa. Even those engaged with a commercial weight loss program had made changes to the program as prescribed to suit their preferences:

PT: So I haven’t changed, it’s not like I had a sedentary, completely sedentary lifestyle. I just haven’t engaged in one to two hours of weights, running, bike riding everyday like the program tells you to.

PM: I haven’t been following her exercise program to the letter. I had, I, years ago, the gym gave me a, quite a comprehensive gym program. And I felt comfortable with that so, I’ve been doing that. It’s worked for me, so I’ve not, not been worried about not following her program exactly. So I’ve been following the program I was given at the gym, and following her diet program.

These extracts showed the participants justifying why they had made modifications to the prescribed program that they had chosen to participate in. Both found that their existing levels of activity were acceptable. As in both cases weight loss was occurring, and there was a view that there was no need to increase the frequency and intensity of their exercise regimes. Perhaps if weight loss had not been occurring, then these participants may have been motivated to modify their activity levels. The adaptations made, based on individual preferences, appeared to make sticking with the new behaviours manageable and acceptable.

Further reinforcing the participants’ desire to stick with the lifestyle changes is the subordinate theme of sense of improved wellbeing. Some participants have found exercise as a substitute for food as a way to manage perceived negative emotions. Participants also spoke about the dietary modifications and exercise as becoming habit or new lifestyle. This
reference to habit infers a sense of permanency and that the change has now become a part of everyday life. This is opposed the common notion of a “diet” which is often conceptualised as having a start and end date:

PL: But it sort of, it’s become more of a lifestyle thing than a goal. So, it’s not, whereas before I wanted this, this, this. Now I, now I’d be happy to go to the gym and do it cause I enjoy rather than, I think that, I think that’s the main thing that’s helped me keep going.

Social connections also assisted participants to persist with their lifestyle changes by helping motivation to attend regularly:

PL: And I’d see people, people in there that, like I’d talk to people there and they’d say “see you tomorrow” or whatever and I’d think “oh yeah, I wasn’t coming in tomorrow, but I’m not doing anything so, I suppose so”.

The participant’s relationships with the employee’s and other regular gym attenders have created an environment where he does not want to be seen as becoming lax. Being a ‘regular gym attender’ has become a salient aspect of his identity and therefore he is compelled to live up to notion by attending the gym when other regular attenders expect him to. Whether it was as a result of new social connections made resulting from engaging in a new activity or the support and encouragement of friends and family, others were mentioned consistently as motivating factors for staying on track with lifestyle change.

Monitoring progress was an important factor for all participants, whether it be tracking changes in weight, changes in body measurements, changes in medical indictors such as blood pressure and cholesterol, or changes in strength and fitness.
Noting overall changes in these factors was especially helpful when progress was seen to plateau:

PJ: The other thing I guess, moving more on that, is that um I’d had an app on the Ipad as well. Which you know tracks your weight and that was sort of good as well, so even though I’d had that plateau you could see the line was generally going down. It’s just a good record to see where you’re at, at what point.

Participant C found monitoring progress an especially motivating activity to engage in as she commenced efforts to lose weight.

PC: And you know when you start the weight loss journey and you lose a bit of weight at the start it really, it’s very motivating. So I was just in that zone of like each Wednesday weighing myself and putting my little number into the computer, and watching it slowly go down, and I just kind of just thought I’m in this for the long haul.

In maintaining their changes to diet and exercise, managing expectations of what was likely to be achievable was important. Anticipating the possible consequences of making changes to diet and activity level also assisted participants to keeping going when faced with difficulties.

PM: I’d still be overweight, but I’m not really hoping to be skinny, I don’t know if that’s achievable for me.
Despite losing a substantial amount of weight, Participant M demonstrates a modification of her expectations in terms of what is an achievable weight loss goal for her. It could be that she lacks confidence in her ability to reach a weight in the healthy weight range of the BMI scale. Alternatively, it may be a realistic judgement that given her long history of being overweight, that it is unlikely that a lower weight is achievable and maintainable. Also, it does not appear to be particularly important for her to be viewed as lower weight, as she is not striving for it.

Expecting difficulties such as initial increased hunger and that progress will have times of plateaus was also important to staying on track:

PT: And I think the forums helped me too, cause they kind of warned. They warned us that that would, warned us what we could expect those first few weeks you really getting used to the hunger change because you’re going to be changing your portion sizes of food. Or you’re going to be eating lighter meals.

Again, this is a demonstration of how social support can motivate the continuation of weight loss behaviours, this time by conveying what can be expected to occur when you embark on these behaviours. Knowing what is to come helped the participant to prepare mentally for elevated levels of hunger to come. Not only that, importantly it let her know that these intense feelings of hunger would subside as her body got used to lower energy meals. It could be suggested that, if there was a lack of awareness that hunger would elevate and be at some times quite an uncomfortable sensation, it might be easy to give up on the new way of eating. Once faced with uncomfortable hunger, a less informed person may expect it to continue indefinitely and determine that the reduced calorie intake is unsustainable.
Theme 4: Future Concerns

Participants cited a desire to lose further body fat or weight. Whilst happy in general with their overall weight loss, there was a sense that they were not entirely content with their bodies as they were at the time they were interviewed:

PT: There’s never, even though I’m super happy at 65 kilo’s. I’m rocking my size 28 jeans and doing all that kind of stuff, that were all my personal goals to get to, I still look at myself and go “Oh I need to get rid of this bit, this bit’s a bit, a bit out of proportion to the rest of me” And I have been heard to say “Hmmm maybe I should try and hit the 50’s”.

There is a lack of contentment expressed in the extract, a continued striving for further improvement, despite having met goals originally set. It may be that this lack of contentment continues focus on sustaining exercise and dietary changes and therefore is results in maintaining weight loss.

Participants projected into the future and health is deemed to play a salient role in what their life might look like in terms of functional ability or relationships with others. Aspects of aging healthily were pertinent to some participants.

PT: Um well I didn’t want the lifestyle medical issues that come with prolonged weight, like diabetes, um heart disease, like those sort of things. And I don’t have those issues, but I didn’t want it to ever get to a point where I did, I also wanted to have more children. So I wanted to be at a healthy fit level before I put my body through the onslaught of having kids again. And I think weights an issue for my dad, it’s an issue in my husband’s family. And I think I just didn’t want to, I didn’t want to be fat, I didn’t want to be fat and fifty on top of menopause fat.
For Participant J, his concerns regarding the future, were not just for his own health, but also for his children’s emotional and physical wellbeing:

PJ: Yeah I guess, you know, don’t want them (his children) to get bullied or teased from their friends about a dad that’s overweight and wanted to just have an active lifestyle as well. And don’t just create another generation of obesity. So leading by example to them before they are big enough to, you know, see that things are different. Make healthy choices from a young age.

Here weight loss is linked to the participant’s role as a father. He does not want the responsibility of indirectly causing his children to be distressed by his being overweight. Being an ‘overweight dad’ is viewed as a weakness for which could result in his children being a target for bullies. He wanted to avoid that possible future self. He had already lost the identification as being “the fat one” in his family, so it could be suggested that the possible self of the ‘fat dad’ could be viewed as avoidable and therefore motivating in terms of maintaining weight loss for Participant J. A number of other participants mentioned hoping to avoid future selves limited by incapacities and poor health as they aged. A sense of urgency is conveyed as he wants to have an impact on his children’s eating and exercise habits now, so that they are raised in a healthier way than perhaps he was. The intended consequence is that his children will not have the same struggles with weight and health that he has had, and will be able to maintain healthy habits and weight into adulthood. It appears that these desires for changes to their current selves, in the form of further weight loss, and to their future selves, that is creating a healthier future self, have the impact of focusing on continued efforts to maintain a healthy lifestyle.
**Theme 5: Changing Social Interactions**

Participants reported changed interactions with others as a result of engaging in dietary changes, increasing exercise or having lost weight. In some cases these changed interactions were viewed as positive and for some the changes were somewhat negative.

Participant M noticed that strangers were reacting differently to her after she had lost weight:

PM: And it’s funny that more people smile at you, more, more guys smile at you. More people smile at you who are in the thinner sort of bracket. And if you’re dressed a little bit flashy, the people who are a little bit bigger, whereas you know they used to nod and smile or something, they don’t. You get dirty looks occasionally off people.

Participant M relates that thinner people now smile at her. It is almost like she now feels an acceptance by people that are leaner than she once was. Now she is thought to be perceived as being part of the ‘smaller’ group, rather than the ‘bigger’ group. Having seen herself as having changed groups, she notes those in the ‘bigger’ group are less friendly towards her.

One positive change noticed, as a result of having lost weight, was with family members:

PJ: I can’t do anything wrong in my grandmother’s eyes now. Which is nice… and now probably my other brother’s taken on the “he’s fat” role now. So he’s, needs to work on his life. So yeah she sort of tells all her friends and anyone she knows about it as well. It’s pretty good [laughs].
Again the participant moves from the ‘bigger’ group (or “fat” group) in terms of his interactions with others and this is reinforcing. He speaks with quite a degree of happiness with regards to how now he is perceived with a sense of pride by his grandmother. His achievement of weight loss is expressed to all she knows. Staying in the ‘smaller’ group and thus avoiding returning to the ‘bigger’ group, would be a potent maintaining factor for continuing exercise and a weight loss maintaining diet, particularly when one receives positive acknowledgement from people who did not express this in the past. It appears to these participants that they are now, at a lower weight, more socially acceptable.

Not all changes to social interactions had been positive:

PG: And certainly, Martha (wife) gets worried with my measuring cycling and running with the apps, that I’m becoming obsessed with losing weight. I said “no, no, no I’m not obsessed, I just like to see how I’m going”. And um so she keeps a watchful eye on that kind of stuff I guess. So that might be a negative thing, her level of concern.

This indicates that performance monitoring has increased with Participant G’s weight loss. His wife’s reported concerns convey a sense that his level of monitoring might not indicate a mentally healthy way of thinking, that weight loss has become obsessive and sinister. Her increased vigilance around his behaviours is an unanticipated negative consequence of weight loss. For those less sure that they are engaging in appropriate and healthy behaviours, this concern from others could have an undermining effect to their weight loss efforts.

Participant T also expressed frustration with others approaching her to offer comment on her weight changes:
PT: So yeah I think that’s probably the thing, is that suddenly people were speaking to me about my weight. That hadn’t happened before, they were commenting on how thin I was, “Oh my God you’re wasting away” or “You need to put some kilos on you”. Where I actually thought I was looking great. So it was kind of like “Hang on a minute, I think I look great. I feel great, I look great”.

It would seem that the change in social interactions as a result of their lifestyle changes, could be seen to have either a motivating or potentially a barrier to ongoing motivation depending on the feedback. For some the feedback is resoundingly positive, especially when in the past the participant was referred to as “the fat one” by family members, as was the case for Participant J. Participant J was pleased that he had lost that label within the family, which can be seen as potent motivator to keep his weight off. For Participants G & T the feedback from others indicates subtly that perhaps they are doing something ill advised by engaging in activities that support weight loss or maintenance. There is a sense from the comments of others that they have taken their lifestyle changes too far. For some people it is conceivable that these kinds of comments could be seen to inhibit motivation to continue with lifestyle changes to facilitate weight loss, as some may question the focus on their behaviours and if it is psychologically healthy. Interestingly for the participants in this study this was not the case. They all were accepting of the efforts they were making to enhance their chances of achieving and maintaining a healthy weight.

**Discussion**

This study examined, in depth, the experiences of six participants who have successfully lost 10 percent of their body weight. Whilst fear was certainly a component of the process of change for some, a motivational kickstart or trigger to action was needed to engage in the
new behaviours of dietary change and exercise. This finding confirms the findings of other studies that highlight a trigger to action or motivational kickstart is needed to initiate behaviours that facilitate both weight loss and maintenance of weight loss (Chapman & Ogden, 2009; Gorin, Phelan, Hill, & Wing, 2004; Ogden & Hills, 2008; Ogden, Stavrinaki, & Stubbs, 2009). The triggers to action could be fear based, but fear was not a necessity to motivate behaviour change. This study supports the findings of Chapman and Ogden (2009), in that participants had been contemplating engaging in weight loss behaviours for some time and had been researching how they might make these changes. It took a trigger to action to lead to putting this information into action and triggers were identified were either being internal or external. Internal triggers included internal thought processes such as the thought ‘enough is enough’ and external triggers such as advice from a health professional. Further confirmation of the finding of Ogden and Hills (2008) some participants in the current study saw the trigger to action lead to a sudden insights into their own mortality and the relationship between their behaviour and health. There was also a shift in identity to that of a ‘healthier individual’ with old identities challenged and the trigger offering an opportunity for reinvention. For participants in the present study exercise and adhering to a healthier diet were central to their new sense of self, for example leaving the former “fat” version of the self, to creating a new self where the pursuit of fitness and health were central.

Traditional rational-cognitive models of health behaviour change such as the transtheoretical model (Prochaska & DiClemente, 1982) and the health belief model (Rosenstock, 1974) do not account for sudden triggers to action. Rather health behaviour change, including change to achieve weight loss is viewed as a linear, gradual process, under the conscious control of the individual by these models. This study challenges this notion. A view of health behaviour change closer to the findings of this study is proposed by Resnicow and Vaughan (2006), referencing chaos theory, who suggest that decisions to change health
behaviour are quantum, as opposed to linear. According to the chaos model traditional health promotions campaigns, such as fear appeal campaigns can serve the role of priming individuals so that when chaotic events occur they have a greater likelihood of leading to sustained change. The motivational kickstart or trigger to action as found in this study was quite personal in nature. Even for Participant G who was spurred into action by a health promotion campaign, the health promotion campaign involved a waist measurement being taken, and therefore the interaction was individualised and personal.

All participants mentioned ongoing challenges to staying on track and maintaining their new healthier exercise and dietary regimes supporting the findings of Welsh et al. (2012), who suggest that challenges to ongoing maintenance of health behaviour change are inadequately addressed in change models and theories such as the stages of change model (Prochaska & DiClemente, 1982). Reyes et al. (2012) also found that weight loss maintainers and regainers identified a number of challenges that led to lapses in their weight loss/maintenance behaviours similar to those found in the current study. These challenges were identified as either changes in life circumstances e.g. changing work circumstances or relationships, or slipping back into old habits. Sharifi, Mahdavi, and Ebrahimi-Mameghani (2013) present findings in line with those of the current study and identified that situational barriers were seen to interfere most in participants’ ability to eat according a weight loss diet, such as when their daily routines were disrupted.

Motivation to engage in weight loss promoting activities is a complex process that requires ongoing focus in the face of many challenges. Participants were able to elucidate the strategies and supportive factors used to keep their focus on persistent lifestyle change. Some were active strategies including monitoring, individualising and adapting diet and exercise to suit their needs and thereby making their efforts maintainable. Other maintaining factors
included a sense of enjoyment associated with their new activities, and positive social interactions.

Once in engaged in weight loss driven behaviours, social interactions were mentioned as a factor in supporting continued weight loss efforts in the current study. Whether it be the connections with others made at the gym, positive feedback from others, partners of participants changing their behaviours concurrently, or hints and tips from members of weight loss internet forums, others were highlighted as very much a part of the weight loss process. Whilst in their review, Teixeira et al. (2005) found that pre-treatment social support was not a predictor of weight control, Verheijden, Bakx, van Weel, Koelen, and van Staveren (2005) suggest there is a strong theoretical rationale for incorporating social support in weight loss interventions, despite results from intervention studies are conflicting. This study certainly supports the notion of social support being seen as valuable and encouraging for participants to persist with weight loss behaviours.

Self determination theory (Deci & Ryan, 1985) proposes there are the basic psychological needs of relatedness, autonomy and competence. These needs are said to be essential to developing internal motivation. Relatedness definitely featured for those in the study. In general, all participants had family members and friends that were supportive of their endeavours to lose weight. For some, they had made social connections with people at their gyms. These social connections were cited as factors for maintaining engagement in exercise at the gym, as the building of these connections meant that participants were encouraged to attend regularly as they felt that there was some kind of social contract between them. These new social connections were seen to hold them to account. Elements of relatedness were not always seen in a positive light, though salient enough for the participants to mention in their interviews.
Social connections were not always seen as a positive support for weight loss in this study. Other people were mentioned as questioning some participants’ efforts to lose weight. There was a sense that these other people were implying that they were somehow going too far, implying there was an element of danger or negative consequences to the participant’s efforts to lose weight. These findings confirm those of Ng, Ntoumanis, and Thøgersen-Ntoumani (2014) who ascertained that not all forms of social interaction are supportive of weight loss or weight maintenance. These authors found that, in the context of self-determination theory, when important other’s interpersonal styles were seen as supporting autonomous motivation, participants stated higher levels of psychological need satisfaction and autonomous motivation for weight management. These ideal motivational states were in turn related to increased physical activity and increased healthy eating behaviours. The opposite was true for important others with controlling interpersonal styles. As with the findings of the current study, certain social interactions related to weight loss and weight management appear to be couched in negativity about the process. Participants mentioned that loved ones and friends express the idea that they had become obsessed or taken weight loss too far. People were making comments uninvited about their bodies, advising them to stop losing weight. Others found that self-monitoring efforts were being frowned upon by loved ones and that they were being scrutinized by these concerned parties to ensure that they were approaching weight loss in a mentally healthy way. It appears that some in the social set of participants were uncomfortable with the visible change in participants’ bodies and the changes in their behaviours to facilitate this change. Although it was not clear as to the degree of importance that social supports were to engaging in weight loss and sustaining it for those involved in the current study, some participants related how having a supportive partner who was also engaging in new lifestyle behaviours supportive of weight loss helped them to maintain physical activity and healthy dietary change.
Technology featured in this study as a facilitator and supporter of lifestyle change for weight loss. Participants used applications (apps), forums, internet delivered weight loss programs and nutritional and fitness websites for information, on their smartphones, tablets and computers. This was in spite the findings of a meta-analysis (Reed, Schifferdecker, Rezaee, O'Connor, & Larson, 2011) that suggested that computer based technologies have been found to impact little on the effect of weight loss interventions. However, it should be noted that only two studies in the meta-analysis included the use of newer technologies such as smartphones, apps, tablets etc and the authors acknowledge that these devices may change the effectiveness of computer-based technologies in the future. Many of the participants in this study mentioned the use of tablets and smartphones in their weight loss practices.

Support for technology as a facilitator of social support for weight loss was found by Hwang et al. (2010) who investigated the characteristics of social support in an online weight loss community. Social support in this context was perceived to offer information, encouragement and motivation, and shared experiences. The authors suggest unlike face to face social support, online social support was viewed by participants as offering anonymity, convenience and interactions free of judgement. Some of these perceptions were echoed in the present study. Convenience was certainly mentioned by some participants, as was using the internet and associated forums as sources of information.

Text message delivered weight loss programs have been found to have some merit. Haapala, Barengo, Biggs, Surakka, and Manninen (2009) found when examining a text message based weight loss program that participants lost significantly more weight than the control group who participated in a traditional, non-technology based weight loss program. The significant difference between groups suggests that the use of technology such as mobile phones for self-directed weight loss can be effective. However, technology based weight loss has not always been found to be superior when compared with standard weight loss programs.
(Pellegrini et al., 2012; Pellegrini et al., 2011). Whilst definitive research on the effectiveness of technology, particularly for newer technologies such as smart phones, in weight loss is still to come, from the qualitative point of view taken in this study, it is evident that technology was highly valued and utilised by participants in this study.

Self-monitoring was used by all participants in their efforts to achieve weight loss. This self-monitoring took the form of recording weight changes, monitoring of physical activity and food intake. The importance of monitoring as a facilitator for weight loss is supported by a number of studies (Akers, Cornett, Savla, Davy, & Davy, 2012; Burke, Wang, & Sevick, 2011; Webber et al., 2010). The three men included in the present study all used various forms of self-monitoring, particularly for changes in performance related to physical activity. This is of note because typically samples used to evaluate monitoring and its effect on weight loss, have been dominated by women (Burke et al., 2011). However there is growing evidence for the use of self-monitoring to assist in successful weight loss, and it has become a prevalent component in behavioural weight loss programs (Burke et al., 2011). Whilst technology based monitoring was commonly used for the participants in this study, in the gym setting some participants used the paper and pen method to record progress of fitness and strength related indicators. Apps on smartphones appeared to be the more commonly used form of monitoring. This is understandable, given that mobile phones are highly portable and conveniently able to be used in a great variety of settings quite discreetly. This might be less true for paper and pen methods of monitoring. In addition, many apps include reminders to enter meals/calories eaten. These reminders could also serve to keep efforts to lose weight top of mind, which could lead to greater mindfulness in making choices in terms of food and engaging in exercise. Burke et al. (2012) suggested that adherence to any form of monitoring, paper and pen form or using a technological devise, was important for weight loss. However greater adherence to monitoring and greater weight loss was found for
participants using a technological device. Using technology to monitor also appeared to lead to better weight loss maintenance. Similar results were found in (Chambliss et al., 2011).

A sense of enjoyment found in new healthy behaviours appeared to be important for maintaining new behaviours when challenges appeared. Participants mentioned the enjoyment of exercise or the excitement in trying new healthy, yet importantly tasty, recipes. Particularly with regards to exercise, self-determination theory offers an understanding of this phenomena. Intrinsic motivation exists where performance of the activity, in this case exercise, is inherently satisfying and provides a sense of excitement, enjoyment or personal accomplishment. For participants who continued to exercise, enjoyment and a sense of accomplishment upon reflecting on their progress was present (Teixeira, Carraça, Markland, Silva, & Ryan, 2012).

For some participants enjoyment of the new food they were eating was highlighted. Enjoyment of food is a key feature of a recently developed theory by Stroebe, Van Koningsbuggen, Papies, and Aarts (2013) aiming to explain eating regulation, and why the vast majority of dieters fail, yet there is a small minority who succeed in achieving maintenance of weight loss. Known as the goal conflict model of eating, the theory posits that individuals who are restrained eaters, as opposed to normal eaters, fail to maintain diets due to the competing aims of weight control versus eating enjoyment. Hedonistic elements such as eating enjoyment are said to be major determinants of diet failure with weight control goals undermined by the pleasure anticipated from eating high calorie and highly palatable foods. Reward systems in the brain are important in regulating food intake (Kenny, 2011). Rather than a malfunction in homeostatic regulation of food intake, Stroebe et al. (2013) hypothesize that restrained eaters have difficulty controlling their weight due to increased responsiveness of the reward systems in the brain to the anticipation of highly palatable, usually high calorie food. Therefore in a food rich environment, such as found in Australia,
weight control for these restrained eaters requires more cognitive resources than the competing goal of eating enjoyment. With goals often activated by factors in the external environment, some beyond the awareness of the individual, the developers of the goal conflict model suggest vast environmental change is needed to occur, whereby healthy and similarly priced alternatives to high calorie foods need to be available at food outlets. In addition it is suggested that simple healthy eating reminders at the point of sale of food may be effective in promotion self-regulation. Given the enjoyment expressed by participants in this study for the palatable new lower energy foods they were eating, it is suggested that efforts could be made to develop and widely disseminate tasty, yet healthy recipes and food products to the wider community at a reasonable cost.

Participants in this study showed a future focus regarding their weight loss efforts. This future focus was also found in Granberg (2006) who described weight loss as a way to achieve hoped for possible selves and avoid undesirable possible selves. Granberg (2006) suggests that the ability to develop a narrative around future selves links goals, such as weight loss, with the desired positive events. This is viewed as an important motivating factor.

It may be that generalised that population based approaches, such as the use of fear appeals in the form of media campaigns, are not sufficient to create behaviour change necessary for weight loss. These campaigns can certainly provide information to the community as to the undesirable consequences such as Type 2 diabetes and heart disease. Information, however, is not enough and it appears that a personally relevant and valued trigger is needed to initiate action and maintain it. Once new diet and activity related behaviours are activated, numerous challenges threaten to stall the process, with participants in the study drawing on many different strategies to maintain the changes. Future research with regards to the notion of a trigger to action particularly with regards to weight loss is
recommended from this study, as it appears that is an area of study that has substantial scope for exploration in both qualitative and quantitative research. There is also scant research in the area of weight loss and how the notion of future selves of possible selves serves as a motivating factor and therefore this is an area ripe for further investigation. As technology develops, providing new formats for the delivery of weight loss facilitating interventions, research should continue to determine efficacious, cost effective and easily disseminated technology based weight loss programs.

A strength of the current study is that participants were 50% men and 50% women, as most studies in the area of weight loss feature predominately female samples. It should be noted that all participants in this study had either completed tertiary education or were in the midst of completing tertiary studies. Thus it might be found that people of lower educational status might provide substantially differing insights than the participants in this study. For instance, people from low socioeconomic status are under-represented in tertiary studies (Australian Government Department of Education, 2014). People from a lower economic status may have less ability to engage in weight loss activities due to financial constraints e.g. affordability of a gym membership and/or a commercial weight loss programs, and therefore be at a disadvantage in terms of achieving sustainable weight loss. A further limitation of this study is that a standardised exercise and dietary program was not used by participants. Participants came to the study having embarked on weight loss activities that had been chosen by themselves and not imposed by the researchers. However this may be an important area for further research in the future, e.g. do those who self-determine their method of weight loss have any better success at weight loss and weight loss maintenance than those assigned to a standardised program as in research studies. Another consideration when interpreting the results of this study is that one of the participants had the support of a
psychologist, which may or may not have been very important to his continuing with his new healthier behaviours, particularly in challenging times.

**Clinical Implications**

Weight loss is a complex process. This study recognises that simply providing information at the population level through mass media campaigns is not enough to motivate individuals to engage in weight loss promoting behaviours. Information may prime individuals for action, but is not sufficient to trigger it. Importantly, a trigger to action or motivational kickstart is needed. Clinician can take the opportunity to be a trigger by highlighting in personalised interventions the reasons for change, e.g. to improve low mood or address high blood pressure. For individuals who have embarked on weight loss without such an intervention, clinicians can support their efforts by encouraging the use of monitoring, recommend technology based resources, and encourage the use of these strategies when inevitable challenges to adhering to weight loss behaviours present.
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Extended Discussion

In addition to the themes discussed above, this extended discussion will explore further some of the subordinate themes only briefly referenced in the Discussion, which was limited by manuscript length considerations. This study highlighted that weight loss is a complex process facilitated by a number of interacting factors that enhance motivation to engage in and maintain weight loss behaviours such as increased exercise and dietary change. Having examined in depth the experiences of six participants who have successfully lost 10 percent of their body weight, it was interesting to note that whilst fear was certainly a component of the process of change for some, a motivational kickstart or trigger to action was needed to engage in the new behaviours of dietary change and exercise. The triggers to action were not necessarily fear based, in fact only one participant was triggered by a potentially fear inducing event. Participant G was triggered by taking part in a health promotion campaign which labelled his waist measurement as “hazardous” thus leading him to increase his participation in exercise. The importance of a trigger to action was supported by the findings of Chapman and Ogden (2009), who examined how people achieve dietary change. Despite the accumulation of evidence that change was needed over a period of time, a trigger was needed to spur participants to take action. Again, this was found in the current study. Participants had been contemplating engaging in weight loss behaviours for some time and had been researching how they might make behavioural changes. It took a trigger to action to lead to putting this information into action. As found in Chapman and Ogden (2009), the triggers were identified as either being internal or external. Internal triggers included internal thought processes such as the thought ‘enough is enough’ and external triggers involved advice and encouragement from a health professional. The notion of a trigger to action remains poorly understood in the literature (Chapman & Ogden, 2009). This
study also supports the findings of Gorin et al. (2004) in this area. In Gorin et al. (2004) 83% of participants identified a trigger to commence weight loss. A trigger to action was found to relate to weight loss maintenance as well. At two year follow up, those with an identified trigger had gained less weight than those with no trigger. Interestingly those with a medical trigger to action experienced the least amount of regain. The authors posit that medical triggers perhaps enhance motivation to succeed thus resulting in higher weight loss and better weight loss maintenance by making more salient the health threats associated with obesity. This is supportive of the notion that fear can create behaviour change. Ogden et al. (2009) also highlighted the role of discrete moments triggering weight loss. The interpretation of the event rather than the nature of event itself was found to be particularly important, with those events perceived as more controllable, positive and predictable leading to weight loss as opposed to weight gain. In a qualitative study by Ogden and Hills (2008) sustained weight loss was found to be triggered by a life event for the majority of participants. The events were either negative or positive in nature. It was proposed by the authors that the events led to a sudden insights into participants own mortality and the relationship between their behaviour and health. A shift in identity to that of a healthier individual was experienced with old identities challenged and the trigger offering an opportunity for reinvention. Like some of the participants in the present study exercise and adhering to a healthier diet were central to their new sense of self, for example leaving the former “fat one” version of the self, to creating a new self where the pursuit of fitness and health were central.

Traditional rational-cognitive models of health behaviour change such as the transtheoretical model and the health belief model do not account for sudden triggers to action. Rather health behaviour change is viewed as a linear, gradual process, under the conscious control of the individual. The current study challenges this view of health behaviour change and supports a model proposed by Resnicow and Vaughan (2006) who,
basing their model of chaos theory, suggest that decisions to change health behaviour are quantum, as opposed to linear. These authors propose that health behaviour may be similar to other complex systems in nature where multicomponent parts interact in a non-linear fashion. Interactions within and between individuals are highly variable, with the system sensitive to initial conditions and therefore difficult to predict. Successful weight loss may depend is proposed to depend on random intrapsychic and external events. It is suggested that linear models and chaos models of health behaviour change are not mutually exclusive. According to the chaos model traditional health promotions campaigns, such as fear appeal campaigns can serve the role of priming individuals so that when chaotic events occur they have a greater likelihood of leading to sustained change. The motivational kickstart or trigger to action as found in this study was quite personal in nature. Even for Participant G who was spurred into action by a health promotion campaign, the health promotion campaign involved a waist measurement being taken, and therefore the interaction was individualised and personal. This is different to many health promotion campaigns that involve the use of mass media such as television commercials. It is interesting to consider whether a traditional mass media campaign would have led to the same increase in exercise for Participant G, given the lack of individualisation associated with such campaigns.

All participants mentioned ongoing challenges to staying on track and maintaining their new healthier exercise and dietary regimes. Chapman and Ogden (2009) highlight in their study similar findings with regard to sustained dietary change and suggest that challenges to ongoing maintenance of health behaviour change are inadequately addressed in change models and theories such as the stages of change model (Prochaska & DiClemente, 1982). Such challenges also support the previous study conducted by Reyes et al. (2012) who found that both weight loss maintainers and regainers identified a number of challenges that led to lapses in their weight loss/maintenance behaviours. As found in the current study,
these challenges were identified as either changes in life circumstances e.g. changing work circumstances or relationships, or slipping back into old habits. In addition to the findings of the current study, the withdrawal of overt support of others was seen as something that inhibited the ability to maintain healthy lifestyle.

As found in the current study, Sharifi et al. (2013) identified that situational barriers were seen to interfere most in participants ability to eat according a weight loss diet, such as when their daily routine was disrupted. Participants in the current study mentioned this as a factor, such as when exams or injury inhibit when and how they can engage in weight loss promoting behaviours. Sharifi et al. (2013) found stress, depression, food cravings, social pressure from friends and family, lack of time due competing priorities such as work and study to present barriers. Competing priorities for time was also found in Welsh et al. (2012). However unlike Welsh et al. (2012), this study did not highlight the barriers of lack of self-control and lack of knowledge. Despite the lack of accounting for barriers to behaviour change in health behaviour change models, the current study adds to the literature in support of barriers being an important factor in the achievement and maintenance of weight loss and facilitating behaviours. It appeared that participants were constantly juggling the emergence of competing priorities and unexpected events that divert their attention from and ability to engage in weight loss achieving behaviours, particularly when it came to exercise. What was demonstrated was an enduring willingness to refocus on diet and/or exercise when these events and priorities changed in their urgency and importance. The constant change that characterises life was responded to with flexibility and with the underlying determination to continue with weight loss driven behaviours.

The analysis of the in depth interviews reveals that motivation to engage in weight loss promoting activities is a complex process that requires ongoing focus in the face of many challenges. Participants were able to elucidate the strategies and supportive factors used to
keep their focus on persistent lifestyle change. Some were active strategies including monitoring, individualising and adapting diet and exercise to suit their needs and thereby making their efforts maintainable. Other maintaining factors included a sense of enjoyment associated with their new activities, and positive social interactions.

Once engaged in weight loss driven behaviours participants in the current study cited social interactions as a factor supporting continued weight loss efforts. Whether it be the connections with others made at the gym, positive feedback from others, partners of participants changing their behaviours concurrently, or hints and tips from members of weight loss internet forums, others were highlighted as very much a part of the weight loss process. Whilst in their review, Teixeira et al. (2005) found that pre-treatment social support was not a predictor of weight control, Verheijden et al. (2005) suggest that whilst there is a strong theoretical rationale for incorporating social support in weight loss interventions, results from intervention studies are conflicting. Despite the conflict, they conclude that their review overall is suggestive of the benefits of incorporating social support into lifestyle interventions for weight loss.

Self determination theory proposes there are basic psychological needs of relatedness, autonomy and competence. These needs are said to be essential to developing internal motivation (Deci & Ryan, 1985). Relatedness definitely featured for those in the study. In general, all participants had family members and friend that were supportive of their endeavours to lose weight. For some, they had made social connections with people at their gyms. These social connections were sighted as factors for maintaining engagement in exercise at the gym, as the building of these connections meant that participants were encouraged to attend regular as they felt that there was some kind of social contract between them. Also a sense that these new connections held them to account. Elements of relatedness were not always seen in a positive light, though salient enough for the participants to mention
in their interviews. Others were mentioned as questioning their efforts to lose weight. There was a sense that these other people were implying that they were somehow going too far, implying there was an element of danger or negative consequences to the participants efforts to lose weight.

Supporting the findings of Ng et al. (2014), this study found that not all forms of social interaction were seen to be supportive of weight loss or weight maintenance. Ng et al. (2014) found, in the context of self determination theory, that when important others interpersonal styles were seen as supporting autonomous motivation, participants stated higher levels of psychological need satisfaction and autonomous motivation for weight management. These ideal motivational states were in turn related to increased physical activity and increased healthy eating behaviours. The opposite was true for important others with controlling interpersonal styles. As with the findings of the current study, certain social interactions related to weight loss and weight management appear to be couched in negativity about the process. Participants mentioned that loved ones and friends expressing the idea that they had become obsessed or taken weight loss too far. People were making comments uninvited about their bodies, advising them to stop losing weight. Others found that self-monitoring efforts were being frowned upon by loved ones and that they being scrutinized these concerned parties to ensure that they were approaching weight loss in a mentally healthy way. It appears that some in the social set of participants were uncomfortable with the visible change in participant’s bodies and the changes in their behaviours to facilitate this change. Although it was not clear as to the degree of importance that social supports were to engaging in weight loss and sustaining it for those involved in the current study, some participants related how having a supportive partner who was also engaging in new lifestyle behaviours supportive of weight loss help them to maintain physical activity and healthy dietary change.
Technology featured in this study as a facilitator and supporter of lifestyle change for weight loss. Participants used applications, forums, internet delivered weight loss programs and nutritional and fitness websites for information, on their smartphones, tablets and computers. This was in spite the findings of a meta-analysis (Reed et al., 2011) that suggested that computer based technologies have been found to impact little on the effectiveness of weight loss interventions. However, it should be noted that only two studies included the use of newer technologies such as smartphones, apps, tablets etc. and the authors acknowledge that these devices may change the effectiveness of computer-based technologies in the future. Many of the participants in this study mentioned the use of tablets and smartphones in their weight loss practices.

As mentioned by participants in the current study technology has been found to be a facilitator of social support for weight loss (Hwang et al., 2010). Investigating the characteristics of social support in an online weight loss community, social support was perceived to offer information, encouragement and motivation, and shared experiences. The authors suggest unlike face-to-face social support, online social support was viewed by participants as offering anonymity, convenience and interactions free of judgement. Some of these perceptions were echoed in the present study. Convenience was certainly mentioned by participants, as was using the internet and associated forums as sources of information.

Whilst this study found that the use of technology based resources was important to the process of weight loss, there have been inconsistent results in other studies. Haapala et al. (2009) found when examining a mobile phone, text message based weight loss program that participants lost significantly more weight that the control group who participated in a traditional weight loss program. The significant difference between groups suggests that the use of technology such as mobile phones for self-directed weight loss can be effective. Although technology based weight loss has not always been found to be superior when
compared with standard weight loss programs. Pellegrini et al. (2011) examined a technology based program with and without a standard in-person weight loss protocol, and compared it to a standard in-person weight loss protocol alone. The technology component included an energy monitoring armband with an associated digital display providing feedback. A website to monitor intake, physical activity and weight was also included. There was no significant difference between protocols suggesting that technology based programs can produce similar outcomes to standard in person weight loss interventions. Whilst definitive research on the effectiveness of technology, particularly for newer technologies such as smart phones, in weight loss is still to come, from the qualitative point of view taken in this study, it is evident that technology was highly valued and utilised by participants.

Self-monitoring was used by all participants in their efforts to achieve weight loss. This self-monitoring took the form of weighing, monitoring of physical activity and food intake. Autonomous motivation has been found to be significantly related to the use of self monitoring for weight loss and actual weight loss (Webber et al., 2010). Monitoring over the course of the study found a significant correlation between self monitoring and weight loss. The findings in the present study are supportive of those found in Burke et al. (2011). This review article appraising 22 studies found a consistent and significant association between self-monitoring and weight loss. Self-monitoring encompasses dietary self-monitoring, exercise self-monitoring, and self-weighing. Despite these significant findings, the authors acknowledge that the level of evidence was weak due to methodological limitations. Samples were predominantly white overweight or obese women, and the authors highlight the need for study of self-monitoring for weight loss in diverse populations and men. Whilst not by any means statistically significant, the three men included in this qualitative study all used various forms of self-monitoring, particularly for changes in performance related to physical activity.
Adherence to self monitoring has been found to be a predictor of weight in a number of studies, with Burke et al. (2012) suggesting that adherence to any form of monitoring, paper and pen form or using a technological devise, was determined to be important for weight loss. Greater adherence to monitoring, and in turn greater weight loss, was found for participants using a technological device. Using technology to monitor also appeared to lead to better weight loss maintenance. Similar results were found for Chambliss et al. (2011) where researchers established that participants who self-monitored, regardless of mode, achieved significant weight loss, as opposed to the control group. Using pen and paper monitoring, Akers et al. (2012) also found that daily self-monitoring of dietary intake, activity, fruit & vegetable consumption and water consumption was an effective way to facilitate weight maintenance. The current study supports the use of self-monitoring as a method of supporting weight loss. For the participants in this study technology based monitoring was a particularly salient method. With strong evidence for the use of self monitoring to assist in successful weight loss, it is a becoming prevalent in commercial weight loss programs. Technology based monitoring was commonly used for the participants in this study, however in the gym setting some participants used the paper and pen method to record progress of fitness and strength related indicators. Apps on smartphones appeared to be the more commonly used form of monitoring. This is understandable, given that mobile phones are highly portable and conveniently able to be used in a great variety of settings quite discreetly. This might be less true for paper and pen methods of monitoring. In addition, many apps include reminders to enter meals/calories eaten. These reminders could also serve to keep efforts to lose weight top of mind, which could lead to greater mindfulness in making choices in terms of food and engaging in exercise.

A sense of enjoyment found in new healthy behaviours appeared to be important for maintaining new behaviours when challenges appeared for participants in this study.
Participants mentioned the enjoyment as related to the performance of exercise or as a result of the trying new healthy, yet importantly tasty, recipes. Particularly with regards to exercise, self determination theory offers an understanding of this phenomena described. Intrinsic motivation exists where performance of the activity, in this case exercise, is inherently satisfying and provides a sense of excitement, enjoyment or personal accomplishment. As found in other studies (Teixeira et al., 2012), for participants engaged in exercise, enjoyment and a sense of accomplishment upon reflecting on their progress was present. Had participants in the study not enjoyed the new exercise behaviours, it is reasonable to speculate that maintaining these new activities would have been increasingly more difficult. However, one participant in the study did not increase her activity, rather focused on diet alone to achieve weight loss. This was as a result of acknowledging that she did not enjoy attending the gym.

For some participant’s enjoyment of the new food they were eating was highlighted. This supports the recently developed theory by Stroebe et al. (2013) aiming to explain eating regulation, and why the vast majority of dieters fail. Known as the goal conflict model of eating, the theory posits that individuals who are restrained eaters, as opposed to normal eaters, fail to maintain diets due to the competing aims of weight control versus eating enjoyment. Hedonistic elements such as eating enjoyment are said to be major determinants of diet failure with weight control goals undermined by the pleasure anticipated from eating high calorie and highly palatable foods. Reward systems in the brain are important in regulating food intake (Kenny, 2011). Rather than a malfunction in homeostatic regulation of food intake, Stroebe et al. (2013) hypothesize that restrained eaters have difficulty controlling their weight due to increased responsiveness of the reward systems in the brain to the anticipation of highly palatable, usually high calorie food. Therefore in a food rich environment, such as found in Australia, weight control for these restrained eaters requires
more cognitive resources than the competing goal of eating enjoyment. With goals often activated by factors in the external environment, some beyond the awareness of the individual. The developers the goal conflict model suggest vast environmental change is needs to occur, whereby healthy and similarly priced alternatives to high calorie foods need to be available at food outlets. In addition, it is suggested that simple healthy eating reminders at the point of sale of food may be effective in promotion self-regulation (Stroebe et al., 2013). Given the enjoyment expressed by participants in this study for the palatable new lower energy foods they were eating, it is suggested that efforts could be made to develop and widely disseminate tasty, yet healthy recipes and food products to the wider community at a reasonable cost.

Participants in this study showed a future focus regarding their weight loss efforts. This future focus was also found in Granberg (2006) who examined how individuals who have lost significant weight navigate the challenges to self and identity. Participants were seen to view weight loss as a way to achieve hoped for possible selves and avoid undesirable possible selves. Granberg (2006) suggests that the ability to develop a narrative around future selves links goals, such as weight loss, with the desired positive events. This is viewed as an important motivating factor, despite not all participants having had their expectations met by achieving significant weight loss. Participant J in the present study identified that he didn’t want to be the embarrassing overweight dad for his children. He wanted to avoid that possible future self. He had already lost the identification as being “the fat one” in his family, so it could be suggested that the possible self of the ‘fat dad’ could be viewed as avoidable and therefore motivating in terms of maintaining weight loss for participant J. A number of other participants mentioned hoping to avoid the future selves limited by incapacities and poor health as they aged.
Managing expectations for weight loss and participation in exercise and dietary change was highlighted by participants in this study. Whilst achieving 10% loss of body weight is associated with significant risk reductions for medical conditions such as heart disease and type 2 diabetes, individuals in weight loss studies tend to have higher expectations. Expected weight loss such studies range from between 24% and 38% of original body weight (Dutton, Perri, Dancer-Brown, Goble, & Van Vessem, 2010). Participants in this study demonstrated a management for their expectations for weight loss. This management of expectations regarding weight loss pertained to what was realistic with regards to the way their body can be changed in terms of the amount of body fat able to be lost, changes they are willing to make relating to diet and physical activity. This management of expectations particularly with regards to realistic and sustainable changes took into account evaluation of prior eating habits, their body type, and assessment of prior activity levels. This approach appeared to correspond with a flexible approach to weight loss. It has been found that modifying unrealistic weight loss expectations is possible (Ames et al., 2005). It may be that a component to encouraging successful weight loss by health professionals includes helping individuals to modify expectations to those that are more realistic, as were the expectations of those in the current study. A health focused expectations, rather than expectation for huge amounts of kilograms lost, would include smaller weight loss goals (e.g. 10% weight loss), realistic expectations of achievable dietary and activity changes, and the impact these changes will have on life in general. For example, facilitate the understanding that some physical discomfort will be experienced as exercise is engaged in and with the reduction of or change to dietary intake. Also mentioned in studies, yet not mentioned by participants in this study is the expectation of significant social and psychological change as a result of weight loss, which is rarely achieved (Ames et al., 2005). It could be suggested that the reason that the participants in the current study were willing to
continue with their weight loss efforts was that their expectations did not include significant social and psychological change. Therefore they had not experienced the disappointment felt by many when their goals are not achieved, thereby leading to discontinuation of their weight loss efforts (Cooper & Fairburn, 2002).

Participants in this study not only approached weight loss and associated goals in a realistic manner, but they also did so in a flexible and adaptive way. Their lifestyle changes were made in terms of what felt acceptable and preferable to them, even for those in the study following a structured and relatively prescriptive commercial weight loss program. For some this meant engaging in exercise with minimal dietary change, or alternatively substantial dietary change with no real in activity levels. An adaptive approach appeared to make sticking with their new behaviours sustainable and acceptable. This supports findings that flexible cognitive restraint and flexible behavioural restraint, as opposed to rigid restraint, as related to eating behaviours and weight management, are associated with greater weight loss and better weight maintenance (Sairanen, Lappalainen, Lapveteläinen, Tolvanen, & Karhunen, 2014). Rigid restraint pertains to a cognitive and behavioural style that has an ‘all or nothing’ quality that has been found to link to a pattern of alternating periods of dietary control and periods of eating high calorie foods (Westenhoefer et al., 2013). One study that sought to increase behavioural flexibility found that increased behavioural flexibility created by having participants engage in a new activity each day during the intervention period had greater weight loss that has continued post intervention, when compared to a control group (Fletcher, Hanson, Page, & Pine, 2011). Interestingly, the intervention to increase behavioural flexibility used in Fletcher et al. (2011), did not specifically increase behavioural flexibility through the introduction of new of dietary and exercise activities. Rather the aim was to break the habitual and constrained cognitive and behavioural patterns that have been found for people that are overweight (Cserjesia, Molnar, Luminet, & Lenard, 2007; Delgado-
Rico, Río-Valle, González-Jiménez, Campy, & Verdejo-García, 2012). It could be hypothesised that the participants in the current study may have represented people who are more behaviourally and cognitive flexible. Rather than taking the all or nothing approach to weight loss, e.g. sticking to every aspect of a commercial weight loss program, they were able to make appropriate and successful adaptations.

The results in this study also align with the notion that preference may be important to successful weight loss. In terms of dietary changes it has been found that when given the option, people will choose a diet that aligns with their dietary preferences, for example choosing a low carbohydrate diet over a low fat diet due to a preference for higher fat foods. However studies have yet to determine if choosing a preferred food based diet has improved outcomes for weight loss and maintenance (McVay et al., 2014). It appears that there is little research in terms of exercise and dietary preferences and their impact on weight loss and weight loss behaviour adherence, therefore providing opportunity for further research in this area.

It could be that generalised that population-based media campaigns using fear appeals are not sufficient to create behaviour change necessary for weight loss. These campaigns can certainly provide information to the community as to the undesirable consequences people can avoid such as Type 2 diabetes and heart disease, as a result of losing weight. Information, however, is not enough though and it appears that a personally relevant and valued trigger is needed to initiate action and maintain it. Once new diet and activity related behaviours are activated, numerous challenges threaten to stall the process, with participants in the study drawing on many different strategies to maintain the changes. Future research with regards to the notion of a trigger to action particularly with regards to weight loss is recommended from this study, as it appears that is an area of study that has substantial scope for exploration in both qualitative and quantitative research. There is also scant research in the area of weight
loss and how the notion of future selves of possible selves serves as a motivating factor. As technology develops, providing new formats for the delivery of weight loss programs, research should continue to determine efficacious, cost effective and easily disseminated technology based weight loss interventions.

**Future Research**

The current study provides detailed insights into the experience of six individuals who have achieved weight loss. Further research taking the themes identified, in this exploratory study and examining them in larger samples and using quantitative methods is indicated, for example, the role of a motivational kickstart and the relevance of enjoyment relating to exercise and dietary activities in initiating and continuing weight loss activities. In addition, exploring the experiences of individuals of low educational and socioeconomic status is necessary to identify unique motivations, barriers and facilitators for weight loss that may be unique to such a population. Populations where there is a high comorbidity of being overweight or obese, such as those with mental health diagnoses, are another group where a qualitative approach to research such as IPA may bring to light unique challenges and perspectives on weight loss.
References


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Appendix

The manuscript was submitted to the journal Qualitative Health Research for consideration of publication. Instructions to authors for this publication can be found at

http://qhr.sagepub.com/site/misc/qhrauthorinstructions.pdf
**Initial Interview Questions**

The questions proposed for the interviews were deliberately open and broad in nature in order to allow the respondent to speak about the topic with as little prompting possible so that their responses were not led by the researcher.

Q1. Can you tell me about your recent experience of weight loss?

Q2. How did you go about the process of losing weight?

Q3. What prompted the changes you made, that led to your weight loss?

Questions were modified during interviews as respondents raised issues in the course of the interviews that were pertinent to the research topic and warranted further exploration.
Description of Participants

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<th>Age</th>
<th>Amount weight lost</th>
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<td>10kg</td>
</tr>
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