Perceived impact of online social support on self-regulatory weight-loss behaviour in a sample of young South African adults

L Botha

orcid.org 0000-0001-7023-963X

Mini-dissertation submitted in partial fulfilment of the requirements for the degree Masters of Arts in Counselling Psychology at the Potchefstroom Campus of the North West University

Supervisor: Prof KFH Botha

Graduation May 2018

Student number: 27572900

Table of Contents

Acknowledgement		3
Summary		4
Opsomming		6
Preface		8
Permission to submit for examination		10
Declaration from researcher		11
Chapter 1:	Literature Review	12
	References	27
Chapter 2: Article		
	Author guidelines: South African Journal of Psychology	42
	Manuscript for examination	46
	Abstract	47
	Introduction	48
	Aims	51
	Method	51
	Results	55
	Discussion	66
	Limitations and Recommendations	74

	Conclusion	75
	References	77
Chapter 3:	Critical reflection	88
	References	96

Acknowledgements

Firstly, I would like to thank my Heavenly Father for blessing me so tremendously on this path towards becoming a psychologist. I am fortunate that You opened so many doors for me and that You provided me with strength, wisdom and patience when I needed it most.

Prof Karel Botha, my supervisor, for you I would like to express my deepest regards and sincerest appreciation. Thank you for your constant guidance and encouragement, without which this work would not have been possible. I am truly grateful for the time you invested and the motivation and direction you provided me with.

To my family, especially my twin sister, mother and father, we have finally reached the end. Thank you for the tremendous amounts of unconditional support you provided me with throughout this long journey. I appreciate your patience, encouraging words, financial support and uplifting spirits.

To my partner, Christiaan Sterk, I commemorate you for supporting me through all the blood, sweat and tears. I appreciate your motivating words, which helped me to believe in myself and my abilities. You inspire me on a daily basis and remind me that with commitment and hard work anything is possible.

To all my friends, thank you for your support throughout our many years of friendship. Although all of us are pursuing different career paths, I value the quality time, humour and advice we provide each other with.

Lastly, to the participants of this study, thank you for your time and effort; your shared experiences will contribute towards a greater understanding of a topic that can assist many individuals going forward.

Summary

Young adulthood (i.e. 18 to 30 years), is a particularly risky time for the development of unhealthy eating behaviours and excessive weight gain, especially due to the dramatic lifestyle changes often taking place during this period. As a result, it is also a time in which individuals use various different weight loss attempts to achieve their ideal weight. Weight control efforts are often driven by factors such as self-esteem and external appearances and may therefore lead to unhealthy or unsuccessful weight control practices. To be effective over the long term, healthy weight loss efforts rather require skilful and persistent self-regulation. In this study self-regulation is considered to include appropriate goal setting, goal planning, self-monitoring, and pursuit of weight loss goals.

Social support is a key facilitator of self-regulation as it provides the individual with emotional comfort, information and feedback regarding progress toward a goal. This study was undertaken as literature indicates that it is not yet clear how online social support is perceived by participants to contribute to changes in the self-regulation of their weight loss efforts. The general aim of this study was therefore to explore, in a sample of young South African adults, the perceived role and contribution of online social support to the self-regulation of specific weight loss goals.

A qualitative, exploratory research approach with a grounded theory design was applied to obtain a deeper understanding of perceptions and experiences regarding online social support and self-regulation of weight loss goals. After ethical approval was granted by the North-West University, 15 young adults between the ages of 18 and 30 were recruited from a weight loss clinic in Pretoria, South Africa. Participants completed a self-compiled open-ended questionnaire on *SurveyMonkey* and the data were analysed according to Braun and Clarke's (2013) model of thematic analysis.

Findings show that the participants perceive social media sites as an easily accessible and easy-to-use weight loss resource that effectively facilitates key self-regulatory skills such as goal setting and planning, goal pursuit, self-control, and self-monitoring. Although certain challenges were also mentioned by participants, they attempt to overcome them in different ways; most notably by changing unrealistic weight loss guidelines and expectations to more realistic ones. The results support the literature that suggests that online weight loss communities can provide high amounts of social support and although preliminary, the results further suggest that the support obtained from social media sites may foster adaptive self-regulatory weight loss behaviours in young adults.

Future studies are needed to facilitate a deeper understanding of the manner in which perceived online social support mediate the enactment of weight loss behaviours in diverse samples.

Opsomming

Jong volwassenheid (tussen 18 en 30 jaar) is ‘n hoë risiko tydperk vir die ontwikkeling van ongesonde eetgedrag en oormatige gewigstoename; dikwels die gevolg van dramatiese leefstyl-veranderinge. As gevolg hiervan is dit ook ‘n tydperk waartydens individue verskillende gewigsverlies-metodes navolg ten einde hul ideale gewig te bereik. Pogings tot gewigsverlies word dikwels gemotiveer deur faktore soos selfbeeld en uiterlike voorkoms en kan daarom lei tot ongesonde en oneffektiewe gewigsverlies-praktyke. Om effektief oor die langtermyn te wees, vereis pogings tot gewigsverlies, vaardige en volhoubare selfregulering. In hierdie studie sluit selfregulering in toepaslike doelwitstelling, doelwitbeplanning, selfmonitering en nastreef van gewigsverlies-doelwitte.

Sosiale ondersteuning is ‘n belangrike fasiliteerder van selfregulering aangesien dit die individu onder andere met emosionele ondersteuning, inligting en terugvoer met betrekking tot vordering voorsien. Hierdie studie is onderneem op grond daarvan dat die literatuur aandui dat dit nog nie duidelik is hoe aanlyn-sosiale ondersteuning tot waargenome veranderinge in die selfregulering van pogings tot gewigsverlies lei nie. Die algemene doel van hierdie studie was daarom om die waargenome rol en bydrae van aanlyn-sosiale ondersteuning tot die selfregulering van gewigsverlies-doelwitte te verken.

‘n Kwalitatiewe, verkennende benadering is gevolg om ‘n dieperliggende begrip van die persepsies en ervaringe rakende aanlyn-sosiale ondersteuning en die selfregulering van gewigsverlies-doelwitte te verkry. Nadat etiese toestemming deur die Noordwes Universiteit toegestaan is, is 15 jong volwassenes deur middel van ‘n gewigskliniek in Pretoria gewerf om aan die studie deel te neem. Deelnemers het ‘n self-opgestelde oop-einde vraelys op *SurveyMonkey* voltooi en die data is met behulp van Braun en Carke (2013) se tematiese analise verwerk.

Die bevindinge dui daarop dat deelnemers aanlyn-platvorms as ‘n bron beskou wat toeganklik en maklik is om te gebruik, en wat sleutel-selfreguleringsvaardighede soos doelwitstelling en –beplanning, doelwit-uitvoering, selfbeheer, asook selfmonitering, fasiliteer. Alhoewel sekere uitdagings ook deur deelnemers genoem is, probeer hulle om dit op verskillende wyses te hanteer; veral deur onrealistiese gewigsverlies-doelwitte en verwagtinge na meer realistiese doelwitte om te skakel. Die resultate ondersteun die literatuur wat suggereer dat aanlyn gewigsverlies-gemeenskappe hoë vlakke van sosiale ondersteuning kan bied, en alhoewel voorlopig, ook dat hierdie ondersteuning aanpassende selfregulering met betrekking tot gewigsverlies bevorder.

Toekomstige studies word benodig om ‘n dieperliggende begrip te fasiliteer ten opsigte van die wyse waarop waargenome aanlyn-sosiale ondersteuning pogings tot gewigsverlies in diverse populasies beïnvloed.

Preface

- This mini-dissertation forms part of the requirements for the completion of the degree Masters of Arts in Counselling Psychology at the Potchefstroom Campus of the North-West University. It has been prepared in article format (manuscript to be submitted for publication) with three chapters and complies with the requirements identified by the North-West University in rule: A.4.4.2.9.
- Chapter 1 includes an in-depth literature overview that aims to present the reader with background information and defining concepts that are of relevance to this study. Chapter 2 presents the manuscript that will be submitted to the *South African Journal of Psychology* for possible publication. The manuscript itself will include a short introduction, the aims of the study, the methodology used, in addition to the findings of the study and a discussion and conclusion regarding this. Finally, chapter 3 presents a critical reflection by the researcher on the research process.
- The manuscript in Chapter 2 has been compiled in accordance with the requirements set out by the *South African Journal of Psychology*, with the goal of possibly submitting it for publication.
- The manuscript and the reference list have been styled according to the specifications of the APA (American Psychological Association, 6th edition) publication guidelines for the purpose of examination. Where journal specifications differ from the APA publication guidelines, the appropriate amendments will be made before submission for publication.
- For the purpose of examination, the pages will be numbered chronologically from the table of content page, ending with the addendum.
- A language practitioner who is a member of the South African Translators' Institute (SATI) conducted the language editing of this mini-dissertation.

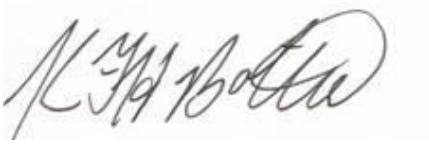
- Data collection for the study (the open-ended questionnaire) was conducted in the language that was preferred by the participants. English and Afrikaans questions were concurrently established and used during the answering of the online questionnaire.

- Consent for the submission of this mini-dissertation for examination purposes (in fulfilment of the requirements for the Master's Degree in Counselling Psychology) has been provided by the research supervisor, Prof Karel Botha.

- Lastly, this mini-dissertation was submitted to Turn-it-in, which established that its content falls within the norms of acceptability regarding plagiarism.

Permission to submit article for examination purposes

I, the supervisor of this study, hereby declare that the article entitled *Perceived impact of online social support on self-regulatory weight loss behaviour in a sample of South African young adults,* written by L. Botha does reflect the research regarding the subject matter. I hereby grant permission that she may submit the mini-dissertation for examination purposes and I confirm that the mini-dissertation submitted is in fulfilment of the requirements for the degree Masters of Arts in Counselling Psychology at the Potchefstroom Campus of the North-West University. The article may also be sent to the *South African Journal of Psychology* for publication purposes.



Prof Karel F.H. Botha

Declaration from researcher

I, Lario Botha, hereby declare that this research manuscript, titled *Perceived impact of online social support on self-regulatory weight loss behaviour in a sample of South African young adults* is my own effort and has never been submitted for examination. I further declare that the sources utilised in this dissertation have been referenced and acknowledged. Furthermore, I declare that this mini-dissertation was edited and proofread by a qualified language editor, as prescribed. I lastly declare that this research study was submitted to the Turn-it-in software system and a satisfactory report was received with regard to plagiarism.

_____

Lario Botha

Student number: 27572900

CHAPTER 1: LITERATURE REVIEW

Introduction

The aim of this chapter is to provide an in-depth literature review in support of the brief review included in the manuscript in Chapter 2. This review provides an extensive overview of all key concepts related to this study. Weight gain and loss, as it pertains to the developing age of young adulthood, will firstly be discussed. Self-regulation will then be defined and different self-regulatory skills, with specific reference to their importance in terms of weight loss, will be outlined. Next, social support will be discussed, specifically focusing on ways it affects individuals' weight loss efforts. Finally, online social support and its impact on self-regulatory weight loss behaviours will be outlined, which will also set the stage for the relevance of this study.

Weight issues during young adulthood: a critical period

Weight gain. Young adulthood (i.e. 18 to 30 years), is a particularly risky time for the development of unhealthy eating and activity behaviours (Gokee-LaRose, Gorin & Wing, 2009; Nelson, Story, Larson, Neumark-Sztainer & Lytle, 2008; Poobalan, Aucott, Precious, Crombie & Smith, 2010). The average weight gain of young adults is between 1 and 2 kg per year, with the largest gains occurring during the early to mid-twenties (Truesdale et al., 2006). Various reasons are put forth in the literature regarding unhealthy weight changes observed during this period (Butler, Black, Blue & Gretebeck, 2004; Graham & Jones, 2002; Wengreen & Moncur, 2009), of which dramatic lifestyle changes appear to be the most important (Poobalan et al., 2010).

Firstly, young adults have been documented to eat large amounts of fast foods (Harris, Gordon-Larsen, Chantala & Udry, 2006; Nelson et al., 2008), to skip breakfast regularly (Niemeier, Raynor, Lloyd-Richardson, Rogers & Wing, 2006) and to decrease their overall

engagement in physical activity (Harris et al., 2006; Nelson et al., 2008). Young adults' increased independence and social life are also significant contributing factors to their weight gain, especially their increased responsibility for food attainment and preparation (Poobalan et al., 2010), as well as the interplay between increased alcohol consumption, stress, adverse eating patterns and inactive behaviour (Nelson et al., 2008; Niemeier et al., 2006). Young adults are also vulnerable to sleep deprivation and depression, which are often accompanied by excess weight gain (Nelson et al., 2008; Voelker, 2004).

Due to the sudden and large amount of weight that may be gained during this period, some young adults desperately attempt to return to their previous body weight (Gokee-LaRose, Leahey, Hill & Wing, 2013). Therefore, just as young adulthood is a perilous period for weight gain, it is also a time in which individuals use various different weight loss attempts to achieve their ideal weight (Wardle, Haase & Steptoe, 2006).

Weight loss. Recent literature indicates that young adults' weight control is mainly driven by social factors, including self-esteem and external appearances (Gokee-LaRose et al., 2013). Young adults are therefore known to have a tendency to pursue thin ideal weights and to use dangerous weight loss efforts in order to achieve this (Wardle & Griffith, 2001). Some of these unhealthy weight control practices include restrictive dietary habits, such as meal skipping and quick weight loss fixes, including the consumption of dangerous diet pills (Wardle et al., 2006).

Other young adults, however, appear to make use of healthier food choices and physical exercise and activity in their attempts to lose weight (Gokee-LaRose et al., 2013; Neumark-Sztainer, Wall, Larson, Eisenberg & Loth, 2011; Wardle & Griffith, 2001; Wardle, et al., 2006). Regardless of which weight loss behaviours are practised, young adults, and others trying to lose weight, continue the cycle of losing and regaining weight, in addition to

falling in and out of motivation (Brownell, 2010). This appears to be ascribed to a general tendency towards inactivity and energy preservation (Catenacci, Mitchell, Wyatt & Hill, 2011).

Weight loss requires self-regulation. Engaging in organised and planned behaviours, such as those required for weight loss, including exercising and eating right, necessitates frequent and conscious decision making (Catenacci, et al., 2011; Weinsier et al., 2002). Decisions to engage in these activities, however, often runs counter to our primal propensity to save energy, implicating that they may easily be overturned by internal impulses encouraging inactive behaviour (Jeffery, Wing, Sherwood & Tate, 2003).

Overeating and inactivity are therefore considered default positions and the choice made by a person to counter this, necessitates deliberate practice of certain psychological skills (Wansink & Chandon, 2006). Although attempts to regulate weight are common among young adults (Roach et al., 2003), these often prove not to be effective over the long term. Therefore, weight loss behaviours, such as dietary and exercise adherence, demand skilful and persistent self-regulation (Carver & Scheier, 2004; Miller, Galanter & Pribram, 1960).

Self-regulation

Self-regulation is an umbrella term used to describe processes by which individuals pursue and achieve goals (Mann, De Ridder & Fujita, 2013). In general, self-regulation refers to the ability to direct behaviour and control or inhibit impulses or desires that would otherwise hinder goal-directed behaviour (Baumeister, Vohs & Tice, 2007). De Ridder and De Witt (2006, p. 3) specifically define self-regulation of health behaviour as "a dynamic motivational system of setting goals, developing and enacting strategies to achieve those goals, appraising progress, and revising goals and strategies accordingly". Self-regulation strategies have proven to affect various health-related behaviours, for example managing

chronic diseases such as asthma (Mellins, Evans, Clark, Zimmerman & Wiesemann, 2015), heart disease (Karademas, 2012) and regulating addictive behaviours such as smoking (Kelly, Zuroff, Foa & Gilbert, 2010).

Although self-regulation unfolds in a sequence of behaviours in response to the context and progress towards goal achievement, specific self-regulation skills are not exclusively linked to specific self-regulation phases. Therefore, the focus will primarily be on different skills or strategies and less on the phases of self-regulation.

Weight loss and various self-regulatory skills. The majority of contemporary weight loss interventions attempt to target both diet and physical activity by improving various self-regulatory skills believed to facilitate these weight loss behaviours (Greaves et al., 2011; Mann et al., 2013; Teixeira et al., 2008; Will et al., 2011). The following self-regulatory skills have proven to significantly promote and facilitate weight loss and maintenance: goal setting (Mann et al., 2013), goal-striving and pursuit (McKee, Ntoumanis & Smith, 2013), self-control (Jasinska et al., 2012), autonomous motivation (Mata et al., 2011), self-monitoring (Gokee-LaRose et al., 2009), and self-efficacy (Shin et al., 2011).

Goal setting and goal planning. Goal setting involves selecting a goal one wishes to pursue (Bagozzi & Edwards, 1998). Goal setting, however, also involves devising an adequate plan in order to motivate and guide oneself to achieve that desired goal or outcome (Schunk, 1990). Goal planning therefore involves constructing plans regarding how one can reach one's goal (Trope & Liberman, 2003). This involves collecting information, setting a realistic timeframe and anticipating future challenges in order to develop possible ways of overcoming them (Turner-Stokes, Rose, Ashford & Singer, 2015).

In terms of weight loss, goal setting (Mann et al., 2013) and goal planning (Michie et al., 2011; Olander et al., 2013; Pagoto, Schneider, Joijc, DeBiasse & Mann, 2013) have

proven to facilitate weight loss by creating a sense of urgency, motivating individuals to make an effort to diminish the discrepancy between their current weight and their desired weight. In the study conducted by Bagozzi and Edwards (1998), participants who were instructed to set goals were found to lose significantly more weight than those participants who did not. Previous research therefore concludes that individuals who set concrete, attainable, proximal and strategic weight loss goals are more likely to maintain their weight loss behavioural changes (Kitsantas, 2000; Mann et al., 2013; Pagoto et al., 2013).

In terms of goal planning, individuals who spend time collecting information about weight loss, who schedule weight loss behaviours (e.g. arranging work-outs at the beginning of the day) and who plan and pre-commit to courses of actions aimed at countering future challenges (e.g. avoiding the route home that runs next to a sweetshop) are considered much more likely to achieve their weight loss goals than those who don't engage in these activities (Maas, DeRidder, De Vet and De Wit, 2012; Mann et al., 2013).

Goal striving and pursuit. Goal striving refers to the process of planning and executing those behaviours required to attain a goal (Mann et al., 2013). Successful goal striving necessitates meeting two crucial self-regulatory challenges. First, individuals must plan and continuously execute those behaviours that directly facilitate goal attainment. Finally, individuals must try to safe-guard esteemed goals from interruption or distraction (Bagozzi & Edwards, 1998; Mann et al., 2013).

Weight loss goals appear to often get abandoned as a result of a lack of adequate goal-striving skills that are necessary for successful goal pursuit (McKee, Ntoumanis & Smith, 2013). Weight loss intervention studies have therefore recently began to focus on improving participants' goal-striving skills by firstly evaluating their goal-setting processes (Napolitano, Hayes, Bennett, Ives & Foster, 2013), assisting them with their goal planning (Jolly et al.,

2011), increasing their intrinsic motivation (Silva et al., 2011), making them aware of the benefits of self-monitoring (Burke et al., 2012) and boosting their self-efficacy (Shin et al., 2011), as these skills are believed to support goal pursuit.

Goal striving, however, often still fails due to the depletion of self-regulatory resources (Carver & Scheier, 2004). The Strength Model of Self-Control (Baumeister et al., 2007) posits that any exertion of self-control will temporarily diminish this resource, resulting in a state of self-regulatory depletion. This state then makes self-control failures probable (Kahan, Polivy & Herman, 2003; Vohs & Heatherton, 2000).

Self-control. Self-control can be defined as an individual's ability to regulate or modify his or her responses in order to meet a particular standard or goal (Carver & Scheier, 2004). Effortful inhibition involves a process by which an individual tries to ward off or overturn thoughts, feelings and behaviours that are in conflict with his or her goals through conscious monitoring and effort (Mann et al., 2013). Self-control and associated inhibition appear to play an important role in achieving weight loss goals (Jasinska et al., 2012). This is specifically true because in the food-rich milieu of Western societies, individuals are exposed on a regular basis to “toxic environments”, where attractive and high-calorie foods are easily available (Papies & Hamstra, 2010).

Individuals who lack the self-control needed to continuously choose healthy options over high-calorie diets are therefore likely to have a greater challenge of losing weight than those who can readily bring their eating tendencies in line with their weight loss goals (Papies & Hamstra, 2010). Self-control is therefore crucial for upholding both a healthy diet (as in counterattacking the temptation to consume fatty dishes) and regular exercise (as in resisting the temptation to rather be inactive) (Nederkoorn, Houben, Hofmann, Roefs & Jansen, 2010).

In addition, those with better self-control exercise more (Moroshko, Brennan & O'Brien, 2011; Lawrence et al., 2015), eat less and loose more weight (Will et al., 2011).

Autonomous motivation. Closely linked to goal pursuit and self-control, motivation plays a crucial role in weight loss. Motivation can broadly be classified into either being external/extrinsic or intrinsic. External motivation, the least self-directed form of motivation, takes place when an individual executes certain behaviours to evade punishment or obtain a reward (Silva et al., 2010). Intrinsic motivation, a highly autonomous form of motivation, in contrast, occurs when an individual engages in behaviour due to its inherent gratification, such as for the enjoyment or challenge it offers (Silva et al., 2010). Autonomous motivation has proven to be a significant predictor of successful self-regulation in the areas of exercise (Fortier, Sweet, O'Sullivan, & Williams, 2007), eating (Pelletier & Dion, 2007) and weight loss (Mata et al., 2011; Teixeira, Silva, Mata, Palmeira & Markland, 2012).

Autonomous motivation can, however, decrease when results do not meet initial expectations or take too long (Teixeira et al., 2012). Various weight loss studies therefore focus on how motivation is increased through boosting autonomy, internal locus and support (Silva et al., 2010; Teixeira et al., 2012; Webber, Tate, Ward & Bowling, 2010). Continuous motivation is also often facilitated through motivational interviewing (MI) (Armstrong et al., 2011). During MI, motivation is boosted by emphasising the discrepancy between present behaviour and preferred outcomes (DiLillo & West, 2011), as well as by reminding individuals of negative facets related to their pre-weight-loss state, thereby intensifying their gratification with their post-weight-loss state (Teixeira et al., 2012; West et al., 2011).

Self-monitoring. Self-monitoring includes directing conscious focus to some part of a person's behaviour and noting some particulars of that behaviour (Kitsantas, 2000). To adjust behaviours, individuals must become aware of their own actions, along with the

circumstances under which they take place (Burke, Wang & Sevick, 2011). Self-monitoring is therefore a key skill in noticing and preventing discrepancies between one's own behavior and goals, and as such, key to effective self-regulation, as it allows individuals to adjust either their behaviour, or their goals (Burke et al., 2011).

The goal of self-monitoring in weight loss studies is usually to enable individuals to notice how their behaviours (e.g., sedentariness or fast food intake) impact on their weight, therefore allowing them to react with suitable behavioural changes or self-corrective behaviours (Burke et al., 2012; Burke et al., 2011; Gokee-LaRose et al., 2009). Examples of self-monitoring approaches in weight loss include self-weighing (Gokee-LaRose et al., 2009), keeping diaries and using web-based tools such as *DietMatePro* and *CalorieKing* to record dietary intake and physical activity (Burke et al., 2011). Frequent self-weighing and dietary self-monitoring have been associated with positive outcomes in weight gain prevention (Akers, Cronett, Salva, Davy & Davy, 2012; Burke et al., 2011; Linde, Jeffrey, French, Pronk, Boyle, 2005), weight loss (Burke et al., 2012; Gokee-LaRose et al., 2009) and weight maintenance studies (Butryn, Phelan, Hill & Wing, 2007; Webber et al., 2010).

Self-efficacy. Self-efficacy can be defined as an individual's belief in his or her ability to make a behavioural change or to exhibit a particular behaviour required to achieve a specific goal, even when things get challenging (Bagozzi & Edwards, 1998; Byrne, Barry & Petry, 2012; Roach et al., 2003; Shin et al., 2011). Self-efficacy governs whether a person will even attempt to initiate a behavioural change, as people have a habit of avoiding circumstances that they believe will surpass their ability to cope efficiently (Kitsantas, 2000). Self-efficacy also determines the extent to which a person will pursue a behavioural adjustment in the midst of difficulties. Therefore, if individuals perceive themselves as ultimately failing, they are unlikely to want to persist in their attempts to uphold behavioural changes (Kitsantas, 2000).

Self-efficacy has been identified as a significant mediator in successful weight loss and weight loss maintenance (Linde, Rothman, Baldwin & Jeffrey, 2006; Martin, Dutton & Brantley, 2004; Schwarzer & Fuchs, 1995; Shin et al., 2011). More specifically, studies examining the link between self-efficacy and weight change have suggested that greater baseline self-efficacy is related to more weight loss during treatment (Shin et al., 2011; Walpole, Dettmer, Morrongiello, McCrindle & Hamilton, 2011).

Because self-efficacy is considered so pivotal for weight loss efforts, various researchers have attempted to increase this self-regulatory skill by specifically promoting participants' social support networks (Man et al., 2013). Social support, however, does not only have the potential to facilitate self-efficacy, but also various other self-regulatory skills, especially in terms of weight loss (Annesi, 2011).

Social Support

Social support gained popularity in 1970s mental health literature, when Cobb (1976) suggested that the meaning of social support was to communicate to an individual that he or she is loved, valued, esteemed and cared for, by others. Although no universally accepted definition of social support exists (Scheurer, Choudhry, Swanton, Matlin & Shrank, 2012), it can broadly be defined as any kind of social behaviour that supports an individual in achieving his or her desired goals (Duncan, Duncan & Strycker, 2005; Taylor, Baranowski & Sallis, 1994). In addition, it involves the exchanging of resources via interpersonal transactions, which is intended by the provider to enhance the health or wellbeing of the recipient (Heaney & Israel, 2008). Social support can take different forms and operate on different levels, which explain its profound impact on an individual's ability to cope and endure in the face of challenges and adverse circumstances (Sarason, 2013).

Based on research over the past four decades (cf. Cobb 1976; Cohen & Wills, 1985; Graven & Grant, 2014; House, 1981; Jacobsen, 1986; Maier, Laumer, Eckhardt & Weitzel, 2015; Rueger, Malecki, Pyun, Aycock & Coyle, 2016) four broad types of social support can be described: *emotional support* refers to the promotion of a sense of comfort, and feeling respected and loved; *informational support* provides information, knowledge and advice that assist others in adjusting to change; *instrumental* or *tangible support* refers to the provision of materials and services that assist individuals to problem-solve; and finally, *appraisal support* provides evaluative feedback to others to help them understand themselves better.

Social support and weight loss. Several studies have demonstrated a relationship between social support and improved health outcomes and health-related behaviours, including smoking cessation (Westmaas, Bontemps-Jones & Bauer, 2010), cardiovascular disease prevention (Barth, Schneider & Von Känel, 2010) and diabetes treatment (Schiøtz, Bøgelund, Almdal, Jensen & Willaing, 2012). Wing and Jeffrey (1999) were, however, the first to exhibit the significance of social support in weight loss attempts. They recruited participants, including three members of their social network, who all aimed to lose weight. These participants were instructed to provide one another with increased amounts of encouragement. In the end, they were all considerably more likely to complete the study, maintain their weight loss and meet their weight loss goals, compared to those who participated in the study without social support. Since then, cross-sectional, cohort and intervention studies have continued to confirm that social support facilitates initial weight loss and weight loss maintenance (Barnes et al., 2007; Elfhag & Rössner, 2005; Gallagher, Jakicic, Napolitano & Marcus, 2006; Thomas et al., 2008; Wing & Jeffery, 1999). Participants themselves have also expressed their desire for support when trying to lose weight and have mentioned the difficulties they face when attempting to lose weight alone

(Carver & Scheier, 2004; Sanford, 2010). Various participants in weight loss studies have therefore identified social support as crucial to their successes (Thomas et al., 2008).

Research has also provided evidence specifically for the manner in which the four different types of social support alluded to earlier, may affect, in a significant way, an individual's weight loss efforts. For instance, emotional support offered through an encouraging running partner (Maitland & Chalmers, 2011), informational support provided by a knowledgeable fitness instructor regarding weight loss (Ballantine & Stephenson, 2011), tangible support given by a friend offering one of her old pieces of exercising equipment (Livhits et al., 2011) and appraisal support offered by a coach giving feedback regarding one's weight loss progress (Christian et al., 2011) have all proven to facilitate an individual's weight loss efforts (Elfhag & Rössner, 2005; Sanford, 2010; Thomas, Hyde, Karunaratne, Kausman & Komesaroff, 2008).

Online social support networks and weight loss. Online support networks, which include social media sites, have become an increasingly common way for individuals to seek emotional and informational support for issues surrounding weight loss (Pagoto, Schneider,Oleski, Smith & Bauman, 2014). These networks can be defined as low-cost electronic tools offering individuals the opportunity to meet virtually in order to find information, share experiences, ask questions and receive emotional support regarding health care issues such as weight loss (Eysenbach, Powell, Englesakis, Rizo & Stern, 2004).

The specific reasons individuals, aiming to lose weight, give for using online support networks vary, but include the ease of communicating with other users, collecting health-related information from experts or peers and developing strong community connections with other individuals also aiming to lose weight (Branscum, Ling & Wang, 2014). In addition, they report seeking reassurance, friendship, support and acceptance

through their online weight loss support networks (Pagoto et al., 2014). Social network users seem to support one another's weight loss efforts through circulating weight loss information, motivational and weight transformation posts, recipes and exercise routines (Hales, Davidson & Turner-McGrievy, 2014; Turner-McGrievy & Beets, 2015). They often also share their difficulties, dish choices and weight gains and they mention that they pick up ideas from one another regarding dealing with their weight loss problems (Sanford, 2010). Online social support networks therefore appear to offer individuals many benefits, including convenience (e.g. 24-hour availability and accessibility for users), potential reach (capacity to reach a large amount of individuals who are experiencing similar problems) and relatively low cost (Branscum et al., 2014).

Another reason for using online support networks is that in-person friends often provide judgment about their weight, which undermines their potential for effective social support. Online friends therefore often appear to be more supportive than in-person friends regarding weight loss initiatives (Sanford, 2010).

Online social support and the facilitation of self-regulation. In-person support has been shown and suggested to facilitate weight loss by affecting certain self-regulatory skills, for example goal pursuit (Fitzsimons & Bargh, 2003), action planning (Sanford, 2010) self-monitoring and self-efficacy beliefs (Eastin & LaRose, 2005; Sanford, 2010). In contrast, Teixeira et al. (2008) indicate that online support networks have the potential to boost self-efficacy by enhancing confidence through esteem support (e.g. encouraging comments highlighting users' previous weight loss successes) and competence through informational support (e.g. sharing of certain recipes, exercise routines and testimonies). The authors suggest that enhancing confidence and competence regarding health behaviours appears to be helpful in regulating those behaviours and overcoming barriers.

Online social support is also thought to affect self-regulation through influencing weight loss motivation. Leahey, LaRose, Fava and Wing (2011) suggest that weight loss motivation can spread by a process of social contagion through online social space. Sanford (2010) further indicates that the consequences of being held accountable to readers online, including eating right, posting regularly, weighing in, and exercising, make them feel more under pressure to succeed, which helps them in the long run. These behaviours seem to relate to self-monitoring, one of the most important self-regulatory skills for weight loss and –maintenance, which involves the systematic observation and recording of eating and exercise behaviours (Wing, Tate, Gorin, Raynor & Fava, 2006). Lastly, online support networks have also provided members with the opportunities for social comparison. When users post photographs of their weight loss, other users compare their own weight-related behaviours, experiences and progress to such posts (Knobloch-Westerwick, 2015). Such self-evaluations have proved to facilitate an individual's self-regulatory weight loss behaviours (Dahl, Hales & Turner-McGrievy, 2016).

Relevance of the Study

Given the grave consequences related to weight gain during young adulthood, effective weight loss interventions are vital (Neumark-Sztainer et al., 2011). Despite this urgency, few interventions have been designed to target this group specifically, and very few young people attend formal weight loss programmes. Therefore little is known about the type of approach best suited for this critical period in the developmental lifespan (Gokee-LaRose et al., 2009; Poobalan et al., 2010).

Although there is some evidence to suggest that in-person social support may increase the ability of individuals with weight loss goals to self-regulate more efficiently with time, it is not yet clear how online social support specifically contributes to changes in self-regulation

(Branscum et al., 2014). More specifically, it is not known how the possible contribution of online support is perceived by participants themselves, and to what extent the role played by online support includes both positive and negative aspects (Eysenbach et al., 2004). Therefore, although there is evidence that online social support has the potential to allude to self-regulation of weight loss behaviours, a deeper understanding is needed of exactly how online social support is perceived to influence, promote or mediate the enactment of health-related behaviours (i.e. weight loss) through self-regulation (Branscum et al., 2014). Conducting research of this nature is critical, as a large amount of descriptive studies on online support groups suggests that these groups have the greatest impact on health-related behaviours, including weight control activities, as opposed to any other available source on the Internet (Eysenbach et al., 2004). The high amount of social support provided to users of online weight loss support groups appears to predict the engagement in imperative weight control behaviours (Chen, 2014; Hwang et al., 2010; Pagoto et al., 2014; Sanford, 2010). The manner in which this is achieved, however, remains equivocal (Branscum et al., 2014).

The value of exploring the perceived contribution of online social support, in this case, is that it would allow the researcher to gain a better qualitative understanding of the personal, idiosyncratic motives of why and how online support is used, as well as the extent to which participants themselves express any specific aspects related to self-regulation. Results may also lay the foundation for future research endeavours, specifically on understanding the role that social media plays in health behaviours such as weight loss. Recommendations could also be made to aid health practitioners and psychologists in their understanding of how online social support may be impacting on individuals' perceived self-regulatory weight loss behaviours, as well as ways in which to make use of online support as additional tools in weight loss programmes.

Aims

The aims of this study were therefore to explore:

1. the reasons why participants use online social networks to obtain social support;
2. the perceptions of the contribution, positive or negative, these support networks give regarding their weight loss goals; and
3. how and to what extent their perceptions regarding the contribution of social support networks imply changes in the self-regulation of their weight loss goals.

References: Chapter 1

Akers, J. D., Cornett, R. A., Savla, J. S., Davy, K. P., & Davy, B. M. (2012). Daily self-monitoring of body weight, step count, fruit/vegetable intake, and water consumption: a feasible and effective long-term weight loss maintenance approach. *Journal of the Academy of Nutrition and Dietetics*, *112*(5), 685-692.

Annesi, J. J. (2011). Self-regulatory skills usage strengthens the relations of self-efficacy for improved eating, exercise, and weight in the severely obese: toward an explanatory model. *Behavioral Medicine*, *37*(3), 71-76.

Armstrong, M. J., Mottershead, T. A., Ronksley, P. E., Sigal, R. J., Campbell, T. S., & Hemmelgarn, B. R. (2011). Motivational interviewing to improve weight loss in overweight and/or obese patients: a systematic review and meta-analysis of randomized controlled trials. *Obesity Reviews*, *12*(9), 709-723.

Bagozzi, R. P., & Edwards, E. A. (1998). Goal setting and goal pursuit in the regulation of body weight. *Psychology and Health*, *13*(4), 593-621.

Ballantine, P. W., & Stephenson, R. J. (2011). Help me, I'm fat! Social support in online weight-loss networks. *Journal of Consumer Behaviour*, *10*(6), 332-337.

Barnes, A. S., Goodrick, G. K., Pavlik, V., Markesino, J., Laws, D. Y., & Taylor, W. C. (2007). Weight-loss maintenance in African–American women: Focus group results and questionnaire development. *Journal of General Internal Medicine*, *22*(7), 915-922.

Barth, J., Schneider, S., & Von Känel, R. (2010). Lack of social support in the etiology and the prognosis of coronary heart disease: a systematic review and meta-analysis. *Psychosomatic Medicine*, *72*(3), 229-238.

Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, *16*(6), 351-355.

Branscum, P., Ling, C., & Wang, X. (2014). Social support and connectedness as predictors of weight control behaviours in online communities. *American Journal of Health Studies*, *29*(1), 24-33.

Brownell, K. D. (2010). The humbling experience of treating obesity: Should we persist or desist? *Behaviour Research and Therapy*, *48*(8), 717-719.

Burke, L. E., Styn, M. A., Sereika, S. M., Conroy, M. B., Ye, L., Glanz, K., ... & Ewing, L. J. (2012). Using health technology to enhance self-monitoring for weight loss: a randomized trial. *American Journal of Preventive Medicine*, *43*(1), 20-26.

Burke, L. E., Wang, J., & Sevick, M. A. (2011). Self-monitoring in weight loss: a systematic review of the literature. *Journal of the American Dietetic Association*, *111*(1), 92-102.

Butler, S. M., Black, D. R., Blue, C. L., & Gretebeck, R. J. (2004). Change in diet, physical activity, and body weight in female college freshman. *American Journal of Health Behavior*, *28*(1), 24-32.

Butryn, M. L., Phelan, S., Hill, J. O., & Wing, R. R. (2007). Consistent self-monitoring of weight: A key component of successful weight loss maintenance. *Obesity*, *15*(12), 3091-3096.

Byrne, S., Barry, D., & Petry, N. M. (2012). Predictors of weight loss success. Exercise vs. dietary self-efficacy and treatment attendance. *Appetite*, *58*(2), 695-698.

Carver, C. S., & Scheier, M. F. (2004). *Self-Regulation of Action and Affect.* Handbook of self-regulation: Research, theory, and applications. Guildford Press: London.

Catenacci, V., Mitchell, N., Wyatt, H. R., & Hill, J. O. (2011). Obesity: overview of an epidemic. *The Psychiatric Clinics of North America*, *34*(4), 717-730.

Chen, Z. (2014). The Role of Informal Online Social Support in Facilitating Long-Term Weight Management: An Online Longitudinal Phenomenological Study.

Christian, J. G., Byers, T. E., Christian, K. K., Goldstein, M. G., Bock, B. C., Prioreschi, B., & Bessesen, D. H. (2011). A computer support program that helps clinicians provide patients with metabolic syndrome tailored counseling to promote weight loss. *Journal of the American Dietetic Association*, *111*(1), 75-83.

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, *38*(5), 300-314.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310-317.

Dahl, A. A., Hales, S. B., & Turner-McGrievy, G. M. (2016). Integrating social media into weight-loss interventions. *Current Opinion in Psychology*, *9*, 11-15.

De Ridder, D. T. D., & De Witt, J. B. F. (2006). Self-regulation in Health Behavior: Concepts, Theories, and Central Issues. In D. T. D. de Ridder & J. B. F. de Witt, *Self-regulation in Health Behavior* (pp. 1-24). Chichester: John Wiley.

DiLillo, V., & West, D. S. (2011). Motivational interviewing for weight loss. *Psychiatric Clinics*, *34*(4), 861-869.

Duncan, S. C., Duncan, T. E., & Strycker, L. A. (2005). Sources and types of social support in youth physical activity. *Health Psychology*, *24*(1), 3-10.

Eastin, M. S., & LaRose, R. (2005). Alt. support: Modeling social support online. *Computers in Human Behavior*, *21*(6), 977-992.

Elfhag, K., & Rössner, S. (2005). Who succeeds in maintaining weight loss? A conceptual review of factors associated with weight-loss maintenance and weight regain. *Obesity Reviews*, *6*(1), 67-85.

Eysenbach, G., Powell, J., Englesakis, M., Rizo, C., & Stern, A. (2004). Health related virtual communities and electronic support groups: systematic review of the effects of online peer to peer interactions. *British Medical Journal*, *328*(7449), 1166-1180.

Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of you: non-conscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology*, *84*(1), 148- 163.

Fortier, M. S., Sweet, S. N., O'Sullivan, T. L., & Williams, G. C. (2007). A self-determination process model of physical activity adoption in the context of a randomized controlled trial. *Psychology of Sport and Exercise*, *8*(5), 741-757.

Gallagher, K. I., Jakicic, J. M., Napolitano, M. A., & Marcus, B. H. (2006). Psychosocial factors related to physical activity and weight-losing overweight women. *Medicine and Science in Sports and Exercise*, *38*(5), 971-980.

Gokee-LaRose, J., Gorin, A. A., & Wing, R. R. (2009). Behavioral self-regulation for weight loss in young adults: A randomized controlled trial. *International Journal of Behavioral Nutrition and Physical Activity*, *6*(1),10-21.

Gokee-LaRose, J. G., Leahey, T. M., Hill, J. O., & Wing, R. R. (2013). Differences in motivations and weight loss behaviors in young adults and older adults in the National Weight Control Registry. *Obesity*, *21*(3), 449-453.

Graham, M. A., & Jones, A. L. (2002). Freshman 15: Valid theory or harmful myth? *Journal of American College Health*, *50*(4), 171-173.

Graven, L. J., & Grant, J. S. (2014). Social support and self-care behaviors in individuals with heart failure: an integrative review. *International Journal of Nursing Studies*, *51*(2), 320-333.

Greaves, C. J., Sheppard, K. E., Abraham, C., Hardeman, W., Roden, M., Evans, P. H., & Schwarz, P. (2011). Systematic review of reviews of intervention components associated with increased effectiveness in dietary and physical activity interventions. *Public Health*, *11*(1), 119-138.

Hales, S. B., Davidson, C., & Turner-McGrievy, G. M. (2014). Varying social media post types differentially impacts engagement in a behavioral weight-loss intervention. *Translational Behavioral Medicine*, *4*(4), 355-362.

Harris, K. M., Gordon-Larsen, P., Chantala, K., & Udry, J. R. (2006). Longitudinal trends in race/ethnic disparities in leading health indicators from adolescence to young adulthood. *Archives of Paediatrics & Adolescent Medicine*, 160, 74-81.

Heaney, C. A., & Israel, B. A. (2008). Social networks and social support. *Health Behavior and Health Education: Theory, Research, and Practice*, *4*, 189-210.

House, J. S. (1981). *Work stress and social support*. Addison-Wesley, Reading, MA.

Hwang, K. O., Ottenbacher, A. J., Green, A. P., Cannon-Diehl, M. R., Richardson, O., Bernstam, E. V., & Thomas, E. J. (2010). Social support in an Internet weight loss community. *Journal of Informatics, 79*(1), 5-13.

Jacobson, D. E. (1986). Types and timing of social support. *Journal of health and Social Behavior*, 250-264.

Jasinska, A. J., Yasuda, M., Burant, C. F., Gregor, N., Khatri, S., Sweet, M., & Falk, E. B. (2012). Impulsivity and inhibitory control deficits are associated with unhealthy eating in young adults. *Appetite*, *59*(3), 738-747.

Jeffery, R. W., Wing, R. R., Sherwood, N. E., & Tate, D. F. (2003). Physical activity and weight loss: does prescribing higher physical activity goals improve outcome? *The American Journal of Clinical Nutrition*, *78*(4), 684-689.

Jolly, K., Lewis, A., Beach, J., Denley, J., Adab, P., Deeks, J. J., ... & Aveyard, P. (2011). Comparison of range of commercial or primary care led weight reduction programmes with minimal intervention control for weight loss in obesity: Lighten Up randomised controlled trial. *British Medical Journal*, *343*, 1-16.

Kahan, D., Polivy, J., & Herman, C. P. (2003). Conformity and dietary disinhibition: A test of the ego-strength model of self-regulation. *International Journal of Eating Disorders*, *33*(2), 165-171.

Karademas, E. C. (2012) Conditional indirect relations of cardiac patients' subjective health to optimism through illness representations: a self-regulation circuit. *Journal of Health Psychology*, 17(36). DOI: 10.1177/1359105311405554

Kelly, A. C., Zuroff, D. C., Foa, C. L., & Gilbert, P. (2010). Who benefits from training in self-compassionate self-regulation? A study of smoking reduction. *Journal of Social and Clinical Psychology*, *29*(7), 727-755.

Kitsantas, A. (2000). The role of self-regulation strategies and self-efficacy perceptions in successful weight loss maintenance. *Psychology and Health*, *15*(6), 811-820.

Knobloch-Westerwick, S. (2015). Thinspiration: Self-improvement versus self-evaluation social comparisons with thin-ideal media portrayals. *Health communication*, *30*(11), 1089-1101.

Lawrence, N. S., O'Sullivan, J., Parslow, D., Javaid, M., Adams, R. C., Chambers, C. D., ... & Verbruggen, F. (2015). Training response inhibition to food is associated with weight loss and reduced energy intake. *Appetite*, *95*, 17-28.

Leahey, T. M., LaRose, J. G., Fava, J. L., & Wing, R. R. (2011). Social influences are associated with BMI and weight loss intentions in young adults. *Obesity*, *19*(6), 1157-1162.

Linde, J.A., Jeffrey, R.W., French, S.A., Pronk, N.P., & Boyle, R.G. (2005). Self-weighing in weight gain prevention and weight loss trials. *Annuals of Behavioural Medicine, 30, 2010-2016.*

Linde, J. A., Rothman, A. J., Baldwin, A. S., & Jeffery, R. W. (2006). The impact of self-efficacy on behavior change and weight change among overweight participants in a weight loss trial. *Health Psychology*, *25*(3), 282-291.

Livhits, M., Mercado, C., Yermilov, I., Parikh, J. A., Dutson, E., Mehran, A., ... & Gibbons, M. M. (2011). Is social support associated with greater weight loss after bariatric surgery? A systematic review. *Obesity Reviews*, *12*(2), 142-148.

Maas, J., De Ridder, D. T., De Vet, E., & De Wit, J. B. (2012). Do distant foods decrease intake? The effect of food accessibility on consumption. *Psychology & Health*, *27*(2), 59-73.

Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2015). Giving too much social support: social overload on social networking sites. *European Journal of Information Systems*, *24*(5), 447-464.

Maitland, J., & Chalmers, M. (2011, May). Designing for peer involvement in weight management. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 315-324). ACM.

Mann, T., De Ridder, D., & Fujita, K. (2013). Self-regulation of health behavior: social psychological approaches to goal setting and goal striving. *Health Psychology*, *32*(5), 487-498.

Martin, P. D., Dutton, G. R., & Brantley, P. J. (2004). Self-Efficacy as a predictor of weight change in African-American women. *Obesity*, *12*(4), 646-651.

Mata, J., Silva, M. N., Vieira, P. N., Carraça, E. V., Andrade, A. M., Coutinho, S. R., ... & Teixeira, P. J. (2011). Motivational "spill-over" during weight control: Increased self-determination and exercise intrinsic motivation predict eating self-regulation. *Health Psychology*, *28*(6), 709-716.

McKee, H., Ntoumanis, N., & Smith, B. (2013). Weight maintenance: Self-regulatory factors underpinning success and failure. *Psychology & Health*, *28*(10), 1207-1223.

Mellins, R.B., Evans, D., Clark, N., Zimmerman, B., & Wiesemann, S. (2015). Developing and communicating a long-term treatment plan for asthma. *American Family Physician*, 91-98.

Michie, S., Ashford, S., Sniehotta, F. F., Dombrowski, S. U., Bishop, A., & French, D. P. (2011). A refined taxonomy of behaviour change techniques to help people change

their physical activity and healthy eating behaviours: the CALO-RE taxonomy. *Psychology & Health*, *26*(11), 1479-1498.

Miller, G. A., Galanter, E., & Pribram, K. H. (1960). Plans and the structure of behavior. *Operational Research Quarterly*, *1*9(3), 338-340.

Moroshko, I., Brennan, L., & O'Brien, P. (2011). Predictors of dropout in weight loss interventions: a systematic review of the literature. *Obesity Reviews*, *12*(11), 912-934.

Napolitano, M. A., Hayes, S., Bennett, G. G., Ives, A. K., & Foster, G. D. (2013). Using Facebook and text messaging to deliver a weight loss program to college students. *Obesity*, *21*(1), 25-31.

Nederkoorn, C., Houben, K., Hofmann, W., Roefs, A., & Jansen, A. (2010). Control yourself or just eat what you like? Weight gain over a year is predicted by an interactive effect of response inhibition and implicit preference for snack foods. *Health Psychology*, *29*(4), 389-393.

Nelson, M. C., Story, M., Larson, N. I., Neumark-Sztainer, D., & Lytle, L. A. (2008). Emerging adulthood and college-aged youth: an overlooked age for weight-related behavior change. *Obesity*, *16*(10), 2205-2211.

Neumark-Sztainer, D., Wall, M., Larson, N. I., Eisenberg, M. E., & Loth, K. (2011). Dieting and disordered eating behaviors from adolescence to young adulthood: findings from a 10-year longitudinal study. *Journal of the American Dietetic Association*, *111*(7), 1004-1011.

Niemeier, H. M., Raynor, H. A., Lloyd-Richardson, E. E., Rogers, M. L., & Wing, R. R. (2006). Fast food consumption and breakfast skipping: predictors of weight gain

from adolescence to adulthood in a nationally representative sample. *Journal of Adolescent Health*, *39*(6), 842-849.

Olander, E. K., Fletcher, H., Williams, S., Atkinson, L., Turner, A., & French, D. P. (2013). What are the most effective techniques in changing obese individuals' physical activity self-efficacy and behaviour: a systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, *10*(1), 29-36.

Pagoto, S., Schneider, K., Jojic, M., DeBiasse, M., & Mann, D. (2013). Evidence-based strategies in weight-loss mobile apps. *American Journal of Preventive Medicine*, *45*(5), 576-582.

Pagoto, S. L., Schneider, K. L., Oleski, J., Smith, B., & Bauman, M. (2014). The adoption and spread of a core-strengthening exercise through an online social network. *Journal of Physical Activity & Health*, *11*(3), 648-653.

Papies, E. K., & Hamstra, P. (2010). Goal priming and eating behavior: enhancing self-regulation by environmental cues. *Health Psychology*, *29*(4), 384-388.

Pelletier, L. G., & Dion, S. C. (2007). An examination of general and specific motivational mechanisms for the relations between body dissatisfaction and eating behaviors. *Journal of Social and Clinical Psychology*, *26*(3), 303-333.

Poobalan, A. S., Aucott, L. S., Precious, E., Crombie, I. K., & Smith, W. C. S. (2010). Weight loss interventions in young people (18 to 25 year olds): A systematic review. *Obesity Reviews*, *11*(8), 580-592.

Roach, J. B., Yadrick, M. K., Johnson, J. T., Boudreaux, L. J., Forsythe, W. A., & Billon, W. (2003). Using self-efficacy to predict weight loss among young adults. *Journal of the American Dietetic Association*, *103*(10), 1357-1359.

Rueger, S. Y., Malecki, C. K., Pyun, Y., Aycock, C., & Coyle, S. (2016). A meta-analytic review of the association between perceived social support and depression in childhood and adolescence. *Psychological Bulletin*, 1-151.

Sanford, A. A. (2010). "I can air my feelings instead of eating them". Blogging as social support for the morbidly obese. *Communication Studies*, *61*(5), 567-584.

Sarason, I. G. (Ed.). (2013). *Social support: Theory, Research and Applications* (Vol. 24). Springer Science & Business Media.

Scheurer, D., Choudhry, N., Swanton, K. A., Matlin, O., & Shrank, W. (2012). Association between different types of social support and medication adherence. *The American Journal of Managed Care*, *18*(12), 461-467.

Schiøtz, M. L., Bøgelund, M., Almdal, T., Jensen, B. B., & Willaing, I. (2012). Social support and self-management behaviour among patients with Type 2 diabetes. *Diabetic Medicine*, *29*(5), 654-661.

Schunk, D. H. (1990). Goal setting and self-efficacy during self-regulated learning. *Educational Psychologist*, *25*(1), 71-86.

Schwarzer, R., & Fuchs, R. (1995). Changing risk behaviors and adopting health behaviors: The role of self-efficacy beliefs. *Self-efficacy in Changing Societies*, 259-288.

Shin, H., Shin, J., Liu, P. Y., Dutton, G. R., Abood, D. A., & Ilich, J. Z. (2011). Self-efficacy improves weight loss in overweight/obese postmenopausal women during a 6-month weight loss intervention. *Nutrition Research*, *31*(11), 822-828.

Silva, M. N., Markland, D., Carraça, E. V., Vieira, P. N., Coutinho, S. R., Minderico, C. S., ... & Teixeira, P. J. (2011). Exercise autonomous motivation predicts 3-yr weight loss in women. *Medicine & Science in Sports & Exercise*, *43*(4), 728-737.

Silva, M. N., Vieira, P. N., Coutinho, S. R., Minderico, C. S., Matos, M. G., Sardinha, L. B., & Teixeira, P. J. (2010). Using self-determination theory to promote physical activity and weight control: a randomized controlled trial in women. *Journal of Behavioral Medicine*, *33*(2), 110-122.

Taylor, W. C., Baranowski, T., & Sallis, J. F. (1994). Family determinants of childhood physical activity: a social-cognitive model. In R. K. Dishman (Ed.), *Advances in Exercise Adherence* (pp. 319-342). Champaign, IL, England: Human Kinetics.

Teixeira, P. J., Going, S. B., Houtkooper, L. B., Metcalfe, L. L., Blew, R. M., ... & Lohman, T. G. (2008). Maintenance of Weight-loss in overweight middle-aged women through the internet. *Obesity*, *16*(5), 1052-1060.

Teixeira, P. J., Silva, M. N., Mata, J., Palmeira, A. L., & Markland, D. (2012). Motivation, self-determination, and long-term weight control. *International Journal of Behavioral Nutrition and Physical Activity*, *9*(1), 22-34.

Thomas, S. L., Hyde, J., Karunaratne, A., Kausman, R., & Komesaroff, P. A. (2008). "They all work... when you stick to them": A qualitative investigation of dieting, weight loss, and physical exercise, in obese individuals. *Nutrition Journal*, *7*(1), 1-17.

Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review*, *110*(3), 403-421.

Truesdale, K. P., Stevens, J., Lewis, C. E., Schreiner, P. J., Loria, C. M., & Cai, J. (2006). Changes in risk factors for cardiovascular disease by baseline weight status in young

adults who maintain or gain weight over 15 years: the CARDIA study. *International Journal of Obesity*, *30*(9), 1397-1407.

Turner-McGrievy, G. M., & Beets, M. W. (2015). Tweet for health: using an online social network to examine temporal trends in weight loss-related posts. *Translational Behavioral Medicine*, *5*(2), 160-166.

Turner-Stokes, L., Rose, H., Ashford, S., & Singer, B. (2015). Patient engagement and satisfaction with goal planning: Impact on outcome from rehabilitation. *International Journal of Therapy & Rehabilitation*, *22*(5), 210-216.

Voelker R. (2004). Stress, sleep loss, and substance abuse create potent recipe for college depression. *Journal of the American Medical Association, 291,* 2177–2179.

Vohs, K. D., & Heatherton, T. F. (2000). Self-regulatory failure: A resource-depletion approach. *Psychological Science*, *11*(3), 249-254.

Walpole, B., Dettmer, E., Morrongiello, B., McCrindle, B., & Hamilton, J. (2011). Motivational interviewing as an intervention to increase adolescent self-efficacy and promote weight loss: methodology and design. *Public Health*, *11*(1), 459-467.

Wansink, B., & Chandon, P. (2006*).* Can "low-fat" nutrition labels lead to obesity? *Journal of Marketing Research*, *43*(4), 605-617.

Wardle, J., & Griffith, J. (2001). Socioeconomic status and weight control practices in British adults. *Journal of Epidemiology & Community Health*, *55*(3), 185-190.

Wardle, J., Haase, A. M., & Steptoe, A. (2006). Body image and weight control in young adults: International comparisons in university students from 22 countries. *International Journal of Obesity*, *30*(4), 644-655.

Webber, K. H., Tate, D. F., Ward, D. S., & Bowling, J. M. (2010). Motivation and its relationship to adherence to self-monitoring and weight loss in a 16-week Internet behavioral weight loss intervention. *Journal of Nutrition Education and Behavior*, *42*(3), 161-167.

Weinsier, R. L., Hunter, G. R., Desmond, R. A., Byrne, N. M., Zuckerman, P. A., & Darnell, B. E. (2002). Free-living activity energy expenditure in women successful and unsuccessful at maintaining a normal body weight. *The American Journal of Clinical Nutrition*, *75*(3), 499-504.

Wengreen, H. J., & Moncur, C. (2009). Change in diet, physical activity, and body weight among young-adults during the transition from high school to college. *Nutrition Journal*, *8*(1), 32-43.

West, D. S., Gorin, A. A., Subak, L. L., Foster, G., Bragg, C., Hecht, J., ... & Wing, R. R. (2011). A motivation-focused weight loss maintenance program is an effective alternative to a skill-based approach. *International Journal of Obesity*, *35*(2), 259-269.

Westmaas, J. L., Bontemps-Jones, J., & Bauer, J. E. (2010). Social support in smoking cessation: reconciling theory and evidence. *Nicotine & Tobacco Research*, *12*(7), 695-707.

Will, C.A., Ehrlinger, J., Alquist, J. L., Conlon, K. E., Baumeister, R. F., Schatschneider, C., & Dutton, G. R. (2011). High trait self-control predicts positive health behaviors and success in weight loss. *Journal of Health Psychology*, *16*(5), 750-759.

Wing, R. R., & Jeffery, R. W. (1999). Benefits of recruiting participants with friends and increasing social support for weight-loss and maintenance. *Journal of Consulting and Clinical Psychology*, *67*(1), 132-138.

Wing, R. R., Tate, D. F., Gorin, A. A., Raynor, H. A., & Fava, J. L. (2006). A self-regulation program for maintenance of weight loss. *New England Journal of Medicine*, *355*(15), 1563-1571.

CHAPTER 2: ARTICLE

Perceived impact of online social support on self-regulatory weight loss behaviour in a sample of South African young adults

2.1 Guidelines for authors: *South African Journal of Psychology*

This article will be submitted for possible publication in the *South African Journal of Psychology*. Therefore, first a summary of key aspects to consider regarding author guidelines will be presented, followed by the article written.

Author guidelines

(Summary of Key Aspects to Consider)

Description

The *South African Journal of Psychology* forms part of SAGE Publications, which is a unique collection of Southern African and African journal titles. The *South African Journal of Psychology* publishes contributions in English from all fields of psychology. The journal places emphasis on empirical research; however, theoretical and methodological papers, review articles, short communications, reviews and letters containing fair commentary are also accepted. Specific articles, relevant to the African context, that aim to address psychological issues of social change and development, are prioritised.

Instructions for authors

General

In general, the manuscript must be written in English, consisting of a high grammatical standard and following specific technical guidelines stipulated in the submission guidelines. The American Psychological Association 6th edition is followed in preparation of

the manuscript. The research presented in the manuscript should be consistent with generally accepted standards of ethical practice, as presented by the Committee on Publication Ethics (COPE). The journal aims to publish ethically sound, accurate and transparent research.

Manuscript style

The *South African Journal of Psychology* conforms to the SAGE house style stipulated in the guidelines of SAGE UK House Style. The following format is required to be used for research-based manuscripts:

- No heading is required for the introductory/literature review.
- The heading/subheadings required in the manuscript is as follows: Method (Participants; Instruments; Procedure; Ethical considerations; Data analysis (which includes the statistical techniques or computerised analytic programmes, if applicable); Results; Discussion; Conclusion; References.
- It is important to include the name of the institution that granted the ethical approval for the study under the "Ethical considerations" heading.

Format. The journal only accepts electronic files that adheres to the stipulated guidelines. The format of the manuscript must be either Microsoft Word or LaTeX files. Templates are available on the Manuscript Submission Guidelines page of the Author Gateway. All manuscripts should be formatted to print out double-spaced throughout and with a minimum of 3cm for left- and right-hand margins and 5cm at head and foot. The text should be standard 12 points. The specifically tailored Word template and guidelines are available to assist with the format and structure of the article, and include useful general advice and Word tips.

Keywords and abstracts. The abstract should be a maximum of 250 words and is important for readers to be able to find the article online. The abstract must be written in such a way that it provides the necessary information/data to a search engine for it to be able to find the

article and rank it in the search results page. Six alphabetical keywords should be included in the abstract and highlighted throughout. The key descriptive phrases should be repeated and focused in the abstract. The SAGE's Journal Author Gateway Guidelines will enable the author to write an abstract and select the important keywords by visiting the *How to Help Readers Find Your Article Online.*

Artwork, figures and other graphics. The guidelines for the use of illustrations, pictures and graphs in electronic format are clearly stated in the SAGE's *Manuscript Submission Guidelines*.

Reference style. The journal adheres to the APA reference style and the specific APA guidelines are available to ensure that the manuscript conforms to the reference style. It is the authors' responsibility to produce an accurate reference list. The references should be listed alphabetically at the end of the article and in-text references must be referred to by name and year in parentheses. The references should include the following:

- last names and initials of all authors,
- year published (in brackets)
- title of article
- name of publication
- volume number
- and inclusive pages

The Publication Manual of the American Psychological Association, 6th Edition can be consulted for accurate formatting of reference. The style and punctuation of the references should conform to the APA style. Illustrated below are examples of different styles:

- Journal Article

  Silverstein, M., & Marenco, A. (2001). How Americans enact the grandparent role across the family life course. *Journal of Family Issues*, *22*(4), 493-522.

- Book

  Johnson, C. L. (1988). Ex familia: Grandparents, parents, and children adjust to divorce. Rutgers University Press.

English language editing services. The language used in the manuscript needs to be accurate and of sufficient quality to be understood by editors and reviewers during the assessment process. The author can consider the following:

- A colleague whose first language is English can review the manuscript for clarity.
- Visit the English language tutorial to review the manuscript.
- Professional editing services can be utilised to review and edit the manuscript.
- SAGE Language Services can be considered to format the manuscript to fit the journal's specifications and standards.

Note to examiners: APA guidelines state that tables and figures should be attached as addenda to manuscripts, with a clear indication in text where they should be inserted. However, to make access easier, this guideline was not followed – tables and figures were therefore included within the manuscript (Chapter 2).

2.2 Article:

Manuscript for Examination

Manuscript title, authors and contact details

Perceived impact of online social support on self-regulatory weight loss behaviour in a sample of South African young adults

*Lario Botha and *Karel Botha

Miss L Botha

205 Rigel Avenue

Waterkloofrif

0181

Email: lariobotha@gmail.com

All correspondence to:

Prof KFH Botha

Department of Psychology

School for Psychosocial Sciences

North-West University, Potchefstroom Campus

Private Bag X6001

Potchefstroom

2520

South Africa

Email: karel.botha@nwu.ac.za

Abstract

Weight loss during young adulthood is a challenge that necessitates deliberate and conscious decision making and self-regulation. The aim of this qualitative study was to explore the perceived relationship between online social support and self-regulation of specific weight loss goals in a sample of 15 young South Africans adults. Participants completed a self-compiled open-ended questionnaire on *SurveyMonkey*. Findings show that participants rely on social media sites to obtain their weight loss goals due to their accessibility, convenience, affordability, as well as their informative and emotionally supportive nature. Participants perceive social media generally as effective, despite certain challenges, in facilitating key self-regulatory skills and ultimately in the achievement of their weight loss goals. The findings are compared to previous research, limitations are discussed and recommendations for further research are made.

Keywords

Social support, online social support, self-regulation, weight loss, young adults.

Perceived impact of online social support on self-regulatory weight-loss behaviour in a sample of South African young adults

Lario Botha* & Karel Botha**

*Department of Psychology, North-West University, Potchefstroom, South Africa

Introduction

Young adulthood appears to be a developmental phase wherein individuals gain weight rapidly due to dramatic lifestyle changes, especially an increase in unhealthy eating and sedentary tendencies (Gokee-LaRose, Gorin & Wing, 2009; Poobalan, Aucott, Precious, Crombie & Smith, 2010). As a result, weight control efforts among young adults, such as dietary restrictions (Wardle, Haase & Steptoe, 2006), healthier food choices and exercise (Gokee-LaRose, Leahey, Hill & Wing, 2012), are quite common (Roach et al., 2003). Despite these efforts, young adults are seldom successful and rather appear to follow a cycle of losing and regaining weight (Brownell, 2010). This implies that behaviour related to weight loss is a challenge that necessitates deliberate and conscious decision making and self-regulation (Carver & Scheier, 2004; Catenacci, Mitchell, Wyatt & Hill, 2011; Wansink & Chandon, 2006).

In general, self-regulation can be defined as the ability to evaluate, adjust and direct behaviour, emotions and thoughts in accordance with one's goals (Baumeister, Vohs, & Tice, 2007). It includes the capacity to inhibit impulses, to eliminate irrelevant stimuli and to persist in certain relevant tasks (Mann et al., 2013). Efficacious weight loss is considered to be dependent on proper self-regulation, as it requires clear goals, the ability to monitor progress toward weight loss targets and, finally, the persistence to follow through in these efforts (Carels et al., 2007; Metcalfe & Mischel, 1999; Wansink & Chandon, 2006). Research

supports the notion that weight loss and its maintenance are significantly improved by goal setting, planning and striving (Mann et al., 2013; Olander et al., 2013), self-control (Jasinska et al., 2012), self-monitoring (Gokee-LaRose et al., 2009), self-efficacy (Shin et al., 2011) and autonomous motivation (Mata et al., 2011).

Self-regulation, however, often fails due to the depletion of self-regulatory resources (Carver & Scheier, 2004) and often, specifically regarding weight loss, depends on external resources, such as social support (Branscum, Ling & Wang, 2014). Social support refers to the exchange of resources, which occurs during the social interaction between two individuals, aimed at enhancing the receiver's wellbeing and ability to cope (Heaney & Israel, 2008). Various cross-sectional, cohort and intervention studies have provided evidence in support of the manner in which social support can facilitate weight loss and weight loss maintenance (Barnes et al., 2007; Elfhag & Rössner, 2005; Gallagher, Jakicic, Napolitano & Marcus, 2006; Wing & Jeffery, 1999), often through effecting certain self-regulatory skills, such as goal pursuit (Fitzsimons & Bargh, 2003), action planning (Sanford, 2010), self-monitoring and self-efficacy beliefs (Eastin & LaRose, 2005; Sanford, 2010). Although mainly beneficial, social support may, however, also have certain disadvantages. Family members have, for instance, been documented to influence weight loss efforts negatively by passing judgement, often because they do not share a common desire to lose weight (Faw, 2014; Henry, Rook & Stephens et al., 2013).

The increasing popularity of electronic media has led researchers to turn their focus towards the connection between online social support networks and the facilitation of weight loss (Ballantine & Stephenson, 2011). Online support networks, including social media sites, are virtual platforms where people can connect with others and obtain coping strategies (Eysenbach, Powell, Englesakis, Rizo & Stern, 2004), advice, feedback (Jayanti & Singh, 2010) and emotional and informational support regarding health care matters, such as weight

loss (Pagoto et al., 2014). The participants in weight loss studies have highlighted various personal reasons for using online support networks, including circulating recipes and exercise routines (Hales, Davidson, & Turner-McGrievy, 2014; Harvey-Berino et al., 2010; Pagoto et al., 2014), in addition to gaining support and acceptance (Pagoto et al., 2014) and motivation for their weight loss efforts (Sanford, 2010). Finally, some evidence exists that online social support may also be used in response to the disadvantages of in-person social support (Sanford, 2010).

Research increasingly shows that online social support may impact positively on the self-regulation of weight losers. According to Teixeira et al. (2008), online social support possibly enhances an individual's sense of self-efficacy through motivational comments and likes (esteem support). Online support networks also seem to offer an opportunity for comparing oneself with other weight losers, for example through photographs (Dahl, Hales & Turner-McGrievy, 2016) and progress reports on weight loss, that certain individuals share on social networks for their followers who are counting on them to share this information (Sanford, 2010). Such self-evaluations have proved to facilitate an individual's self-regulatory weight loss behaviours (Dahl et al., 2016), specifically as it provides an effective way to promote self-monitoring, which is essential to success in weight loss (Wing, Tate, Gorin, Raynor & Fava, 2006).

Although there is some evidence to suggest that online social support has the ability to result in the self-regulation of weight loss behaviours, these results are still limited and it is not yet exactly clear if individuals perceive these networks as having an impact on their self-regulatory weight loss efforts (cf. Branscum et al., 2014). A more comprehensive understanding of the manner in which online social support mediates weight loss behaviours through self-regulation is, therefore, required (Branscum et al., 2014). This study aims to redress these gaps by exploring the following questions:

1. Why do young adults use online social networks to obtain social support?
2. How do they perceive the contribution, whether positive and/or negative, of these support networks specifically to their weight loss goals?
3. How and to what extent do their perceptions regarding the contribution of social support networks imply changes in the self-regulation of their weight loss goals?

Aims

The general aim of the present study is to explore, in a sample of young South African adults, the perceived role and contribution of online social support to the self-regulation of specific weight loss goals. The specific aims are to explore:

1. The reasons why the participants use online social networks to obtain social support.
2. The perceptions of the contribution, positive or negative, these support networks provide regarding their weight loss goals.
3. How and to what extent their perceptions regarding the contribution of social support networks imply changes in the self-regulation of their weight loss goals.

Method

Approach and design

A qualitative, exploratory research approach was employed, as it is considered the most appropriate approach for conducting research on phenomena that have not been well defined and for which no conceptual distinctions or explanatory relationship have yet been postulated (Saunders, Lewis & Thornhill, 2012; Singh, 2007). A qualitative research approach especially facilitates a deeper understanding of an individual's perceptions and experiences, in addition to the meanings they attach to various situations, contexts and events.

Therefore, it was considered an appropriate approach for the aims of the present study (Yilmaz, 2013).

A grounded theory design was applied, specifically defined as "a qualitative research method that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon" (Strauss & Corbin, 1998, p. 24). It is thus a general inductive method in which theory is systematically generated from the emergence of conceptual categories in a data set (Grounded Theory Institute, 2014).

Participants

A sample of 15 young adults between the ages of 18 and 30 years participated in the study. They were recruited by means of an advert placed in the newsletter of a well-known weight loss clinic in Pretoria. A criterion sampling method (Maree & Pietersen, 2016) was used by clearly indicating a predetermined set of criteria in order to ensure that the aims of this study could be reached. All the participants were South African, fluent in either Afrikaans or English, had a specific weight loss goal and made regular use of social media sites in order to obtain support for their weight loss efforts. No other demographic details are, however, known to the researcher, as online questionnaires were answered anonymously.

Data collection

Data were collected by means of a self-compiled open-ended questionnaire, created on *SurveyMonkey,* a cloud-based survey software system. Boyton and Greenhalgh (2006) consider open-ended questionnaires to be useful when trying to capture new ideas or information for which there is no basis to develop an all-inclusive set of structured responses. The four open-ended questions presented to the participants, enabled the researcher of the present study to gather the data in the participants' own words regarding their attitudes and experiences of online social support and its perceived impact on their self-regulatory weight loss behaviours (Boynton &

Greenhalgh, 2006). The four questions were as follows:

1. *Please tell us why you make use of an online social support network in your effort to achieve weight loss goals.*
2. *What role does this social network play – supportive or unsupportive – in the success of achieving your weight loss goals?*
3. *What difference does the social network make to your weight-loss-related behaviour, which should not have been possible otherwise?*
4. *Is there anything you would like to add regarding how the social network influences your ability to have more control over your own behaviour, self-monitoring, decision making and motivation?*

These questions were presented to an independent clinical psychologist to ensure face validity before inclusion in the study.

Data analysis

The data were analysed according to Braun and Clarke's (2013) model of thematic analysis. Thematic analysis is an analytic method of identifying, analysing and reporting patterns and themes within a data set (Braun & Clarke, 2013). This method of analysis was deemed appropriate for the present study as it highlights the participants' perceptions, feelings and experiences as paramount objects of the study (Gibbs, 2008; McLeod, 2001; Ryan & Bernard, 2000). In addition to the researcher, a co-coder, trained in thematic analysis, was appointed to independently read and reread the data several times until a sense of familiarity was reached. Next, initial codes were generated by documenting where and how the patterns occurred and reoccurred. Mind maps were then used to organise the codes into themes and subsequently into main and subthemes (Braun & Clarke, 2013). The two independent analyses were then compared, discussed and integrated to produce one final set of analysis.

Trustworthiness

In order to ensure scientific quality, the four components of trustworthiness, outlined by Lincoln and Guba (1985), were addressed as follows: i) *Credibility* was achieved by spending prolonged time analysing the data by including a rich and thick description and interpretation of the data, and by appointing and using a co-coder to analyse the data (Tomas & Magilvy, 2011). ii) *Transferability* was achieved through providing thick descriptions of the relevant literature and the research context (Thomas & Magilvy, 2011). iii) *Dependability* was achieved by thoroughly documenting the methodology, the data generation and the data analysis process. iv) *Confirmability* was achieved by taking a self-critical stance regarding the manner in which the researcher's own preconceptions may have affected the research in order to represent as closely as possible the perspectives of the research participants.

Ethical considerations

Ethical approval for the study was obtained from the Health Research Ethics Committee (HREC) of the North-West University (NWU), Potchefstroom Campus (approval number NWU-00078-17-S1). After ethical approval had been granted by the HREC, an appointment was made with the director of the weight loss clinic, who acted as the gatekeeper, to explain the nature, aims and scope of the research study. Once the permission was obtained, an advertisement was placed in the clinic's newsletter, after which the participants who were interested to participate in the study, sent the researcher an email. They were contacted telephonically in order to explain the purpose of the study as well as all the ethical and procedural aspects relating to the study. The participants who were still interested were then sent an email containing the online link that granted them access to the online open-ended questionnaire. Once they opened this link, they were presented with the electronic informed consent form (ICF) to which they had to respond by clicking either *yes* or *no*. By clicking *yes*, the participant automatically gave voluntary consent to participate in the research

study and, therefore, was granted access to the online questionnaire. They also automatically became anonymous on the online sphere, meaning that no one could trace their responses back to them. The participants who clicked *no* were thanked for their interest, but they were denied access to the online open-ended questionnaire.

Results

From the analysis, ten main themes and five subthemes emerged which are presented according to the three aims of the study. Figure 1 provides a visual representation of the themes.

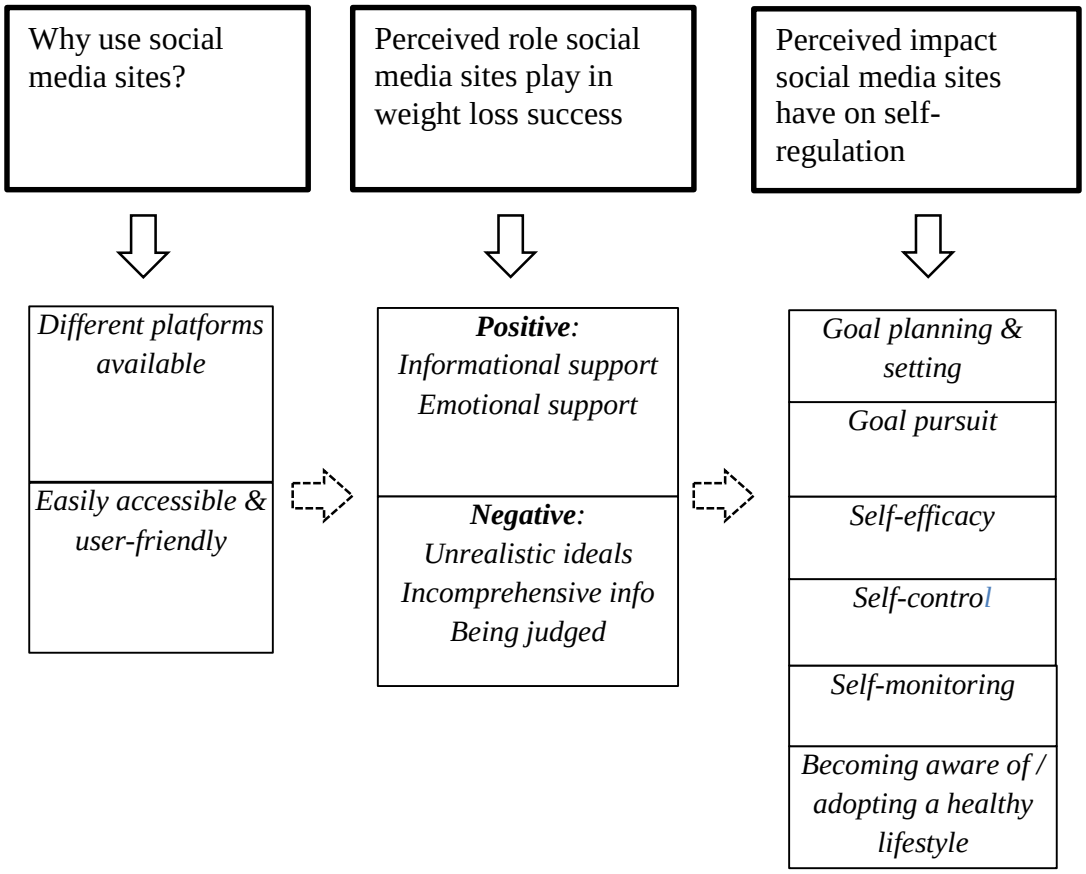


Figure 1 – The use of social media sites in weight loss and the impact on self-regulation

Aim 1: Reasons why the participants use social media sites to obtain social support for their weight loss efforts.

Different social media platforms are available. First, the participants appeared to use social media as it offers different platforms, each with its own unique benefits. Facebook, Instagram and Pinterest appear to be the sites most visited by the participants for the motivational and informational support they offer, while sites such as YouTube and Strava were mentioned to a lesser degree. Facebook specifically appears to be used in order to follow certain celebrities or fitness guru pages with the intention of gaining tips, especially regarding workout regimes and diets. Facebook and Instagram also seem to be accessed to gain motivation by following the fitness journeys of others, specifically looking at the photographs of certain individuals' fit bodies. One participant for instance mentioned,

> *"I therefore follow various celebs and models on Facebook and Instagram, as they often post photos of their 'in-shape' bodies."*

Pinterest also appears to be alluring for the participants, as it offers free recipes and workout regimes. One participant commented on this by saying,

> *"Pinterest has great weight loss recipes that are easy to follow and not as expensive and especially me not being a great cook, it helps a lot for that extra guidelines to actually make the food."*

Social media sites are easily accessible and user-friendly. The participants highlighted several practical aspects of social media sites that seem to contribute to the popularity thereof. Social media sites were firstly reported to be convenient, easily accessible and user-friendly. They can be accessed anywhere, anytime, either on one's laptop, tablet or phone. They are also thought of as being instant; just the touch of a button provides a person with an endless stream of information, photographs and tips regarding weight loss, saving a large amount of time. One participant specifically noted,

"Social media makes my weight loss goals so much more accessible and achievable; it would have been a real time consuming struggle without it. With the help of social media, I have so much more time to focus on my goals, instead of searching for ways to achieve them."

Cost-effectiveness also appears to be an alluring aspect for the participants. The information provided, is often offered for free and a person is rarely expected to pay a subscription fee. Finally, it also offers variety and choices to the participants and can reportedly often be modified to fit one's own specific interests and preferences.

Aim 2: Perceived role social media plays in the success of participants' weight loss goals

The majority of the participants noted that social media has a positive impact on their weight loss efforts. Although they could highlight certain negative elements, they felt that the support offered on social media, in terms of their weight loss efforts, far outweighed the shortcomings or risks thereof.

Positive aspects of social media sites.

Informational support. Social media sites are primarily used to obtain informational support. This includes receiving information on new exercise techniques, diets, workout programmes and recipes. One participant specifically noted,

"I make use of social media to support my weight loss goal as there are many work-out programmes and tips for toning and losing weight… From an eating plan perspective there are many tips and diets that can be followed depending on what your goal is."

Information that is provided regarding unique weight loss services, such as healthy meal deliveries and yoga classes, were also mentioned. One participant noted,

"Social media also has a lot of adverts on them and therefore people are also offering specials on certain classes such as yoga, which I often attend."

Some other information that the participants highlighted, specifically on Facebook, involved quick weight loss fixes such as weight loss tablets.

Emotional support. The participants felt that social media offers recognition and encouragement for their weight loss efforts. It appears they felt acknowledged when their posts (usually photographs reflecting either their weight loss efforts or their weight loss achievements) receive likes or encouraging comments. One participant, for instance, commented on this by saying,

"When I post photos of my progress, it is motivating for me when I get likes from my followers, it pushes me to work even harder."

One participant in particular mentioned emotional support that contributed to a sense of connectedness, as a result of the positive contributions made by the members of the site:

"Certain of the pages on social media that I am a part of also has a 'community' like feeling, most people on it is contributing in a positive and uplifting way."

Negative aspects of social media sites.

Unrealistic ideals. The participants felt that the individuals who use social media sites, especially Facebook and Instagram, have the tendency to create unrealistic ideals of how one ought to look. There are certain photographs of, especially, celebrities or fitness experts' "in-shape" bodies that are impossible to attain. These individuals reportedly often train for a living or make use of Photoshop and Airbrushing. Although some participants realise that these photographs portray an unrealistic ideal, they often still strive to attain it, which appears to become a tiresome exercise. One participant shared her experience,

"Often women's waists are made thinner and men's muscles made larger in photos and then, because social media figures are so influential, we don't even realise that we actually aspire to their fake goals and not our own. I then beat myself up about not looking 'the way I could be looking' and not achieving my goals fast enough, if I see how beautiful others are."

Incomprehensive information. Although information generally emerged as a positive aspect, certain types of information were also perceived as lacking by the participants. Certain exercise routines, for instance, do not appear to come with complete instructions, which often result in injury or ineffective exercising. One participant specifically noted,

"The free work-out regimes that is being posted, however convenient, has also led me to exercise incorrectly and to hurt myself, as they usually don't come with comprehensive instructions."

Workout regimes and diets offered on social media sites, according to the participants, are also not always tailor-made and often disregard a person's level of fitness. Healthy recipes, according to the participants, also often lack proper instructions or accessible ingredients. Finally, the individuals (celebrities, athletes or fitness instructors), who are sharing these exercises and recipe tips on their social media pages do not always consider the average person's work and household responsibilities.

Being judged. Some participants mentioned that instead of receiving encouraging comments or likes from their followers, they sometimes rather feel like they were being judged. Online users have ridiculed some of the photographs the participants have posted of their weight loss efforts. One participant commented on this by saying,

"Even though you find motivation when looking at other's before and after photos, the backlash received from the public is quite (in some cases) vicious/patronising."

Aim 3: How the participants' perceptions regarding the contribution of social media imply changes in the self-regulation of their weight loss goals

Social media sites, according to the participants, appear to offer certain types of support which affects, mainly in a positive way, self-regulatory weight loss behaviours.

Goal planning and subsequent goal setting. The majority of informational support (diets, recipes and workout regimes), which the participants obtain on these sites, appears to contribute towards their goal planning. They seem to constantly adjust their weight loss goals and plans as they are confronted with new comprehensive information. Planning and scheduling, specifically exercise routines, dish choices and other weight loss behaviours, are reportedly facilitated or made easier by social media. This is specifically evident from one participant's remark:

"I thus use it to create my entire exercise and eating plan."

Certain participants also mentioned that once they achieve their weight loss goals and receive recognition online, they are often encouraged to set a next weight loss goal for themselves. Social media, specifically the encouragement and motivation it offers, therefore, also appears to facilitate continuous goal setting. This is apparent from the following remark made by a participant:

"If I reached my goal, I often share this with friends and followers by posting a photo of my body which shows the progress I have achieved. I then usually set myself a next goal."

Although social media appears to contribute mainly in a positive way towards goal planning and goal setting, there are certain aspects of the informational support offered on

social media that pose challenges for the weight loss planning of certain participants. Firstly, the individuals (celebrities, fitness gurus and other individuals) sometimes suggest certain diets or exercise routines which the participants consider to be unrealistic for an everyday working individual. One participant specifically noted,

> *"It can be discouraging to see influencers looking great, perfect body and all and actually having time to achieve these goals. Influencers make it look so easy and do not take into consideration the everyday life of people with normal jobs."*

The incomprehensiveness of certain of these exercise routines and diets also appear, in certain cases, to make weight loss planning difficult for the participants. The recipes are not always complete and workout regimes are not often clear, which may be confusing for the participants. One participant gave an example of this:

> *"The free dish ideas that are available on different social media sites are sometimes difficult for me to make as they contain ingredients that are not readily available in South Africa. I often then don't know what to substitute them for."*

Goal pursuit through motivation and endurance. The inspiration and motivation that the participants receive from other individuals online, who share their fitness journey, through photographs or status updates, appear to inspire and encourage them to strive continuously to reach their own personal weight loss goals. These individuals, whether they are celebrities, models, fitness gurus or average individuals, appear to impact the participants by continuously motivating them not to give up on their weight loss goals. This is illustrated by one of the participant's detailed description:

> *"I often simply look at work-out bodies on social media platforms, especially Pinterest, and Instagram, I then use these pictures to serve as*

motivation to enable me to commit to having a body like the ones I encounter on social media. I sometimes even download the pictures and set them as background photos on my cell phone to encourage me to work even harder every time I unlock my phone."

This motivates them by reminding them how they want their bodies to look, reminding them that it will take time and commitment and reminding them that it is not impossible or out of reach. One participant specifically remarked,

"It reminds me constantly of what I want my end goal to be (how I want to look). It reminds me that changing how you look takes time (when looking at progress of other people) it does not happen overnight."

The encouragement that certain participants receive for their weight loss efforts from followers online, also appear to impact positively on their goal pursuit. The credit that they receive reportedly makes them feel motivated to continue pursuing their weight loss goals. This is illustrated by a participant stating,

"When someone posts on your photo that you look good, or after seeing your photo makes a comment in person, that can be encouraging."

The convenience and accessibility of social media make it easier for the participants to obtain continuous and frequent reminders of their end goal, therefore, continuously priming their focus towards their higher-order goals, for example,

"Social media offers a permanent supply of information … to constantly motivate me to continue and not give up."

Although the support offered on social media facilitates, for the most part, goal pursuit and self-motivation, certain individuals' remarks also point to ways in which these self-regulatory skills may be negatively affected by different aspects of social media. Firstly, the participants appear to become discouraged and demotivated when they compare their bodies

against those of certain celebrities and fitness gurus online. Regardless of their commitment, the most participants feel over time that they are not able to achieve that goal, which results in their feeling demotivated and discouraged. One participant commented on this by saying,

> *"One can easily feel demotivated looking at certain individuals' photos, feeling as if one is constantly falling short. You start believing that it will be impossible to ever get your body that perfect and that sometimes makes one feel like giving up."*

With regard to the informational support offered on social media, the participants also reported often feeling discouraged – like giving up – when they attempted an exercise or diet that does not come with the proper instructions. One participant, for instance, remarked,

> *"So you might feel discourage after trying an exercise struggling with it and then at the end you give up as you feel it is impossible."*

Finally, the scrutiny that some of the participants received from their followers regarding the photographs they posted of their weight loss efforts also appears to have a negative impact on their goal pursuit and motivation, often leaving them feeling disheartened, for example,

> *"There are also times when you receive judgement, where people either make fun of your photos, or where they dislike your ideas or where they will respond by posting insulting and sarcastic memes. This has often made me feel demotivated and made fun of, which is definitely not inspirational or encouraging."*

Self-efficacy. The support offered by other individuals online, specifically seeing how "everyday" individuals achieve their weight loss goals, leave the participants with the idea that they will be able to do the same. Other people's weight loss successes, therefore, appear to

boost the participants' self-efficacy and appear to make their weight loss goals more attainable. One participant specifically noted,

"I have never in my life felt like I have reached my desired body, but I know it's possible when I look at those people on social media."

As indicated previously, the comprehensive informational support offered on social media sites, including recipes and workout regimes, also appears to make the participants feel more equipped to reach their weight loss goals. They reportedly feel more in control of their weight loss efforts, as they were adequately informed and educated on certain aspects of their weight loss behaviours. This is illustrated by different participants' remarks:

"I believe that social media enables me to have control over my behaviour and to not lose track of my goals…"

"Watching exercise videos also help to make sure that you are doing the exercises correctly, eating the correct foods and it is like exercising with a professional."

"I may not have known how to eat healthily without reading about it online."

Another way some participants improve self-efficacy is by intentionally turning more towards the social media pages of everyday individuals in their efforts to seek motivation and inspiration for their weight loss efforts. In doing so, they prevent being demotivated by the unrealistic information appearing on athletes' and fitness gurus' pages. These everyday individuals are considered by the participants as a more realistic bar against which to measure themselves. One participant, for instance, said,

"Average, everyday people achieving their goals make me feel as if my goal is more reachable and that I shouldn't be so hard on myself."

Self-control. Inspirational photographs of other individuals' in-shape bodies, healthy recipes and workout regimes reportedly assist the participants to make healthier choices when they are confronted with cravings or temptations that are detrimental to their weight loss efforts. Social media, therefore, appears, for the most part, to facilitate their decision making by reminding them of their end goals, which often have the effect of lessening cravings. This is illustrated especially by the following participants' remarks:

> *"Another benefit is that when I download those photos and set them as my background and I unlock my phone, I have the ability to think twice before taking a bite of that chocolate."*

Some participants, however, had different experiences. They are of the opinion that social media often negatively affects their decision making in terms of their weight loss efforts by exposing them to various unhealthy temptations. One participant specifically noted,

> *"Just as social media have a lot of healthy recipes etc. being circulated, it also contains photos of delicious unhealthy foods. People often share pictures of their 'cheat days' that may involve eating burgers or drinking milkshakes. This can also often make me crave these unhealthy foods and it makes me feel irritated and frustrated when I know I can't have it."*

Self-monitoring. The participants often weigh themselves or make use of applications such as FitBit to measure their progress and to determine how far they are from reaching their goals. This information is then often shared with others on social media through posts in order to receive recognition and encouragement for their efforts. One participant clearly illustrates this by saying,

> *"I weigh myself regularly in order to see how far I am from reaching my goal, if I reached my goal, I often share this with friends and followers by posting a photo of my body which shows the progress I have achieved."*

The participants' tendencies of constantly comparing their own bodies against the photographs of other individuals' bodies online, is also a way in which they monitor their progress in terms of their weight loss goals. One participant specifically noted,

"I follow some of my competitors via social media platforms. Based on their achievements and form, I get motivated to be as lean and light as possible to compete against my competitors in sporting events!"

Becoming aware of and adopting a healthier lifestyle. Social media appears to go beyond only facilitating self-regulatory weight loss behaviours; it also appears to contribute to an overall awareness among the participants regarding healthier living. Various participants mentioned words such as "healthy living", "lifestyle choices" and "general wellbeing", which indicate that social media use does not only facilitate the participants' weight loss behaviours, but also their enactment of various other healthy behaviours. Some participants' comments illustrated this:

"It is about creating an awareness of healthy living and lifestyle choices even if the end goal is something you might never achieve."

"For me it mainly has a positive effect, because it motivates me to improve my life and general wellbeing to become a better person."

"It also reminds me to look after my body as a whole, such as drinking less alcohol."

Discussion

This study explored the perceived relationship between online social support, weight loss and self-regulation within a sample of young South African adults aged 18 to 30. The findings, firstly, indicate that the participants of the present study prefer social media sites, as it offers several different platforms, such as Facebook and Pinterest, each with their own unique benefits including advice, tips and photographs regarding workout regimes and diets.

Facebook also appears to be a popular social media platform among the participants in other weight loss studies (Dahl et al., 2016; Jane, Foster, Hagger & Pal, 2015; Patrick et al., 2014; Turner-McGrievy & Tate, 2013). Interestingly, the researcher could not find other weight loss studies that specifically mentioned or included Instagram or Pinterest as social media platforms. The researchers and the participants in other countries appear to make more use of discussion forums, chat rooms and blogs (Hwang et al., 2010; Leggatt-Cook & Chamberlain, 2012; Sanford, 2010; Turner-McCrievy & Tate, 2013; Williams, Hamm, Shulhan, Vandermeer & Hartling, 2014). Blogs are especially used in the United States of America (USA) as a platform where they document their weight loss initiatives and vent about the anxieties, struggles and failures that accompany weight loss efforts (Leggatt-Cook & Chamberlain, 2012; Sanford, 2010). Although Twitter, an online social site that enables the posting of messages (Pagoto et al., 2014), was not mentioned by the participants in the current study, it is often reported in American and British weight loss studies (for example Jane et al., 2015; Pagoto et al., 2014; and Turner-McGrievy & Tate, 2013).

In addition to the different platforms offered, the participants of the present study, similar to those in other research studies, also value the accessible, instant, convenient, low-cost features of social media sites (Branscum et al., 2014; Chen, 2014; Hwang et al., 2010; Pagoto, 2014; Williams et al., 2014). Noteworthy is that weight loss participants in other studies, in contrast to the current study, also mentioned reciprocal support, anonymity, and shared similar experiences and emotional connections as additional attractive features of social media sites (Ballantine & Stephenson, 2011; Hwang et al., 2010; Newman, Lauterbach, Munson, Resnick & Morris, 2011; Pagoto et al., 2014; Saperstein, Atkinson & Gold, 2007). Although the participants in the current study did mention the value of emotional support, they did not mention social interaction as a reason for using social media sites. A possible reason for this may be that most of them might be considered as 'lurkers' –

defined as individuals who browse websites in a read-only mode, without engaging in social interactions – as they primarily want to learn more about a community or topic (Ballantine & Stephenson, 2011).

The findings of the current study also support previous research regarding the importance of social media sites in terms of offering *informative* (cf. Branscum et al., 2014; Chen, 2014; Lewis et al., 2010; Napolitano, Hayes, Bennett, Ives & Foster, 2013; Pagoto et al., 2014; Sanford, 2010; Saperstein, Atkinson & Gold, 2007; Turner-McCrievy & Tate, 2013) and *emotionally supportive resources* (cf. Ballantine & Stephenson, 2011; Hwang et al., 2010; Jane et al., 2015; Newman et al., 2011; Patrick et al., 2014; Pinkerton, Tobin, Querfurth, Pena & Wilson, 2017).

In addition to these resources, the current study also supports previous research on the challenges posed by social media sites, specifically those related to unrealistic ideals (Fardouly, Diedrichs, Vartanian & Halliwell, 2015; Lee et al., 2014; Mabe, Forney & Keel, 2014; Meier & Gray, 2014), incomprehensive information (Chen, 2014; Lewis et al., 2010; Saperstein, Atkinson & Gold, 2007) and the perception of being judged (Leggatt-Cook & Chamberlain, 2012; Pagoto et al., 2014; Pinkerton, Tobin, Querfurth, Pena & Wilson, 2017).

It further seems clear from the results that these resources and challenges influence the participants' weight loss success, while impacting on their self-regulatory skills in different ways. Firstly, the participants perceive the amount of information regarding exercise routines and recipes available on social media sites to contribute positively towards their goal planning and goal setting. This is in agreement with previous research specifically regarding dietary and exercise-related decision making (Chen, 2014; Hwang et al., 2010; Patrick et al., 2014). The perceived impact of social media as informative, rich resources of goal planning is not surprising, as goal planning is believed to form an integral part of weight loss, especially collecting materials and choosing and scheduling weight loss behaviours based on

relevant information (Mann et al., 2013; Michie et al., 2011; Olander et al., 2013; Pagoto, Schneider, Joijc, DeBiasse & Mann, 2013).

Although goal planning is crucial for weight loss, the ability to be motivated to pursue goals over time is even more difficult and demanding. Various research studies provide evidence for the importance of goal pursuit and autonomous motivation when it comes to weight loss and weight loss maintenance (Akers, Cronett, Salva, Davy & Davy, 2012; Kitsantas, 2000; Maas, DeRidder, De Vet & De Wit, 2012; Poncela-Casasnovas et al., 2015; Silva et al., 2010). Leahey, LaRose, Fava and Wing (2011), for instance, found compelling evidence for the spread of weight loss motivation among the social contacts of an online weight loss community through a process of contagion. In line with the current findings, various other studies report increased motivation, encouragement and persistence when exposed to the photographic documentation of other social media users' in-shape bodies (Chen, 2014; Dahl et al., 2016; Newman et al., 2011; Poncela-Casasnovas et al., 2015).

The participants in the present study and others appear also to be motivated, to a great degree, by the validation, recognition and encouragement they receive online for their weight loss efforts (Pinkerton et al., 2017; Sanford, 2010). A crucial difference exists, however – although some participants in the present study made specific mention of a "community-like feeling", in general, they do not use social media sites to socially interact or to intentionally motivate others. According to Chen (2014), Jane et al. (2015) and Newman et al. (2011), when participants motivate others online, they create a reciprocal system of encouragement by holding themselves accountable, which, in turn, encourages them to follow their weight loss routines with more dedication. For the participants in the current study, therefore, due to perhaps being more "lurking", this may be a limitation in potential motivational benefits (cf. Pagoto et al., 2014; Sanford, 2010).

The unrealistic ideals of social media sites, as created by especially celebrities and fitness gurus through the photographs they share of their bodies online, however, pose some difficult challenges to goal pursuit. Despite the participants' realisation of the unrealistic nature of these photographs, some still admit to striving to obtain such bodies. This, however, proves over time to be a tedious exercise, often leaving them demotivated, as they constantly fall short of attaining their goals. Other researchers have also found that the photographs shared on social media sites of celebrities and fitness gurus have left the participants feeling inadequate and demotivated (Dahl et al., 2016; Pagoto et al., 2014; Turner-McGrievy & Tate, 2013).

However, many participants of the present study reported that they have recently started to prefer turning towards the social media pages of everyday individuals to obtain more realistic information on tips, motivation and support for their weight loss efforts. This is an important indication of the participants' self-regulatory abilities in the sense that they are often able to overcome difficult challenges towards goal achievement. Rothermund (2007) refers to this type of adjustment or neutralising discrepancies as assimilation, defined as “an assimilation of the current situation to the given goals” (p. 220) (in this case, ‘chosen’ goals). Assimilation contrasts with accommodation, where an individual would neutralise discrepancies by changing the goal itself, or disengaging from it. These two coping strategies are key to the dual process model of self-regulation (Brandstädter & Rothermund, 2002, as cited in Rothermund, 2007). According to Rothermund (2017), assimilation depends on the perception of having high control over the desired outcome. This shows at least two things – one, that the weight loss goals for the participants in this study are important to such an extent that they would, rather than disengage from the goal, change their ways (in this case, the information they access and use) in obtaining the goal and, two, that it is important to them to have high control over the outcome.

The participants further indicated that incomprehensive information often leave them feeling demotivated and confused. They also become frustrated and discouraged when they cannot master a certain exercise routine or recipe, which may result in injuring themselves or doing workouts incorrectly. This finding largely supports previous research wherein the participants reported on some inaccurate, misleading and dangerous information being shared on social media sites (Chen, 2014; Lewis et al., 2010; Saperstein, Atkinson & Gold, 2007).

Even though some participants appear to have a positive experience regarding the emotional support they get from social media sites, others feel that they are being judged instead of receiving support, specifically being ridiculed or teased for sharing photographs of their weight loss efforts, which leaves them feeling disheartened and demotivated towards goal pursuit. This contradiction is supported by previous research efforts (cf. Chen, 2014; Hwang et al., 2010; Leggatt-Cook & Chamberlain, 2012; Pagoto et al., 2014; Pinkerton et al., 2017). Although there is no clear explanation for this, it can perhaps be ascribed to individual differences, the stage of the weight loss process or which social sites are visited.

In this study, the inspiration that the participants receive online from others' weight loss journeys appears to have a positive impact on their self-efficacy. This is crucial, as self-efficacy has been identified as a significant mediator in successful weight loss and weight loss maintenance (Martin, Dutton & Brantley, 2004; Linde, Rothman, Baldwin & Jeffrey, 2006; Schwarzer & Fuchs, 1995; Shin et al., 2011). More specifically, when the participants in the present study see others achieving their weight loss goals, their own goals appear more attainable. Comprehensive and meaningful information shared online regarding recipes and exercises also make the participants feel more equipped. In essence, social media often makes them feel well informed to achieve their weight loss goals more efficiently, confirming previous research (Dahl et al., 2016; Newman et al., 2011; Patrick et al., 2014; Teixeira et al., 2012).

Self-control, just like self-efficacy, is crucial to effective goal pursuit. It refers to the ability to regulate or modify the responses in order to meet a particular standard (Carver & Scheier, 1998). In terms of weight loss, self-control would normally mean inhibiting or resisting temptations to eat unhealthy foods. Various research studies indicate that self-control and effortful inhibition are pertinent to upholding a healthy diet and regular exercise (Lawrence et al., 2015; Moroshko, Brennan & O'Brien, 2011; Nederkoorn et al., 2010; Papies & Hamstra, 2010). According to the participants in this study, the motivational photographs of the individuals' weight loss journeys, including the healthy recipes and workout regimes posted online, assist them in safeguarding their weight loss goals by resisting temptations that are likely to distract them from achieving these goals. Previous research also reports that social media facilitates weight-loss-related self-control (Chen, 2014; Sanford, 2010; Saperstein, Atkinson & Gold, 2007).

The participants, however, also perceive some aspects of social media sites as challenging to their self-control. These include readily available photographs and posts of delicious foods or sedentary behaviours, which often makes it difficult to avoid temptations and sometimes lead to falling back into old habits (i.e. overeating and laziness). The participants from previous research also report that social media has the tendency of either making them hungry (Dahl et al., 2016) or, more specifically, increasing their cravings for unhealthy foods (Patrick et al., 2014). The present study, therefore, supports the assumption that social media can both facilitate and hinder the individuals' self-control.

Social media also appears to have a positive impact on the participants' self-monitoring, the deliberate attention to one's own behaviour (Kitsantas, 2000). It is a crucial component of effective self-regulation, as it provides the individual with feedback regarding progress towards a specific goal. Without self-monitoring, the individual will not be able to detect discrepancies between current behaviour and their goals. According to Walker et al

(2015), the use of photographs in social media play an important role in motivating one to narrow any perceived gaps between weight loss goals and current progress. Frequent self-weighing and dietary self-monitoring, like the participants in this study did, have been associated with positive outcomes in weight gain prevention, weight loss and weight maintenance studies (cf. Akers et al., 2012; Butryn, Phelan, Hill & Wing, 2007; Burke, Conroy et al., 2011; Burke, Wang & Sevick, 2011; Gokee-LaRose et al., 2009; Krukowski, Harvey-Berino, Ashikaga, Thomas & Micco, 2008; Webber, Tate, Ward & Bowling, 2010). Blogs specifically appear to be a platform on which many participants report their self-monitoring, including their weekly weigh-ins, weekly menus and daily exercises (Leggatt-Cook & Chamberlain, 2012).

Finally, the participants in the present study mentioned that the informational and emotional support they receive from online sites enhances their *awareness* of healthy living. With this, they refer to being aware of the importance of their wellbeing and a healthy lifestyle in general, and not only of weight loss and its benefits. This finding could not be supported by previous research. Even though clear evidence does not exist, the participants of the present study might not merely be more aware, but perhaps more mindful of themselves, their own bodies and their health. Brown, Ryan and Creswell (2007) define *mindfulness* as a receptive attention to, and awareness of, present events and experiences. It permits the individual to be present in reality and not to react to it or habitually process it through conceptual filters. In a practical sense, mindfulness implies being flexible, non-judgmental (Brown, Ryan & Creswell, 2007) and being able to notice new things (Langer, 2009). With increased mindfulness, an individual can alter his or her responses, rather than continue habitual behavioural patterns that may be inconsistent with an individual's goals and needs (e.g. recognising bodily signals of hunger and fullness to prevent overeating in response to negative emotions or social cues) (Olson & Emery, 2015). It would, therefore, be important

that further research studies explore the possibility that social media sites may improve mindfulness and not merely awareness in weight loss clients.

Limitations and Recommendations

The present study has certain limitations that have to be considered within context. Foremost, certain demographic information regarding the participants was unknown due to the anonymous nature of the questionnaire and this made it difficult to determine whether the sample of the present study was disproportionately homogenous regarding gender and race. Future research studies should, therefore, consider including a more diverse population in order to determine the feasibility of social media use for weight loss to a broader population.

The online nature of the questionnaire resulted in a lack of interaction with the researcher and an inability from her side to probe or gauge non-verbal feedback from the participants. Some of the responses that certain participants provided were, therefore, short and vague. Selection bias may also have likely occurred, such as that the participants may have been more active on social media sites or more successful at or motivated to lose weight and were, therefore, more inclined to participate than non-respondents. Future research should explore whether highly successful people are disproportionately attracted to online social networks and whether online social networks have the potential to enhance weight loss in people who do not naturally gravitate to them and who may have low levels of motivation.

Another limitation of this study is the participants' perceptions regarding the impact of social media on their self-regulatory weight loss behaviours, which could not be objectively verified or measured. All of the variables in the present study were self-reported, which inherently may cause the misinterpretation of the data if the participants over-reported or were dishonest. The cause-and-effect relationship between exposure to online social support and the engagement in self-regulatory weight loss behaviours mentioned in the study, could also not be formally established because of this. Future research should, therefore, consider

making use of both subjective and objective means of measuring the impact of the social support obtained on social media sites on the individuals' self-regulatory weight loss behaviours.

Overall, future studies are needed to better comprehend the factors that serve as motivation and predict weight loss successes among young adults. A deeper understanding is also specifically needed for the manner in which social media use and perceived online social support mediate the enactment of health-related behaviours, especially weight loss initiatives.

Conclusion

The aim of the present study was to explore the impact of social media use and the social support obtained from this on the self-regulation of young South African adults' weight loss efforts. Based on the results, it is clear that the participants in this study not only perceive social media sites as an easily accessible and easy-to-use weight loss resource, but also as an effective, emotional and informational support resource that facilitates key self-regulatory skills, ultimately contributing to the pursuit and achievement of weight loss goals. Although certain challenges are also experienced, the participants have different ways in overcoming them; one notable strategy appears to be assimilation (Rothermund, 2007), especially in changing unrealistic weight loss guidelines and expectations to more realistic ones. This implies that they perceive their weight loss goals as important, to such an extent that they would not easily disengage from them, but also that they place a high premium on having control over goal attainment.

These results, therefore, support the literature that suggests that online weight loss communities can provide high amounts of social support to the users, which has the potential to facilitate their engagement in important weight control behaviours (Ballantine & Stephenson, 2011; Branscum et al., 2014; Hwang et al., 2010; Pagoto et al., 2014; Sanford, 2010). Although these findings are preliminary, they also offer a unique and contemporary

avenue for specifically young adults to obtain support for their weight loss efforts. This is significant, as little evidence regarding effective approaches for this population group in terms of weight loss is available (Svetkey et al., 2015). Incorporating online social support networks in weight loss intervention studies and structured weight loss programmes, based on the results of this study, will, therefore, likely result in more effective weight loss and weight loss maintenance among young adults.

In conclusion, although the results of this study are preliminary, they suggest that the perceived informational and emotional social support obtained from social media sites may foster adaptive self-regulatory weight loss behaviours of young adults. This research study is subsequently believed to have contributed to an enriched understanding of online social support as a construct and the mechanisms through which social media use may foster more adaptive self-regulation among those looking to lose weight.

References: Chapter 2

Akers, J. D., Cornett, R. A., Savla, J. S., Davy, K. P., & Davy, B. M. (2012). Daily self-monitoring of body weight, step count, fruit/vegetable intake, and water consumption: a feasible and effective long-term weight loss maintenance approach. *Journal of the Academy of Nutrition and Dietetics*, *112*(5), 685-692.

Ballantine, P. W., & Stephenson, R. J. (2011). Help me, I'm fat! Social support in online weight-loss networks. *Journal of Consumer Behaviour*, *10*(6), 332-337.

Barnes, A. S., Goodrick, G. K., Pavlik, V., Markesino, J., Laws, D. Y., & Taylor, W. C. (2007). Weight-loss maintenance in African–American women: Focus group results and questionnaire development. *Journal of General Internal Medicine*, *22*(7), 915-922.

Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, *16*(6), 351-355.

Boyton, P. M., & Greenhalgh, T. (2006) Selecting, designing and developing your questionnaire. *British Medical Journal*, *13*(328), 5-12.

Branscum, P., Ling, C., & Wang, X. (2014). Social support and connectedness as predictors of weight control behaviours in online communities. *American Journal of Health Studies*, *29*(1), 24-33.

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. Sage Publications.

Brown, K., Ryan, R., & Creswell, D. (2007). Mindfulness: theoretical foundations and evidence for its salutatory effects. *Psychological Inquiry*, 18, 211-237.

Brownell, K. D. (2010). The humbling experience of treating obesity: Should we persist or desist? *Behaviour Research and Therapy*, *48*(8), 717-719.

Burke, L. E., Conroy, M. B., Sereika, S. M., Elci, O. U., Styn, M. A., Acharya, S. D., ... & Glanz, K. (2011). The effect of electronic self-monitoring on weight loss and dietary intake: a randomized behavioral weight loss trial. *Obesity*, *19*(2), 338-344.

Burke, L. E., Wang, J., & Sevick, M. A. (2011). Self-monitoring in weight loss: a systematic review of the literature. *Journal of the American Dietetic Association*, *111*(1), 92-102.

Butryn, M. L., Phelan, S., Hill, J. O., & Wing, R. R. (2007). Consistent self-monitoring of weight: a key component of successful weight loss maintenance. *Obesity*, *15*(12), 3091-3096.

Carels, R. A., Darby, L., Cacciapaglia, H. M., Konrad, K., Coit, C., Harper, J., ... & Versland, A. (2007). Using motivational interviewing as a supplement to obesity treatment: a stepped-care approach. *Health Psychology*, *26*(3), 369-380.

Carver, C. S. & Scheier, M. F. (1998). *On the Self-regulation of Behavior*. New York: Cambridge University Press.

Carver, C. S., & Scheier, M. F. (2004). *Self-Regulation of Action and Affect.* Handbook of self-regulation: Research, theory, and applications. London: Guildford Press.

Catenacci, V., Mitchell, N., Wyatt, H. R., & Hill, J. O. (2011). Obesity: overview of an epidemic. *The Psychiatric Clinics of North America*, *34*(4), 717-730.

Chen, Z. (2014). The Role of Informal Online Social Support In Facilitating Long-Term Weight Management: An Online Longitudinal Phenomenological Study.

Dahl, A. A., Hales, S. B., & Turner-McGrievy, G. M. (2016). Integrating social media into weight-loss interventions. *Current Opinion in Psychology*, *9*, 11-15.

Eastin, M. S., & LaRose, R. (2005). Alt. support: Modeling social support online. *Computers in Human Behavior*, *21*(6), 977-992.

Elfhag, K., & Rössner, S. (2005). Who succeeds in maintaining weight loss? A conceptual

review of factors associated with weight-loss maintenance and weight regain. *Obesity Reviews*, *6*(1), 67-85.

Eysenbach, G., Powell, J., Englesakis, M., Rizo, C., & Stern, A. (2004). Health related virtual communities and electronic support groups: systematic review of the effects of online peer to peer interactions. *British Medical Journal*, *328*(7449), 1166-1180.

Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: The impact of Facebook on young women's body image concerns and mood. *Body Image*, *13*, 38-45.

Faw, M. H. (2014). Young adults' strategies for managing social support during weight-loss attempts. *Qualitative Health Research*, *24*(2), 267-278.

Fitzsimons, G. M., & Bargh, J. A. (2003). Thinking of you: Non-conscious pursuit of interpersonal goals associated with relationship partners. *Journal of Personality and Social Psychology*, *84*(1), 148- 163.

Gallagher, K. I., Jakicic, J. M., Napolitano, M. A., & Marcus, B. H. (2006). Psychosocial factors related to physical activity and weight-losing overweight women. *Medicine and Science in Sports and Exercise*, *38*(5), 971-980.

Gibbs, G. R. (2008). *Analysing Qualitative Data*. London: Sage.

Gokee-LaRose, J., Gorin, A. A., & Wing, R. R. (2009). Behavioral self-regulation for weight loss in young adults: A randomized controlled trial. *International Journal of Behavioral Nutrition and Physical Activity*, *6*(1),10-21.

Gokee-LaRose, J. G., Leahey, T. M., Hill, J. O., & Wing, R. R. (2013). Differences in motivations and weight loss behaviors in young adults and older adults in the National Weight Control Registry. *Obesity*, *21*(3), 449-453.

Grounded Theory Institute, (2014, July 10). *The official website of dr. Barney Glaser and Classic Grounded Theory*. Retrieved from http://www.groundedtheory.com/

Hales, S. B., Davidson, C., & Turner-McGrievy, G. M. (2014). Varying social media post types differentially impacts engagement in a behavioral weight-loss intervention. *Translational Behavioral Medicine*, *4*(4), 355-362.

Heaney, C. A., & Israel, B. A. (2008). Social networks and social support. *Health Behavior and Health Education: Theory, Research, and Practice*, *4*, 189-210.

Henry, S. L., Rook, K. S., Stephens, M. A., & Franks, M. M. (2013). Spousal undermining of older diabetic patients' disease management. *Journal of Health Psychology*, *18*(12), 1550-1561.

Hwang, K. O., Ottenbacher, A. J., Green, A. P., Cannon-Diehl, M. R., Richardson, O., Bernstam, E. V., & Thomas, E. J. (2010). Social support in an Internet weight loss community. *Journal of Informatics*, *79*(1), 5-13.

Hwang, K.O., Etchegaray, J.M., Sciamanna, C.N, Bernstam, E.V., & Thomas, E.J. (2011). Structural support predicts functional social support in an online weight-loss programme. *Health Expectations*, *17*, 345-352.

Jane, M., Foster, J., Hagger, M., & Pal, S. (2015). Using new technologies to promote weight management: a randomised controlled trial study protocol. *Public Health*, *15*(1), 509-517.

Jasinska, A. J., Yasuda, M., Burant, C. F., Gregor, N., Khatri, S., Sweet, M., & Falk, E. B. (2012). Impulsivity and inhibitory control deficits are associated with unhealthy eating in young adults. *Appetite*, *59*(3), 738-747.

Jayanti, R. K., & Singh, J. (2010). Pragmatic learning theory: an inquiry-action framework for distributed consumer learning in online communities. *Journal of Consumer Research*, *36*(6), 1058-1081.

Kitsantas, A. (2000). The role of self-regulation strategies and self-efficacy perceptions in successful weight loss maintenance. *Psychology and Health*, *15*(6), 811-820.

Knobloch-Westerwick, S. (2015). Thinspiration: Self-improvement versus self-evaluation social comparisons with thin-ideal media portrayals. *Health Communication*, *30*(11), 1089-1101.

Krukowski, R. A., Harvey-Berino, J., Ashikaga, T., Thomas, C. S., & Micco, N. (2008). Internet-based weight control: the relationship between web features and weight loss. *Telemedicine and e-Health*, *14*(8), 775-782.

Langer , E. (2009) Mindfulness versus positive evaluation. In C.R. Snyder & S.J. Lopez. (Eds.), *Oxford Handbook of Positive Psychology* (2nd ed., pp. 709). Oxford University Press.

Lawrence, N. S., O'Sullivan, J., Parslow, D., Javaid, M., Adams, R. C., Chambers, C. D., ... & Verbruggen, F. (2015). Training response inhibition to food is associated with weight loss and reduced energy intake. *Appetite*, *95*, 17-28.

Lee, H. R., Lee, H. E., Choi, J., Kim, J. H., & Han, H. L. (2014). Social media use, body image, and psychological well-being: A cross-cultural comparison of Korea and the United States. *Journal of Health Communication*, *19*(12), 1343-1358.

Leahey, T. M., LaRose, J. G., Fava, J. L., & Wing, R. R. (2011). Social influences are associated with BMI and weight loss intentions in young adults. *Obesity*, *19*(6), 1157-1162.

Leggatt-Cook, C., & Chamberlain, K. (2012). Blogging for weight loss: Personal accountability, writing selves, and the weight-loss blogosphere. *Sociology of H & Illness*, *34*(7), 963-977.

Lewis, S., Thomas, S. L., Blood, R. W., Castle, D., Hyde, J., & Komesaroff, P. A. (2011). 'I'm searching for solutions': why are obese individuals turning to the Internet for help and support with 'being fat'? *Health Expectations*, *14*(4), 339-350.

Lincoln, Y., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Linde, J. A., Rothman, A. J., Baldwin, A. S., & Jeffery, R. W. (2006). The impact of self-efficacy on behavior change and weight change among overweight participants in a weight loss trial. *Health Psychology*, *25*(3), 282-291.

Maas, J., De Ridder, D. T., De Vet, E., & De Wit, J. B. (2012). Do distant foods decrease intake? The effect of food accessibility on consumption. *Psychology & Health*, *27*(2), 59-73.

Mabe, A. G., Forney, K. J., & Keel, P. K. (2014). Do you "like" my photo? Facebook use maintains eating disorder risk. *International Journal of Eating Disorders*, *47*(5), 516-523.

Mann, T., De Ridder, D., & Fujita, K. (2013). Self-regulation of health behavior: Social psychological approaches to goal setting and goal striving. *Health Psychology*, *32*(5), 487-498.

Maree, K., & Pietersen, J. (2016). Sampling. In K. Maree (Ed.), *First steps in research* (2nd ed., pp. 192-202). Pretoria: Van Schaik.

Martin, P. D., Dutton, G. R., & Brantley, P. J. (2004). Self-Efficacy as a predictor of weight change in African-American women. *Obesity*, *12*(4), 646-651.

Mata, J., Silva, M. N., Vieira, P. N., Carraça, E. V., Andrade, A. M., Coutinho, S. R., ... & Teixeira, P. J. (2011). Motivational "spill-over" during weight control: Increased self-determination and exercise intrinsic motivation predict eating self-regulation. *Health Psychology*, *28*(6), 709-716.

McLeod, J. (2001). *Qualitative Research in Counselling and Psychotherapy.* London: Sage.

Meier, E. P., & Gray, J. (2014). Facebook photo activity associated with body image disturbance in adolescent girls. *Cyberpsychology, Behavior, and Social Networking*, *17*(4), 199-206.

Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification:

dynamics of willpower. *Psychological Review*, *106*(1), 3-12.

Michie, S., Ashford, S., Sniehotta, F. F., Dombrowski, S. U., Bishop, A., & French, D. P. (2011). A refined taxonomy of behaviour change techniques to help people change their physical activity and healthy eating behaviours: The CALO-RE taxonomy. *Psychology & Health*, *26*(11), 1479-1498.

Moroshko, I., Brennan, L., & O'Brien, P. (2011). Predictors of dropout in weight loss interventions: a systematic review of the literature. *Obesity Reviews*, *12*(11), 912-934.

Napolitano, M. A., Hayes, S., Bennett, G. G., Ives, A. K., & Foster, G. D. (2013). Using Facebook and text messaging to deliver a weight loss program to college students. *Obesity*, *21*(1), 25-31.

Nederkoorn, C., Houben, K., Hofmann, W., Roefs, A., & Jansen, A. (2010). Control yourself or just eat what you like? Weight gain over a year is predicted by an interactive effect of response inhibition and implicit preference for snack foods. *Health Psychology*, *29*(4),389-393.

Newman, M. W., Lauterbach, D., Munson, S. A., Resnick, P., & Morris, M. E. (2011). It's not that i don't have problems, I'm just not putting them on Facebook: challenges and opportunities in using online social networks for health. In *Proceedings of the ACM 2011 Conference on Computer Supported Cooperative Work* (pp. 341-350).

Olander, E. K., Fletcher, H., Williams, S., Atkinson, L., Turner, A., & French, D. P. (2013). What are the most effective techniques in changing obese individuals' physical activity self-efficacy and behaviour: a systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, *10*(1), 29-36.

Olson, K. L., & Emery, C. F. (2015). Mindfulness and weight loss: a systematic review. *Psychosomatic Medicine*, *77*(1), 59-67.

Pagoto, S., Schneider, K.L., Jojic, M., DeBiasse, M., & Mann, D. (2013). Evidence-based strategies in weight-loss mobile apps. *American Journal of Preventive Medicine*, *45*(5), 576-582.

Pagoto, S., Schneider, K. L., Evans, M., Waring, M. E., Appelhans, B., Busch, A. M., ... & Ziedonis, M. (2014). Tweeting it off: Characteristics of adults who tweet about a weight loss attempt. *Journal of the American Medical Informatics Association*, *21*(6), 1032-1037.

Papies, E. K., & Hamstra, P. (2010). Goal priming and eating behavior: Enhancing self-regulation by environmental cues. *Health Psychology*, *29*(4), 384-388.

Patrick, K., Marshall, S. J., Davila, E. P., Kolodziejczyk, J. K., Fowler, J. H., Calfas, K. J., ... & Merchant, G. (2014). Design and implementation of a randomized controlled social and mobile weight loss trial for young adults (project SMART). *Contemporary Clinical Trials*, *37*(1), 10-18.

Pinkerton, S., Tobin, J.L., Querfurth, S.C., Pena, I.M., & Wilson, K.S. (2017). Those sweet, sweet likes: Sharing physical activity over social network sites. *Computers in Human Behaviour*, *69*, 128 – 135.

Poncela-Casasnovas, J., Spring, B., McClary, D., Moller, A. C., Mukogo, R., Pellegrini, C. A., ... & Amaral, L. A. N. (2015). Social embeddedness in an online weight management programme is linked to greater weight loss. *Journal of The Royal Society Interface*, *12*(104), 20140686.

Poobalan, A. S., Aucott, L. S., Precious, E., Crombie, I. K., & Smith, W. C. S. (2010). Weight loss interventions in young people (18 to 25 year olds): A systematic review. *Obesity Reviews*, *11*(8), 580-592.

Roach, J. B., Yadrick, M. K., Johnson, J. T., Boudreaux, L. J., Forsythe, W. A., & Billon, W. (2003). Using self-efficacy to predict weight loss among young adults. *Journal of the American Dietetic Association*, *103*(10), 1357-1359.

Rothermund, K. (2007) Hanging On and Letting go in the Pursuit of Health Goals: Psychological Mechanisms to Cope with a Regulatory Dilemma. In D. T. D. de Ridder & J. B. F. de Witt. *Self-regulation in Health Behavior* (pp. 217-241). Chichester: John Wiley.

Ryan, G. W., & Bernard, H. R. (2000). *Data Management and Analysis Methods.* Thousand Oaks, CA: Sage.

Sanford, A. A. (2010). "I can air my feelings instead of eating them": Blogging as social support for the morbidly obese. *Communication Studies*, *61*(5), 567-584.

Saperstein, S. L., Atkinson, N. L., & Gold, R. S. (2007). The impact of Internet use for weight-loss. *Obesity Reviews*, *8*, 459-465.

Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research Methods for Business Students*. 6th edition. London: Pearson Education Limited.

Schwarzer, R., & Fuchs, R. (1995). Changing risk behaviors and adopting health behaviors: The role of self-efficacy beliefs. *Self-efficacy in Changing Societies*, 259-288.

Shin, H., Shin, J., Liu, P. Y., Dutton, G. R., Abood, D. A., & Ilich, J. Z. (2011). Self-efficacy improves weight loss in overweight/obese postmenopausal women during a 6-month weight loss intervention. *Nutrition Research*, *31*(11), 822-828.

Silva, M. N., Vieira, P. N., Coutinho, S. R., Minderico, C. S., Matos, M. G., Sardinha, L. B., & Teixeira, P. J. (2010). Using self-determination theory to promote physical activity and weight control: A randomized controlled trial in women. *Journal of Behavioral Medicine*, *33*(2), 110-122.

Singh, K (2007). *Quantitative Social Research Methods*. London: Sage.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks: Sage.

Svetkey, L. P., Batch, B. C., Lin, P. H., Intille, S. S., Corsino, L., Tyson, C. C., ... & Gallis, J. A. (2015). Cell phone intervention for you (CITY): A randomized, controlled trial of behavioral weight loss intervention for young adults using mobile technology. *Obesity*, *23*(11), 2133-2141.

Teixeira, P. J., Going, S. B., Houtkooper, L. B., Metcalfe, L. L., Blew, R. M., ... & Lohman, T. G. (2008). Maintenance of weight-loss in overweight middle-aged women through the internet. *Obesity*, *16*(5), 1052-1060.

Teixeira, P. J., Silva, M. N., Mata, J., Palmeira, A. L., & Markland, D. (2012). Motivation, self-determination, and long-term weight control. *International Journal of Behavioral Nutrition and Physical Activity*, *9*(1), 22-34.

Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing*, *16*(2), 151-155.

Turner-McGrievy, G. M., & Tate, D. F. (2013). Weight loss social support in 140 characters or less: Use of an online social network in a remotely delivered weight loss intervention. *Translational Behavioral Medicine*, *3*(3), 287-294.

Walker, M., Thornton, L., De Choudhury, M., Teevan, J., Bulik, C. M., Levinson, C. A., & Zerwas, S. (2015). Facebook use and disordered eating in college-aged women. *Journal of Adolescent Health*, *57*(2), 157-163.

Wansink, B., & Chandon, P. (2006*).* Can "low-fat" nutrition labels lead to obesity? *Journal of Marketing Research*, *43*(4), 605-617.

Wardle, J., Haase, A. M., & Steptoe, A. (2006). Body image and weight control in young adults: international comparisons in university students from 22 countries. *International Journal of Obesity*, *30*(4), 644.

Webber, K. H., Tate, D. F., Ward, D. S., & Bowling, J. M. (2010). Motivation and its relationship to adherence to self-monitoring and weight loss in a 16-week Internet behavioral weight loss intervention. *Journal of Nutrition Education and Behavior*, *42*(3), 161-167.

Williams, G., Hamm, M. P., Shulhan, J., Vandermeer, B., & Hartling, L. (2014). Social media interventions for diet and exercise behaviours: A systematic review and meta-analysis of randomised controlled trials. *British Medical Journal*, *4*(2), 1-16.

Wing, R. R., & Jeffery, R. W. (1999). Benefits of recruiting participants with friends and increasing social support for weight-loss and maintenance. *Journal of Consulting and Clinical Psychology*, *67*(1), 132-138.

Wing, R. R., Tate, D. F., Gorin, A. A., Raynor, H. A., & Fava, J. L. (2006). A self-regulation program for maintenance of weight loss. *New England Journal of Medicine*, *355*(15), 1563-1571.

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: epistemological, theoretical and methodological differences. *European Journal of Education*, *48*(2), 311-325.

CHAPTER 3: CRITICAL REFLECTION

In this section, a discussion of the strengths and limitations of the research process and the researcher's personal reflection of the experience of the complete research process is provided.

Critical Reflection

A personal critical reflection of the research process, including the decision making, recruitment, data collection and data analysis processes and the interpretation of the research findings, is discussed.

The decision-making process

The research topic: The researcher and her supervisor shared a mutual interest in self-regulation before they embarked on this research endeavour. Choosing self-regulation as their primary focus of investigation, therefore, came relatively easily. However, deciding which specific area of self-regulation to explore required a more sequential and time-consuming process. The researcher and her supervisor first consulted the literature in order to identify understudied topics relating to self-regulation (Ritchie, Lewis, Nicholls & Ormston, 2013). It became evident from this review that weight loss is a pertinent and global struggle (Centers for Disease Control and Prevention, 2012), which is largely dependent on self-regulatory skills (Carver & Scheier, 2004). The research topic, therefore, started to gravitate towards the association between weight loss and self-regulation.

Consulting literature regarding self-regulation and weight loss further, it became evident that various weight loss studies were focusing on the link between social support, weight loss and self-regulation (Barnes et al., 2007; Gallagher et al., 2006; Thomas et al., 2008). Their findings, however, were starting to yield more and more evidence regarding the

negative impact that in-person social support may have on the individuals' self-regulatory weight loss behaviours. There were also few research initiatives exploring other alternatives, such as online support networks (Branscum, Ling & Wang 2014). When the researcher and her supervisor considered the large number of young adults who are gaining weight rapidly and struggling to lose it (Nelson et al., 2008) and the manner in which this population group have incorporated social media usage into their daily lives (Vaterlaus, Patten, Roche & Young, 2015), they narrowed their investigation to exploring the perceived link between weight loss, self-regulation, online social support and social media use, specifically as it relates to young adults.

The research design: An exploratory qualitative research design was specifically chosen by the researcher and her supervisor, as limited information was available on their topic of investigation (Saunders, Lewis & Thornhill, 2012). The researcher and her supervisor were also interested in young adults' *personal* experiences and thoughts regarding the manner in which they perceive social media use to impact on their self-regulatory weight loss behaviours (Yilmaz, 2013). An exploratory qualitative research approach was, therefore, deemed appropriate for this study, as it may facilitate insight into an understudied phenomenon and may allow a deeper understanding of an individual's emerging perceptions and experiences (Mitchell & Jolley, 2010). Since the participants perceive social media use as significant to their weight loss behaviours, future studies may begin quantifying and empirically testing this in order to objectively measure the true extent to which online support impacts on the participants' self-regulatory skills.

Participants

The participants of this study consisted of Afrikaans- and English-speaking South African individuals, between the ages of 18 and 30, who make regular use of social media

sites in order to obtain social support for their weight loss efforts. Owing to the fact that the participants only had to fulfil a specific inclusion criterion and that the researcher never came in physical contact with them, certain demographic details regarding the participants, such as race and gender, remain unknown. It was, therefore, difficult for the researcher to ascertain whether the sample was too homogenous. The sample of this study is also small (15 participants), which is ascribed to a low response rate. This also had a negative impact on the generalisability of the results of the study (Shen et al., 2011). The total number of the participants is still, nevertheless, considered an acceptable sample size for qualitative research (Guest et al., 2006) and allowed for more rich data that could be analysed more comprehensively and in depth.

Data Collection

The website *SurveyMonkey* was used to construct the online open-ended questionnaire that served as the data collection method. This website is an online survey development cloud-based software system, founded by Ryan Finley in 1999. It offers its users the opportunity to construct online surveys containing both closed- and open-ended questions. The researcher spent a great amount of time creating her own personalised online open-ended questionnaire on this website. This posed unique challenges as the questionnaire had to be password-protected and personalised to include an electronic ICF in order to fulfil certain ethical requirements.

The questions that were included in the open-ended questionnaire were formulated following a systematic process in which the researcher and her supervisor identified, included and excluded possible feasible open-ended questions. Viable questions became apparent after consulting the literature focusing specifically on social media sites and weight loss behaviour (Harvey-Berino et al., 2010; Pagoto et al., 2014; Sanford, 2010) in addition to literature regarding the formulation of open-ended questionnaires (Boynton & Greenhalgh,

2006; Brinkmann, 2014; Turner, 2010). Reviewing this literature assisted the researcher and her supervisor in formulating questions that could capture the essence of the impact of social media sites on self-regulatory weight loss behaviours, which was in line with the guidelines of open-ended questionnaires. However, these questions were also given to an independent clinical psychologist in order to allow the objective review of its face validity.

The open-ended online questionnaire allowed the researcher to gather data in the participants' own words, with little structure imposed by her, regarding a topic for which there is a limited basis (Boyton & Greenhalgh, 2006). Data saturation could also ultimately be achieved through this data collection method, meaning that most perceptions regarding the research question were uncovered (Francis et al., 2010). It also offered numerous benefits for the researcher, including time-efficiency, large geographic coverage, lack of interviewer bias, reduction of costs, respondent anonymity and convenience (Evans & Mathur, 2005).

The online nature of the questionnaire, however, also posed several limitations, as the researcher could not be present while the participants were answering the questionnaire, which made probing, observations, rapport building and the clarification of any uncertainties difficult. The latter could have affected the quality of the findings of the study (Van Gelder, Bretveld & Roeleveld, 2010). The present study also included only one data collection method due to the anonymous manner in which the questionnaire was conducted. Different data collection methods, such as focus groups, journal keeping and individual interviews, would, however, have increased the trustworthiness of the findings of the study (Cope, 2014).

Data analysis and interpretation

It was important for the researcher to spend ample time with the participants' responses in order to achieve a genuine sense of familiarity with the data (Braun & Clarke, 2013). Identifying initial codes came relatively easy, as there were many repetitive patterns in

the data set. Organising subthemes under the main themes proved more of a challenge, as many of the themes overlapped. Identifying accurately which data fitted under which specific self-regulatory subtheme also required intense focus. Reviewing and naming the themes were also time-consuming, as it was essential for the researcher to convey the correct messages gained from the data. Mind maps and various coloured pens and highlighters were used to assist with this.

Noble and Smith (2015) highlight the importance of taking the researcher's impact into consideration to try and account for personal bias as far as possible. Given the fact that the researcher could anticipate some of the results, she had to remain mindful of her possible subjective impact on the interpretation of the findings of the study. In order to address this, the researcher had to employ a process known as 'bracketing' to ensure that no personal bias played a role in the interpretation of the data. Bracketing is a method used in qualitative research, which enables the researcher to lessen the potentially damaging effect of preconceptions related to the research that may taint the research process, subsequently increasing the rigour of the project (Tufford & Newman, 2012).

Data was coded in consultation with the supervisor, as well as independently by the co-coder. The two sets of data analyses were ultimately compared in order to determine whether the participants' meanings were adequately captured and whether the results were free of any personal bias which may have negatively affected the accuracy of the results (Tomas & Magilvy, 2011).

Results

In order to understand the results of the study against the backdrop of other relevant studies globally, the researcher had to conduct a thorough review of all possible studies pertaining to weight loss, self-regulation and support (both in person and online) that she

could find in the university's database (Cals & Kotz, 2013). This meant that sufficient time had to be spent to compare the results of this study against those of others in an effort to determine to what extent the research findings agree with or differ from the current literature (Cals & Kotz, 2013). The researcher also had to ultimately decide which corresponding and conflicting evidence proved relevant, considering the aims of the study.

Regardless of a few limitations, the approach and methodology applied within this research study proved to be adequate in answering the research question and in attaining the aims and objectives of the study. Overall, this study generated significant results, which are believed to have made a positive contribution to self-regulation, weight loss and online support literature, specifically in the South African context. Literature regarding weight loss and self-regulation in young South African adults is still in its infancy and more research endeavours are, therefore, needed regarding this phenomenon, especially longitudinal studies focusing on weight loss maintenance (Branscum et al., 2014).

Personal reflections

This research process was a challenging and daunting task, especially considering the time constraints with which I was faced. Having had conducted a research study of this magnitude in my honours year, however, proved beneficial. I felt relatively competent to conduct a literature review, to recruit the participants and to collect and analyse the data. I also had a clear understanding of the ethical issues pertaining to a qualitative research study. The specific data collection method used (i.e. online open-ended questionnaires) was a novel experience. Creating and managing my own online open-ended questionnaire proved to be challenging. It created various implications in terms of ethics, and special adjustments had to be made, such as creating an electronic ICF, which required training in specific web-based features.

Not being able to interact with the participants of this study directly also proved to be a drawback for me. In my previous research endeavour, I was able to build a rapport with the participants and to experience their gestures and non-verbal cues first-hand, given the nature of the face-to-face interviews I conducted. Although the online questionnaire used in my current research study benefitted me in several aspects, I felt that certain personal experiences were missing because of this. I would, therefore, consider using a mixed method approach in my following research project.

Although I am based in Pretoria and my supervisor is in Potchefstroom, we arranged to have regular contact. This assisted me to a great degree, as it allowed me to be guided and to gain reassurance in the manner in which I was conducting the research methods. Especially having been able to compare my data analysis against his, gave me confidence in the credibility of the interpretations of my research findings. His opinions, feedback and suggestions, to a large extent, improved my academic skills and enabled me to feel proud of the research document we have constructed.

"I gain weight and lose it again in inevitable cycles" – Gerard Depardieu. This is the direct quote of a famous actor's experience of weight loss. Knowing many young adults who struggle to lose weight, the research topic proved meaningful to me. Having experienced the manner in which these individuals continue cycles of losing and picking up weight first-hand and how they struggle to persist in their efforts, I wanted to explore a unique way of assisting them with the self-regulation of their weight loss initiatives. Investigating the feasibility of technology-based tools proved especially relevant, as I have also observed the manner in which young adults have begun structuring their functioning around electronic media.

It is, therefore, my hope that the findings of this study will assist these young adults and other individuals looking to lose weight by offering them a novel and relevant approach

to obtain effective support for their weight loss efforts. Furthermore, I hope that the knowledge gained from this study may lead to other studies being conducted to further explore some identified domains.

Overall, this research project was an enriching experience. It has reignited my curiosity regarding those aspects of human behaviour, emotions and thoughts that require further investigation. I would like to end with a quote that I feel encompasses my experience of the research process:

"Research is to see what everybody else has seen and to t`hink what nobody else has thought"

– Albert-Szent-Gyorgyi

References: Chapter 3

Barnes, A. S., Goodrick, G. K., Pavlik, V., Markesino, J., Laws, D. Y., & Taylor, W. C. (2007). Weight-loss maintenance in African-American women: Focus group results and questionnaire development. *Journal of General Internal Medicine*, *22*(7), 915-922.

Boyton, P.M., & Greenhalgh, T. (2006) Selecting, designing and developing your questionnaire. *British Medical Journal, 13*(328), 5-12.

Branscum, P., Ling, C., & Wang, X. (2014). Social support and connectedness as predictors of weight control behaviours in online communities. *American Journal of Health Studies*, *29*(1), 24-33.

Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. Sage.

Brinkmann, S. (2014). Interview. In *Encyclopedia of Critical Psychology* (pp. 1008-1010). New York: Springer.

Cals, J. W., & Kotz, D. (2013). Effective writing and publishing scientific papers, part VI: Discussion. *Journal of Clinical Epidemiology*, *66*(10), 1064-1075.

Carver, C. S., & Scheier, M. F. (2004). *Self-Regulation of Action and Affect.* Handbook of self-regulation: Research, theory, and applications. London: Guildford Press.

Centers for Disease Control and Prevention. (2012). Overweight and obesity. Retrieved from http://www.cdc.gov/obesity/

Cope, D. G. (2014, January). Methods and meanings: Credibility and trustworthiness of qualitative research. *Oncology Nursing Forum*, *41(*1),89-91.

Evans, J.R., & Mathur, A. (2005). The value of online surveys. *Internet Research*, *15*(2), 195-219.

Francis, J. J., Johnston, M., Robertson, C., Glidewell, L., Entwistle, V., Eccles, M. P., & Grimshaw, J. M. (2010). What is an adequate sample size? Operationalising data saturation for theory-based interview studies. *Psychology and Health*, *25*(10), 1229-1245.

Gallagher, K. I., Jakicic, J. M., Napolitano, M. A., & Marcus, B. H. (2006). Psychosocial factors related to physical activity and weight-losing overweight women. *Medicine and Science in Sports and Exercise*, *38*(5), 971-980.

Guest, Greg , Brunce, Arwen & Johnson, Laura (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, *18*(1), 59-82.

Harvey-Berino, J., West, D., Krukowski, R., Prewitt, E., VanBiervliet, A., Ashikaga, T., & Skelly, J. (2010). Internet delivered behavioral obesity treatment. *Preventive medicine*, *51*(2), 123-128.

Mitchell, M. L., & Jolley, J. M. (2012). *Research Design Explained*. Belmont, CA: Cengage Learning.

Nelson, M. C., Story, M., Larson, N. I., Neumark-Sztainer, D., & Lytle, L. A. (2008). Emerging adulthood and college-aged youth: an overlooked age for weight-related behavior change. *Obesity*, *16*(10), 2205-2211.

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-Based Nursing*, 1-3.

Pagoto, S., Schneider, K. L., Evans, M., Waring, M. E., Appelhans, B., Busch, A. M., ... & Ziedonis, M. (2014). Tweeting it off: Characteristics of adults who tweet about a

weight loss attempt. *Journal of the American Medical Informatics Association*, *21*(6), 1032-1037.

Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (Eds.). (2013). *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: Sage.

Sanford, A. A. (2010). "I can air my feelings instead of eating them": Blogging as social support for the morbidly obese. *Communication Studies*, *61*(5), 567-584.

Saunders, M., Lewis, P. & Thornhill, A. (2012). *Research Methods for Business Students* (6th edition). London: Pearson Education Limited.

Shen, W., Kiger, T. B., Davies, S. E., Rasch, R. L., Simon, K. M., & Ones, D. S. (2011). Samples in applied psychology: over a decade of research in review. *Journal of Applied Psychology*, *96*(5), 1055-1064.

Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing*, *16*(2), 151-155.

Thomas, S. L., Hyde, J., Karunaratne, A., Kausman, R., & Komesaroff, P. A. (2008). " They all work... when you stick to them": A qualitative investigation of dieting, weight loss, and physical exercise, in obese individuals. *Nutrition Journal*, *7*(1), 1-17.

Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative social work*, *11*(1), 80-96.

Turner III, D. W. (2010). Qualitative interview design: A practical guide for novice investigators. *The Qualitative Report*, *15*(3), 754-760.

Van Gelder, M. M., Bretveld, R. W., & Roeleveld, N. (2010). Web-based questionnaires: the future in epidemiology? *American Journal of Epidemiology*, *172*(11), 1292-1298.

Vaterlaus, J. M., Patten, E. V., Roche, C., & Young, J. A. (2015). Getting healthy: The perceived influence of social media on young adult health behaviors. *Computers in Human Behavior*, *45*, 151-157.

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: epistemological, theoretical and methodological differences. *European Journal of Education*, *48*(2), 311-325.