



**A POSITIVE PSYCHOLOGICAL APPROACH
TO WEIGHT LOSS AND MAINTENANCE IN OBESE AUSTRALIANS**

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SUMMARY

Obesity is a global problem affecting the biopsychosocial well-being of approximately six hundred million adults globally (WHO, 2015). To date, the deleterious effects of obesity have attracted a wide range of treatment approaches with two things in common. The first is an almost exclusive focus on pathology in an attempt to alleviate distress and dysfunction, and the second is a high rate of relapse. This has prompted scientists to explore new approaches to facilitate weight loss, to prevent weight regain, and to improve quality of life for people struggling with weight related issues. Over the last two decades the field of positive psychology has sought to balance and enhance our traditional approach to disease management via promotion of positive thinking, feeling and behaviour across a broad range of disorders. Positive psychotherapeutic strategies have been applied to mood disorders, psychiatric illness and addictive disorders with results suggesting improvement in biopsychosocial resources and health (Kahler, Spillane, Day, Clerkin, Parks, Leventhal & Brown, 2014; Meyer, Johnson, Parks, Iwanski & Penn, 2012; Ruini & Fava, 2009; Seligman, Rashid, & Parks, 2006). However, the application of a positive psychological approach to weight loss and maintenance in obese populations is lacking.

This body of work explores the hypothesis that obese populations may be languishing, that is experiencing a state of incomplete mental health characterised by low levels of mental illness and low levels of subjective well-being (e.g. Keyes & Lopez, 2002). In this broad context, subjective well-being refers to perceptions and evaluations of one's life in terms of affect (the presence or absence of positive feelings about life), psychological health (the presence or absence of positive functioning in life) and social functioning (self-assessed quality of societally based experiences (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi & Biswas-

Diener, 2010; Keyes & Magyar Moe, 2003; Keyes, Shmotkin & Ryff, 2002). We also posit that the experience of obesity, characterised by negative mood states, a lack of functioning and social isolation (Thomas, Hyde, Karunaratne, Herbert & Komesaroff, 2008), is sufficiently negative to create unhelpful physiological changes, and a narrowing of functional behavioural strategies serving to deplete personal resources and motivation (Fredrickson, 1998; Fredrickson & Joiner, 2002; Lazarus, 1991; Levenson, 1994). To the best of the researcher's knowledge this thesis is among the first to consider positive mental health variables as viable adjuncts to traditional strategies, in the service of improving outcomes in this often treatment resistant population.

Given this is a new area of research, a mixed-methodology involving qualitative and quantitative analyses served to inform and guide each study, and to provide a deeper insight into how a positive psychology approach might benefit obese populations. The results of three independent but related studies are presented in two published and two submitted papers.

Paper one (*study one*) reports the results of a qualitative study exploring the 'lived' experience of obese Australians ($N = 22$) during weight loss attempts, interpreted with reference to the positive psychological concepts of Subjective Well-being (SWB), Psychological Well-Being (PWB) and Social Well-Being (SLWB). Findings suggest the majority of our participants were languishing during their weight loss experiences, evidenced by a lack of domain specific SWB, and only four of the possible eleven domains of PWB and SLWB

required for complete mental health being subjectively endorsed. This provided preliminary support for our hypothesis that a state of languishing may serve to contribute to, or maintain obesity in some individuals. A benefit associated with the qualitative approach involved the ability to identify the presence of positive psychological variables existing outside of the weight loss domain. This served to contribute a more balanced and realistic picture of the obesity experience than traditional, domain specific quantitative approaches could offer in this early stage of investigation. Themes promoting positive mental health were identified including Motivational Forces and Self-View, indicating strengths, gratitude, hope and life satisfaction may potentially be useful areas to direct further investigation.

Paper two (*study two*) served to quantitatively verify and extend our preliminary findings, providing a vehicle through which we could identify potential differences in positive psychological correlates across weight categories including normal, overweight and obese classes one to three. The main findings of this cross-sectional study using an online survey method (n=260) suggest the category two and three obese demonstrated significantly lower scores on flourishing in comparison with the normal and overweight. The class three obese also demonstrated higher depression, and lower scores on agency, gratitude, positive affect and strength use in comparison with the normal and overweight. Results provided preliminary support for the hypothesis that a lack of well-being may contribute to atypical BMI. In addition, the treatment needs of obese categories may differ, requiring specifically targeted interventions to improve treatment outcomes.

Paper three (study two) extended our previous findings and the maintenance literature by comparing the well-being characteristics of successful weight maintainers (intentional loss of at least 10% body weight for at least 12 months) and non-maintainers, using the same dataset. Results from this cross-sectional online survey ($N = 250$) suggest maintainers reported more frequent positive mood states and agentic thinking, both correlates of psychological health. They also engaged in more frequent diet, exercise and self-weighing behaviours in comparison with non-maintainers. However, despite achieving the physical health benefits assumed to be present post 10% weight loss, maintainers did not report being happier or more satisfied with life. Incorporating results from paper two, it was hypothesised that perhaps for some people, achieving weight in the 'normal range' (found to be associated with a flourishing state) may be more important than the achievement of successful weight maintenance. It was also hypothesised that the resultant dissatisfaction may serve to interfere with the sustained goal directed behaviour required for continued weight maintenance, perhaps leading to relapse.

Based on results from papers two and three, it was proposed that for some obese individuals a Positive Psychological Intervention (PPI) may enhance well-being via broadening and building behavioural repertoires to achieve happiness, and perhaps as a by-product of this process, achieve weight loss.

Paper four (*study three*) reports the results of a pilot uncontrolled study ($N = 4$) using a mixed methodology investigating the potential benefits of a brief PPI teaching Hope, Strengths and Gratitude to women with class two and three obesity. Four participants were assessed using a mixed-methods approach at baseline, post module, post course and at 3-

month follow-up to establish the feasibility, tolerability, teachability and impact of the intervention on a number of outcome variables including weight, Subjective and Psychological Well-Being and mood states. Results indicated the program was teachable, feasible and tolerable. In addition, preliminary data based on reliable and clinically significant change analyses suggest the majority of women experienced short-term improvements in weight loss, positive mood states, flourishing and satisfaction with life, as well as a reduction in depression, anxiety and stress. These results provided preliminary support for the hypothesis that for some people, the promotion of positive psychological health may be helpful to sufficiently broaden and build behaviour conducive to maintainable weight loss success.

The current findings are new, and may be useful for the development of strategies to promote well-being in obese populations. First, the state of languishing may be an important contributor to the failure of current biopsychosocial approaches to facilitate weight loss and maintenance behaviour in the obese, and requires further consideration. A more balanced approach promoting the health and psychological benefits of well-being may serve to encourage flourishing, leading to improvements in outcomes in this often treatment resistant population. Second, the treatment needs of languishing individuals may differ across weight categories requiring specifically targeted interventions to achieve successful outcomes. Third, the understanding that the health benefits achieved via the recommended 10% weight loss may be insufficient as a stand-alone measure of success in weight maintenance. In addition, the facilitation of flourishing despite current atypical weight may serve to assist with motivation to continue with maintenance behaviour, improving

physiological reactivity and mood to reduce the risk of relapse. Fourth, specifically targeted Positive Psychological Interventions (PPI) promoting well-being may promote short-term improvements in the positive mental health, happiness and weight loss outcomes of the class two and three obese, beyond the benefits traditional strategies can offer, making PPI's a potentially useful adjunct to current treatment strategies. Further investigation and refinement of these preliminary findings may promote sustainable weight loss, and reduce the burden of disease and illness currently experienced by six hundred million individuals worldwide (WHO, 2015).

DECLARATION

I certify that this submission is my own work and contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. All work contained in the submission was initiated, undertaken, and prepared within the period of candidature. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide. I give consent to this copy of my thesis when deposited in the University Library, being made available for loan and photocopying, subject to the provisions of the Copyright Act 1968. I also give permission for the digital version of my thesis to be made available on the web, via the University's digital research repository, the Library Search and also through web search engines. The author acknowledges that copyright of published works contained within this thesis (as listed below) resides with the copyright holder(s) of those works.

Two papers have been published, the first in the *Obesity Research and Clinical Practice* Journal and the second in the *Clinical Psychologist*. The remaining two papers are currently being considered for publication in the *Australian Journal of Psychology* and *Obesity*.

Robertson, S., Davies, M., & Winefield, H. (2015a). Why weight for happiness? Correlates of BMI and SWB in Australia. *Obesity Research & Clinical Practice*. doi.org/10.1016/j.orcp.2015.04.011

Robertson S., Davies, M., & Winefield, H. (2015b). Positive Psychological correlates of successful weight maintenance in Australia. *Clinical Psychologist*. doi: 10.1111/cp.12073

Robertson S., Davies, M., & Winefield, H. (2015c). The Well-Being of obese Australians during weight loss attempts : A Qualitative and Positive Psychological approach' Manuscript submitted for publication.

Robertson S., Davies, M., & Winefield, H. (2015d). A mixed method feasibility and tolerability study of a brief, group based positive psychology intervention for obese women. Manuscript submitted for publication.

Sharon Robertson

Signed:

Date: 09/11/2015

ACKNOWLEDGEMENTS

Throughout my Clinical Masters training undertaken at the University of Adelaide (2007), the importance of the Scientist Practitioner model was regularly advocated. This model of training promoted the benefits of empirical research as a necessary and valuable foundation for applied clinical practice. It also called for clinical experiences to inform pertinent research questions, and this has led to my current contribution in the service of advancing knowledge in the treatment of obesity.

I would like to acknowledge my obese clients in clinical practice who sought me out for help in their battle to lose weight and become 'happier' human beings. It highlighted the many problems associated with weight loss, and inspired me to find new ways to meet their treatment goals. It also enabled me to fulfil the 'scientist' component of the model upon which my foundation skills were built.

My primary supervisor Dr Matthew Davies helped to formulate the main objectives of this body of work, ensuring conceptual clarity and the production of original, authentic and high quality research throughout my candidature. Special thanks must also go to my second supervisor Professor Helen Winefield, for her ability to keep me grounded, productive and enthusiastic throughout the arduous and invaluable experiences I have enjoyed over the last four years. In completing this course of study, I believe I have understood the true meaning of the undertaking, that is, my contribution to the scientific community is ultimately very,

very, small... and valuable, as it will hopefully encourage others to advance, refine and perfect the scientific models required for best practice in the treatment of obesity.

To complete a Doctorate, regardless of field of interest is an exercise in pure determination, perseverance and humility. The value of feedback from peers is immeasurable, as is my respect for those who have achieved publication in their chosen field. I now understand the true value of scientific rigour, and through the article rewrite process have learned much regarding the tailoring of research to the specific needs of both the readership and editorial requirements. I can say without a doubt this has been a character defining experience that I would not recommend for the faint hearted... but would recommend nonetheless!

DEDICATIONS

To my three sons for their patience, understanding and belief in my ability to complete this research. It has certainly impacted on time spent enjoying extra-curricular activities, however their collective ability to see the 'bigger picture' and value of this work for me both professionally and personally, reflects what amazing young men they are... and are destined to become. We are equally proud of each other.

My parents, whose constant support in life and eagerness to spend extra time with their grandchildren was invaluable and allowed me to study in peace. Thank you.

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KEY TO ABBREVIATIONS

AHS	Adult Hope Scale
ANOVA	Analysis of Variance
BMI	Body Mass Index
CSM	Complete State Model
DASS-21	Depression, Anxiety and Stress Scale (short form)
FS	Flourishing Scale
GQ-6	Gratitude Questionnaire (short form)
HIV	Human immunodeficiency virus
HREC	Human Research Ethics Committee
M	Maintainer
NM	Non-Maintainer
NHMRC	National Health and Medical Research Centre
NWCR	National Weight Control Registry
OTHQ	Orientations to Happiness Questionnaire
PANAS	Positive and Negative Affect Scale
PWB	Psychological Well-Being
SLWB	Social Well-Being
SPSS	Statistical Package for the Social Sciences
SWLS	Satisfaction with Life Scale
SWB	Subjective Well-Being
WHO	World Health Organisation