Positive ageing: Views of the past, present, future and self and their associations with wellbeing in later life

Susan Jeanne Ferguson (Sue)

Bachelor of Arts (Psychology) Honours

Masters in Clinical Psychology

A thesis as partial fulfilment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Centre for Emotional Health and

Department of Psychology, Faculty of Human Sciences

MACQUARIE UNIVERSITY

Sydney, Australia

March 2017

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

The aim of this thesis was to investigate psychosocial resources associated with wellbeing in older adults, particularly those related to perceptions of specific time periods. The novel contribution of the thesis is its examination of positive psychology constructs in the context of older adulthood and the integration of these with developmental theories, particularly Eriksonian theory, and with other related emerging areas such as the self-compassion and Acceptance and Commitment Therapy literatures. More specifically, this thesis explored the relationships of questionnaire measures of views of the future (optimism and hope), the past (accepting the past and ego integrity), the present (acceptance and experiential avoidance), the self (self-compassion), and other resources (perceived health, social support, finances and education) with both hedonic wellbeing and eudaimonic wellbeing among older adults. Hedonic wellbeing was conceptualised as positive and negative affect, and eudaimonic wellbeing as either purpose in life or the presence of a sense of meaning in life.

The thesis includes four quantitative papers based on four separate cross-sectional surveys of older adults. Participants were all aged from 65 to 97 years. The first study examined optimism and wellbeing in older adults and explored the role of two potential mediators; the second study considered whether self-compassion was related to wellbeing; the third study explored whether accepting the past, which has been shown to be associated with depression in older adults, was also associated with positive aspects of wellbeing. The final study made a novel contribution in directly comparing the effects of a positive psychology construct (hope) with an Acceptance and Commitment Therapy concept (experiential avoidance) in predicting different aspects of wellbeing, and was also unique

in exploring whether hope or experiential avoidance were associated with positive outcomes such as positive affect and meaning in life in older adults.

The key findings were that views of the future, whether measured as hope or optimism, were associated with higher scores on positive aspects of hedonic wellbeing (positive affect) and eudaimonic wellbeing (purpose or meaning in life). Having a positive and accepting view of the past was also associated with both positive affect and meaning in life, as was having a positive attitude to the self (measured by self-compassion), which was also associated with greater ego integrity. On the other hand, self-criticism and being non-accepting of the past were associated with higher negative affect and with lower meaning in life. The findings for accepting the present were mixed. Avoidance of emotions and thoughts occurring in the present was strongly associated with higher negative affect, but not with more positive aspects of wellbeing. Acceptance as resignation to present events was not related to wellbeing. Implications of these findings for interventions with older adults are discussed, and suggestions for future research are presented.

CERTIFICATION OF CANDIDATURE

This thesis, entitled: "Positive ageing: Views of the past, present, future and self and their associations with wellbeing in later life", is submitted to Macquarie University in partial fulfilment of the requirements for the degree Doctor of Philosophy.

The research detailed in this thesis represents work undertaken while I was a PhD student (part-time) within the Centre for Emotional Health, Department of Psychology, Faculty of Human Sciences, Macquarie University from 2009-2017, under the supervision of Associate Professor Catherine McMahon. Candidate contributions specific to each study are detailed at the beginning of Chapters 3a, 4a, 5 and 6. Any help or assistance I received in the preparation of this thesis has been appropriately acknowledged. The work presented in this thesis is original. All information sources and the literature included are referenced appropriately throughout. Finally, I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

The research presented in this thesis involved voluntary participation. Ethics approval was provided by Macquarie University Human Research Ethics Committee. Appendix A shows approval for the dataset in Study 1 (Chapter 3a) - HE27MAY2005-R04123, 22 June, 2005; Appendix B is approval for Study 2 (Chapter 4a) - 5201100467, 22 June, 2011; Appendix C contains approval for Study 3 (Chapter 5) - 5201000420, 31 May 2010; Appendix D is the approval for Study 4 (Chapter 6) - 5201200213, 10 May, 2012.

Susan (Sue) J. Ferguson
Student ID: 86058304
March 2017

ACKNOWLEDGEMENTS

Firstly, I would like to thank all the hundreds of individuals who participated in the studies reported in this thesis, and the community and retirement community organisations that allowed us to recruit their members for our studies. Thank you all for your time and invaluable input.

Next I would like to thank Associate Professor Cathy McMahon, who has been exactly the supervisor I needed in every way. Cathy, thanks so much for your support, guidance, and superb editing. I could not have done it without you. You have such a kind and careful way of delivering criticism and suggesting revisions, my writing has improved under your wonderful care. You are the world's best supervisor in my opinion! Thanks very very much.

Also, thanks to Dr. Alan Taylor, who has been a supremely patient teacher to this statistics-wary and anxious PhD student. You explained all things statistical clearly, gently, and without being at all condescending. You also kept up the supervision for years after you retired, even when no longer paid to do so! Thanks so very much, which doesn't seem to cover it.

Thanks too to Dr. Wendy Phillips, my wonderful friend and colleague, your speedy and thoughtful work on the self-compassion paper was very much appreciated, but beyond that your ongoing friendship and support have been invaluable in keeping me going over the years this thesis has taken. Thanks so much Wendy.

Thanks too to Dr. Jill Duffield who very kindly proof-read much of this thesis and made excellent suggestions. Thanks for your help, and your friendship and support.

I would also like to thank all the Journal Editors, Sub-Editors, anonymous reviewers, proofing/typesetters who through their valuable input contributed to making the three published papers in this thesis better.

I would also like to acknowledge the wonderful resources and support provided by the PhD Older Wise Learners Facebook (OWLs) group and all its members. This is a supportive environment for older PhD students and was much appreciated.

I would also like to thank Dr. Barbara Griffin for stepping in to lend her name as the official extra supervisor required when Dr. Alan Taylor technically retired.

I would also like to thank Professor Kay Bussey, my work supervisor and mentor for all your support and encouragement over the years.

I would also like to give my thanks to the late Dr. Doris McIlwain, who was a supportive and encouraging informal mentor and friend through the early years of this PhD; and to Professor Amanda Barnier who kindly stepped in to fill some of this void when we were both missing Doris.

I would also like to thank Dr. Julia Irwin for providing much needed support and distractions in times of need; and thanks also to Ian Faulks and my other "study buddies" who were there through my PhD journey.

In addition, I'd like to thank my brother-in-law, Ric for building my standing-desk and setting up my computer, and for stepping in supporting Mum with endless paperwork when Dad died, so I was free to work on my thesis. Thanks too to both my sisters (Lyn and Fiona) for their support. To my other close friends who have sustained me with their support, hugs, food, swims and much more, much thanks to you all (Sue and Alan, Leisa and Bella, Nancy and Patrick, Maggie and Mike, and all the others who I will kick myself for forgetting).

Last, but by no means least, I would also like to thank my 4th year research students over the years who contributed to the collection of the data for this thesis. For the optimism study: Doone Richmond and Tanya Gebbie. For the self-compassion study: Elizabeth Figliuzzi and Melinda McAlpine. For the accepting the past study: Florence Choi, Tamara Brkic, and Richard Wilkinson. For the hope study: Naomi Miller-Powell, Lareena Brown, Amanda Davis, and Monica Liston.

DEDICATION

This thesis is dedicated to both my father, Dr. Bob Ferguson, and my mother, Margaret Ferguson. Both of you showed me the value of education and the importance of perseverance. You modelled positive ageing for me early on in my candidature and then showed me some of the harder aspects of ageing too, including being left behind. You always believed I could do this and that has helped so much.

Rest in Peace Dad, and hang in there Mum. This is for both of you with my love.

CHAPTER 1:
OVERVIEW

The wellbeing of older adults is important given the rapidly increasing numbers of older adults worldwide, as the Baby Boomer generation ages and moves into retirement (e.g. Australian Bureau of Statistics, 2013). Most studies in this age group have focused on depression and distress, or on the maintenance of wellbeing in the face of the challenges of ageing, rather than on factors that may promote and enhance the positive aspects of wellbeing. Similarly, theories of ageing have traditionally emphasised processes of adaptation to age-related changes, predominantly losses (Baltes & Carstensen, 2003; Brandtstadter & Renner, 1990; Heckhausen & Schulz, 1995).

This thesis is about positive ageing, a concept which developed out of dissatisfaction with the concept of successful ageing. Successful ageing, while being a first attempt to acknowledge and study the more positive outcomes possible in older adulthood (at least initially) required the absence of both chronic illnesses and cognitive decline (e.g. see Rowe & Kahn, 1987). Yet many older adults described themselves as aging successfully despite having chronic illnesses and functional decline, and their own definitions of successful aging included not merely health, but also activity, personal growth, happiness and contentment, relationships and independence (e.g., Knight & Ricciardelli, 2003). While there has been much research on the concept of successful ageing, including expanding its definition and looking at its correlates (e.g., Kim & Park, 2016; Rowe & Kahn, 2015), the area of positive ageing was chosen instead as the focus of this thesis. Positive ageing is a more recent development and is focused on hedonic (or subjective) and eudaimonic (or psychological) wellbeing outcomes, with less emphasis on physical health outcomes than is typical in successful ageing research. The area of positive ageing is an offshoot of the positive psychology movement and thus emphasizes the strengths acquired throughout the lifespan which help older adults optimize their well-

being while dealing with the transitions occurring in later life (Hill, 2011). Positive ageing, rather than successful ageing is therefore the focus of this thesis, in which the emphasis is on identifying factors associated with subjective and psychological wellbeing (rather than physical health) in older adults.

This thesis makes a novel contribution by taking a variety of concepts from the field of positive psychology and applying them to older adulthood. Positive psychology is about individual resources and strengths in the past, present and future and their relationship to valued subjective experiences, such as wellbeing (Seligman & Csikszentmihalyi, 2000). This is important because developmental theories such as Erikson's (Erikson, Erikson, & Kivnick, 1989) suggest that different resources and strengths may be important at different stages of the lifespan. This thesis, builds on the work of other adult developmental psychologists who have taken a positive approach, such as George Vaillant (e.g. Vaillant, 1994, 2000, 2012). The thesis, in order to develop ideas to promote positive ageing, attempts to identify some of the resources and strengths important for positive aspects of wellbeing in particular.

I'll now give a personal background to my interest in this area. As I was growing up we spent holidays with each of my sets of grandparents. I loved them dearly and watched closely as they aged. This led to a life-long interest in older adults. While an undergraduate I watched a number of age-related problems occur for my grandparents, and saw how Granny and Grandad dealt with these, including physical illness and growing disability. Grandad had attitude and was determined and feisty to the end. I went on to do my fourth year Honours thesis with older adults. After my Honours year I moved to Sydney and for a time moved in with my Nan (or Nanny as we called her) and Grandpop. Through the changes brought about through Nanny's sudden death, I saw my Grandpop cope with

determination and accept changes as they occurred, but not passively. He initially moved in with my parents and then, making new hopes and plans, made a decision for himself to move into a retirement community. For him, this was a somewhat unusual new version of being independent. I watched as he found new ways of doing what was important to him. He was able to garden again in the raised beds at the hostel, and to feel a sense of purpose and connection by helping the staff wipe dishes in the communal kitchen after meals. He was also what can best be described as a "grand-generative role model" to me, always believing in and supporting me and his other grandchildren. I also listened to him speak of the past and tell tales of raising my Mum and my uncle. I learned from my Mum how hard some of the times had actually been, particularly on the farm as they were growing up, and the wrench of losing the farm. Through this I learnt how positive and accepting views of the past can sustain a person later in life.

Following my Grandpop's death, I then watched as my parents began to age and develop new ways of being and doing after retirement. I watched my Dad, who when he first retired didn't know what to do with himself, begin to find new goals to work toward and to attain and to acquire new ways of relating to the world beyond his prior School Headmaster identity. My parents were now my models for positive ageing as they grew and changed, found increased happiness together, and literally climbed mountains, beating half of the Malaysian arm team to the top of Mt Kinabalu (the highest mountain in South-East Asia (despite having not been at all fit prior to retirement). My parents travelled extensively and with great joy in their retirement, remained active in the community, and continued to support our family members, including myself, through the challenges of divorce and ongoing illnesses. Similarly, my recently retired friends exhibit positive ageing in their ongoing wellbeing and their volunteer work for schools and community

organisations and caring for neighbours and friends. It is within this context that, at age 47, I decided to embark on this PhD thesis on positive ageing.

My parents and I aged as this thesis progressed and for me it has been an eight year journey of learning about both midlife and ageing. My PhD progress has been interrupted at various stages by developmentally expected and unexpected events such as illnesses and injuries to both my ageing parents and myself. I had caregiving duties from time to time, as most middle-aged people, women in particular, do. Early in my PhD I saw my mother cling to life in hospital having nearly died following major respiratory arrests, and saw her come fighting back. Midway through my PhD I saw my Dad's increasing frailty and his ongoing determination and hope following a major stroke and learning to walk again. In the last full year of my PhD I watched my father die, and spoke at his funeral. These experiences all reinforced my focus on developmental and positive psychology perspectives, and how the positive and negative sides of ageing both need to be explored, preferably together. So I developed too, as my PhD thesis did. These experiences also meant that the thesis developed over time and took eight years. As a consequence, some of the chapters were written and published some years ago, the first in 2010. Others have been spread out, with another in 2013 and one in 2016, with a final one yet to be submitted. The consequences of this for the structure of the thesis will be explained later.

I will turn back now to the origins of my research ideas. Through my previous training in clinical psychology, I became intrigued by the work of Arron Beck (Beck, 1976; Greenberg & Beck, 1989, 1990), particularly his argument that depression is characterised, and perhaps caused, by maladaptive schemas with negative views of the self, the world and the future (known as the cognitive triad). In this research I aimed to focus on the positive side of these views, based on positive psychology constructs and positive

wellbeing outcomes rather than depression (negative affect is also considered, however, to consider if the positive constructs also predict negative affective experiences). The focus is thus on resources or strengths that contribute to positive wellbeing outcomes and on exploring whether these same resources reduce negative affect (perhaps by providing alternate schemas to the depressive cognitive triad). This focus led to a decision to focus on positive views of the self (through the recent concept of self-compassion); of the world, through a focus on the present (via acceptance of the present circumstances, and acceptance versus avoidance of experiences, cognitions and emotions); and of the future (through optimism and hope). As older adults are the population of interest in this research, Erikson's views of development in older adulthood, particularly his focus on accepting the past were also included.

Concepts chosen were thus focused around dimensions of time and of acceptance. Views of the future, the past, and the present, including the self are examined. Related to these is the concept of acceptance, which Haase, Britt, Coward, Leidy and Penn (1992) define as: "a present-oriented activity requiring energy and characterized by receptivity toward and satisfaction with someone or something, including past circumstance, present situations, others and, ultimately, the self." (p. 144).

This thesis will thus focus on psychosocial factors associated with wellbeing which have the potential to promote positive ageing. There are two related theoretical frameworks underpinning the work: Erikson's developmental theory (Erikson et al., 1989), particularly his focus on adaptive ego strengths; and related concepts drawn from positive psychology (Seligman & Csikszentmihalyi, 2000) including the resources of optimism (Scheier, Carver, & Bridges, 2001), hope (Snyder, 2002), and self-compassion (Neff, 2009). In keeping with the themes of time and acceptance, the concept of accepting the past (from

Erikson's model) is another focus, as is acceptance or avoidance of emotions, a concept taken from the Acceptance and Commitment Therapy (ACT) literature (Hayes, 2004).

Erikson's theory was chosen as the main developmental focus for the thesis as it is seen as vital in the origins of positive psychology, particularly the construct of strengths (Vaughan & Rodriguez, 2013). Each of the studies in this thesis also includes some element from Eriksonian developmental theory (Erikson et al., 1989). Study 1, the optimism paper (Chapter 3a), examines the maintenance of an earlier strength, a sense of purpose in life in older adults after retirement. Study 2 (Chapter 4a) looks specifically at a new potential predictor of ego integrity, self-compassion. Study 3 (Chapter 5) looks at a key aspect of Erikson's final stage, accepting the past. Study 4 (Chapter 6) examines the role of another early strength, potentially reworked in older adulthood: hope.

Chapter 2 provides a broad framework of theory and research in these areas. To minimise overlap between chapter 2 and subsequent chapters, the more detailed empirical review related to each of the four studies is presented in the relevant subsequent paper (chapters 3a, 4a, 5 and 6) and in the two literature update chapters (chapters 3b and 4b), rather than in chapter 2. The four empirical research papers are then presented in the subsequent chapters in the form of manuscripts as they were when accepted for publication in the journals indicated, or in the case of paper 3 (Chapter 5), prepared for submission to a journal. They are each formatted according to the requirements of the specific journal though, for ease of reading, tables and figures are integrated, headings and subheading styles modified slightly, and reference format updated so they are all consistent. Note this means that the empirical papers have American spelling as required by the journals, whereas the remainder of the thesis has Australian spelling. This includes words used frequently throughout the thesis such as aging/ageing, and well-being/wellbeing, and

behavior/behaviour. Note that the names of theories and therapies are in italics, as are some key concepts (occasionally) for emphasis. There is necessarily some repetition and overlap of conceptual, theoretical, and empirical material in the different chapters.

In addition, and somewhat unconventionally, given the length of time since the early empirical chapters were published due to part-time candidature, a brief update of research relevant to the study findings is presented following the first two empirical chapters. In particular, those chapters (Chapters 3b and 4b) focus on recent research which has supported and extended these published results and also include any papers that may have produced contradictory findings. As quite a few subsequent papers cite one of these published papers, it did not seem appropriate to incorporate them into a reworked introduction to the papers. These sections between the main published empirical chapters also link and lead into the subsequent paper.

After the empirical chapters, the final chapter (Chapter 7) presents a general discussion of study findings and strengths and limitations of this research and implications of this research for theory and for interventions are then addressed.

CHAPTER 2:
CONCEPTUAL AND THEORETICAL BACKGROUND

Conceptual Background

Given well established demographic patterns with ever increasing numbers of older adults in Australia (Australian Bureau of Statistics, 2013) and the developed world (World Health Organization, 2015), this thesis focuses on identifying factors that contribute to *positive ageing*, which Bar-Tur and Malkinson (2014) argue "describes an individual acting on resources available to him or her to optimize the ageing experience" (p. 933).

This chapter will cover the conceptual and theoretical background to the studies included in this thesis. First key areas and concepts are presented, including *positive psychology* and particularly specific aspects of wellbeing. Then theories with a focus on *time* will be covered, particularly *developmental theories* relevant to later life (emphasizing Erikson). Next other developmental theories focused on adjustment to older adulthood will be presented, particularly those focused on *acceptance*. Positive psychology theories and constructs potentially relevant to wellbeing in ageing will then be presented (including *optimism*, *hope*, and *self-compassion*). Then *Acceptance and Commitment Therapy* (ACT) model's construct of *acceptance* versus *experiential avoidance* will be covered and applied to older adults. Finally the four empirical studies will be briefly outlined along with the research aims.

Most older adults have many years of active, productive, healthy and happy retirement. This often involves contributing to their families (e.g. through care of grandchildren) and the community (e.g. through formal or informal volunteering), as well as greater time to spend as they choose on hobbies and travel. In addition, older adulthood is a time of maintenance or gains in various areas of functioning, such as: in skills that are well developed and practiced, including those selected and those where compensation has been used to maintain functional outcomes (see the model of *Selective Optimization with*

Compensation, SOC below*);* increases in wisdom (see *Erikson's model* below); and changes in emotional and social functioning which contribute to maintained or improved wellbeing (as proposed in *Socioemotional Selectivity Theory*, SST*)*. There are, however, a range of individual challenges and losses which often accompany ageing (e.g. sensory losses and higher rates of chronic illnesses, see AIHW, 2016). Yet despite these increasing age-related challenges and losses and contrary to stereotypes, the proportion of the population with common mental illnesses, excluding dementia, decreases with age, with the rates being lowest in the over 65s (AIHW, 2016). Older adults also typically report higher levels of subjective wellbeing than other age groups, at least until around age 75 years (e.g. see Gana, Saada, & Amieva, 2015) and this maintenance of wellbeing in the face of increased losses with age is known as the *paradox of wellbeing* (Mroczek & Kolarz, 1998). In line with the World Health Organization definition of *health* as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (1948, p. 100), this thesis will thus focus on factors which may help us to understand this paradox, particularly those associated with the maintenance of positive aspects of wellbeing in older adults, rather than merely those leading to psychopathology or negative affect. This focus is important because the predictors of *ill-being* are not necessarily the same as those of *wellbeing* (Ryff et al., 2006). This thesis will focus on the role of specific *resources* in contributing to wellbeing in older adults, that is, specific aspects of an individual's characteristics and circumstances that facilitate adaptation to life and its challenges. In choosing which resources to focus on, this thesis draws on aspects of positive psychology and developmental psychology.

Positive Psychology

Positive psychology was formally identified as a specialization within psychology by Martin Seligman and Malay Csikszentmihalyi in 2000. They describe positive psychology as the study of "valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present)" (Seligman & Csikszentmihalyi, 2000, p. 5). The positive psychology approach was in part a reaction to what was seen as the dominant focus in psychology on psychopathology and on problems more broadly; on illness rather than wellness. While the study of positive aspects of human functioning substantially predated this, for example in humanistic (e.g. Maslow, 1968), existential (e.g. Frankl, 1963), and developmental psychology (e.g. Erikson, 1964; Vaillant, 1994), the field has grown substantially since 2000.

Central to positive psychology is the study of wellbeing (including positive emotions, meaning, and growth or benefit-finding), and its predictors such as positive attitudes (e.g. optimism and hope), resources (e.g. supportive relationships) and individual human strengths (or virtues). Understanding and encouraging engagement in the present is also a key focus of positive psychology. Positive psychology isn't "*happyology*", it isn't focused on unrealistic positive thinking, or on ignoring the valuable role that stress and negative emotions play in our experiences and growth (Diener, 2009). This thesis will focus, in particular, on wellbeing in older adulthood, and its potential predictors.

Wellbeing

Wellbeing has been conceptualized as a multidimensional construct comprising both *hedonic* (subjective) wellbeing, which focuses on happiness and pleasure; and eudaimonic (*psychological*) wellbeing, which focuses on the fulfillment of human potential

(Delle Fave, Brdar, Freire, Vella-Brodrick, & Wissing, 2011; Keyes, Shmotkin, & Ryff, 2002; Ryan & Deci, 2001). There is evidence that these two aspects of wellbeing are related but distinct (e.g. Chen, Jing, Hayes, & Lee, 2013; Compton, Smith, Cornish, & Qualls, 1996; Joshanloo, 2016; Keyes et al., 2002; McGregor & Little, 1998; Ryff & Keyes, 1995). While some, such as Kashdan and colleagues (Disabato, Goodman, Kashdan, Short, & Jarden, 2016; Kashdan, Biswas-Diener, & King, 2008), have argued that wellbeing is better viewed as a single dimension, they acknowledge that "Nevertheless, measures of eudaimonia may contain aspects of meaningful goal-directedness unique from hedonia." (Disabato et al., 2016, p. 471).

The developmental literature also distinguishes between the happy life (hedonia) and the good life (eudaimonia), that is, between happiness and maturity. King (King, 2001; King & Hicks, 2007), for example argues that while some theorists such as Erikson (1964) equate maturity with greater happiness or wellbeing, other developmental theorists such as Loevinger (1976) instead argue that with maturity we develop more complex ways of experiencing and understanding ourselves and the world, we thus essentially strive for meaning. The more mature person is thus capable of recognizing conflict and experiencing ambivalence and is therefore not necessarily happy. Meaning in life is thus also an important construct developmentally.

Affect

Hedonic (subjective) wellbeing covers both affect and satisfaction with life. Affect was chosen as the measure of subjective wellbeing partly because life satisfaction has an inbuilt aspect of satisfaction with aspects of the individual's past and may overlap with the aspects of perceptions of the past considered in the thesis, such as accepting the past. The thesis is more concerned with how views of time periods affect current aspects of

wellbeing. Furthermore, in investigating the structure of wellbeing, Keyes et al. (2002) found the highest loading for subjective wellbeing was positive affect, which further justifies the choice of positive affect, in particular, as a measure of hedonic wellbeing. Additionally, two elements of hedonic wellbeing, positive and negative affect have also been shown to be separate factors (Crawford & Henry, 2004; Watson & Clark, 1997), a result confirmed in older adults (Hilleras, Jorm, Herlitz, & Winblad, 1998; Kercher, 1992). Recent bifactor studies (Chen et al., 2013; Jovanovic, 2015; Leue & Beauducel, 2011) have also suggested that while there is a general factor representing common variance, positive and negative affect components can be distinguished. Some have taken this distinction further and argued that positive affect & negative affect are the subjective representations of two separate underlying psychobiological systems of approach and withdrawal (e.g. see Watson, Wiese, Vaidya, & Tellegen, 1999).

Positive affect. Positive affect is measured on a continuum and includes a range of positively valanced affective states reflecting enthusiasm and alertness, which at high levels indicate happiness, interest, and enthusiasm and at low levels indicate lethargy (Watson, Clark, & Tellegen, 1988). Positive affect is used as a measure of hedonic wellbeing in this thesis, because it has a present orientation (compared with a past orientation of life satisfaction) and it is comparatively modifiable. Positive affect tends to remain fairly stable with age until a slight decrease occurs in the oldest ages (Charles, Reynolds, & Gatz, 2001; Gana et al., 2015). Thus identifying variables that assist in the maintenance of positive affect in many older adults is of particular interest.

Negative affect is also measured on a continuum and includes a range of negatively valanced affects such as fear, anger, disgust and contempt: at high levels negative affect indicates general subjective distress, but at low levels calmness and serenity (Watson et al.,

1988). Negative affect is also included as a measure of hedonic wellbeing throughout this thesis, in all but the first study, because it allows for greater comparability of findings with past studies and a more complete picture of wellbeing in older adulthood. Negative affect is also potentially modifiable, and positive and negative affect may in fact have some different predictors (e.g. Cho, Martin, & Poon, 2013; Kunzmann, 2008). Longitudinal evidence, confirms a slight decrease in negative affect with age (Charles et al., 2001). Given the great variability among older adults, identifying resources and processes that assist in the reduction of negative affect in many older adults is also important from both research and clinical perspectives.

Eudaimonic wellbeing

While there is no agreed definition for psychological or eudaimonic wellbeing, discussions of this concept focus on the realization of a person's true potential, frequently including a focus on growth and purpose in life (Ryff, 1989b), and a sense of meaning in life (e.g. Delle Fave et al., 2011). Relatedly, Keyes et al. (2002) the highest loading for psychological/eudaimonic wellbeing was purpose in life. This further justifies the choice of purpose and meaning in life as the indicator of eudaimonic wellbeing in this thesis. Eudaimonia as a *subjective state* or what Huta (2017) terms *eudaimonic experience*, is the sense of self-realization and meaning and purpose derived from working toward valued goals. It is this aspect of eudaimonia which is used throughout this thesis and referred to as eudaimonia or psychological wellbeing.

Purpose is an *ego strength* derived from Erikson's developmental theory (Erikson, 1964; Ryff, 1989a). The concepts used to represent eudaimonia in this thesis are thus purpose in life and the related construct of meaning in life. Ryff defines a person with high purpose in life as "having goals, intentions, a sense of directedness, all of which contribute

to feelings of meaningfulness and integration about various parts of one's life" (Ryff, 1989a, pp. 43-44). Steger and Kashdan (2007) define meaning in life as "the extent to which people experience their lives as comprehensible and full of meaning and purpose, (and) is representative of psychological well-being" (p. 163). Steger's concept and measurement of presence of meaning in life (Steger, Frazier, Oishi, & Kaler, 2006) clearly overlaps considerably with Ryff's concept and measure of purpose in life (Ryff, 1989a). Meaning is a key aspect of eudaimonic wellbeing (Huta, 2017) and several prior studies have argued meaning can be used as a proxy for eudaimonia (Baumeister, Vohs, Aaker, & Garbinsky, 2013; Delle Fave et al., 2011; King & Hicks, 2012). Several approaches to the measurement of this construct were included in this research. Ryff's Purpose in Life subscale was used as the measure of eudaimonic wellbeing in the first study, and Steger's Presence subscale of his Meaning in Life Questionnaire (MLQ-P) was used in subsequent studies. In addition, one of the studies in this thesis (the self-compassion study in chapter 4a) adds a developmental variable, *ego integrity*, which could also be classifed as part of eudaimonic wellbeing.

Given disparate findings for age-related changes in sense of purpose (Springer, Pudrovska, & Hauser, 2011) and meaning in life (Battersby & Phillips, 2016; Steger, Oishi, & Kashdan, 2009), and the fact that any age-related changes seem to be small, it is important from a research and a clinical perspective to understand which factors can differentiate between those who maintain or gain purpose and meaning in life as they age and those who lose it. Further justification for the focus on particular wellbeing outcomes will now be presented.

Importance of positive affect and meaning in life

This thesis focuses on positive affect (happiness) and meaning (and purpose) in life, as both these aspects of wellbeing have been linked to not only lower levels of psychopathology, for example, depression in older adults (Van der Heyden, Dezutter, & Beyers, 2015) and better recovery from psychopathology (Garland et al., 2010); but also to better physical health and longevity (Diener & Chan, 2011; Kim, Sun, Park, & Peterson, 2013) and less functional decline (Hirosaki et al., 2013; Ostir, Ottenbacher, & Markides, 2004). Additionally both positive affect and meaning in life build social relationships (Salanova, Bakker, & Llorens, 2006; Stavrova & Luhmann, 2015) and increase the likelihood of participation in volunteer work (Ryff, 2014; Stavrova & Luhmann, 2015), both of which are important to ageing positively and productively. Also, as Kashdan and colleagues state: "focusing research attention on specific dimensions of well-being allows for greater clarity in communication, (*and*) facilitates comparison" (Kashdan et al., 2008, p. 228). With this in mind, I now turn to whether there are different predictors of hedonic and eudaimonic wellbeing, and/or of positive and negative affect.

Are there different predictors for hedonic and eudaimonic wellbeing?

Chen and colleagues (2013) found subjective (hedonic) and psychological (eudaimonic) wellbeing had some overlapping and some distinct predictors when general wellbeing was accounted for. Baumeister et al. (2013) have argued that thinking of the past and future helps in achieving success at meaningful pursuits in education, careers and long-term relationships. Their research showed that the more individuals thought about past struggles and challenges, the more meaningful their lives were, but the less happy they felt and proposed that reflections on the past contribute to temporal integration a component of meaningfulness. This clearly fits with Erikson's emphasis on the process of life review in older adulthood in order to achieve *ego integrity* and *wisdom* (Erikson, Erikson, &

Kivnick, 1989). Baumeister et al. (2013) further argue that "present events draw meaning from future ones" (p. 506). Future oriented thinking, and goal focus in particular should also help build a sense of purpose and meaning in life, but if goals are difficult to achieve, this may not necessarily contribute to more immediate positive affect.

It is therefore important to determine whether the psychosocial variables included in the current studies differentially relate to hedonic wellbeing and eudaimonic wellbeing. If differences are found, then this will facilitate the development of more specific intervention goals and strategies to improve wellbeing in older adults.

Are there different predictors for positive and negative aspects of wellbeing?

Along similar lines, the two elements of hedonic wellbeing, positive and negative affect may also have distinct correlates and predictors (e.g. see Cho et al., 2013; Kunzmann, 2008). Karademas (2007) for example, found optimism and emotion-focused coping predicted both positive and negative aspects of wellbeing, whereas self-efficacy and positive approach coping were more specifically predictive of positive wellbeing, and neuroticism and stress predicted negative aspects of wellbeing. In addition, health problems have been associated with negative affect, but not positive affect (Cho et al., 2013). This thesis will investigate whether other resources and processes are also differentially related to positive versus negative affect in older adults.

It is possible, for example, that resources or processes involving focus on negative aspects of life (such as life regrets/ lack of acceptance of the present or the past) may predict negative affect; whereas focusing on positives such as hopeful views of the future, may be linked more strongly to positive outcomes such as positive affect and meaning or purpose in life. Other psychological resources may be more broadly effective, for example,

acceptance may contribute to both an increase in meaning and a reduction in negative affect.

The above discussion shows an individual's propensity to take past and future perspectives (related to time) is a key context for understanding wellbeing in older adults. This thesis now moves to consider specific theories and considers time perspectives in some detail.

Theoretical Background

Erikson and related theories that focus on stages and time such as Vaillant are central to this thesis. Other psychological models which consider *time* will also be presented including *Zimbardo's model* of time perspective (Zimbardo, 1999) which argues focusing on specific time periods (past, present or future) has impacts on wellbeing, and the *Socio-emotional Selectivity theory* (Carstensen, Isaacowitz, & Charles, 1999) which focused specifically on reduced future time perspective and its impact on resources and processes in ageing. This will then be followed by coverage of other *developmental* theories focused on older adulthood and *adaptation to and acceptance of* age-related changes. These are the model of *Selective Optimization with Compensation* (SOC) (Baltes, 1997), the *Lifespan Theory of Control (Heckhausen & Schulz, 1995)*, and the *Dual Process model* (Brandtstadter & Renner, 1990) attempts to integrate these developmental models, such as the model of *Developmental Regulation across the Lifespan* (Haase, Heckhausen, & Wrosch, 2013).

Theories Incorporating a Focus on Time

Zimbardo's model of time perspective

Zimbardo (1999) defined time perspective as a relatively stable preference for focusing on a particular time period (the past, the present, or the future). He argued that how we view the past and the future influences our present actions and feelings. The Past-Positive time perspective is described as "relating to a warm, embracing view of the past, often sentimental and *predominantly accepting*" (Stolarski, Matthews, Postek, Zimbardo, & Bitner, 2014, p. 811, emphasis added), whereas those with a strong Past-Negative orientation view the past in an aversive, negative way. Desmyter and De Raedt (2012) propose that those with a Past-Negative orientation are likely to ruminate and to experience regret with a negative impact on hedonic wellbeing; whereas a Past-Positive orientation is linked to integrating unresolved conflicts, leading to greater life satisfaction. Interestingly, Desmyter and De Raedt (2012) found that a Past-Positive orientation was not associated with positive affect in older adults. However, Palgi and Shmotkin (2010) studied old-old adults (aged 86 to 95 years) and suggested that attention toward the past helped them cope with aversive aspects of the present and anticipated future. They suggested this past focus might help older adults cope with negative aspects of the present and their foreshortened future by reinforcing a sense of being respected, loved, capable and successful.

Future time perspective is also associated with positive outcomes (Zimbardo, 1999), as are aspects of focus on the present, such as focusing on socioemotional goals (Carstensen et al., 1999). Webster, Bohlmeijer, and Westerhof (2014), reported that while older adults were more past-oriented than younger adults, a balanced time perspective was associated with both higher wisdom and wellbeing. This study suggests that views of the present and the future, not just the past, are important when studying wellbeing in older adults.

There are a number of unanswered questions however, particularly related to measurement of these constructs. The Zimbardo measure of present time perspective (Zimbardo, 1999), particularly the Present-Fatalistic subscale, seems to be confounded with views of the future (capturing fatalistic views of the present and hopeless views of the future). Likewise, the present time perspective subscale, Present-Hedonistic (of the Zimbardo measure) does not include the possibility that it is a nonjudgmental focus on the present that is important for wellbeing, as demonstrated in mindfulness research (e.g. de Frias & Whyne, 2015; Raes, Bruyneel, Loeys, Moerkerke, & De Raedt, 2013) and Acceptance and Commitment Therapy (ACT, Ciarrochi, Kashdan, & Harris, 2013). Thus while a key focus of this thesis is views of different time periods in older adults, a measure of accepting the past, more specifically (rather than the broader construct of past-positive time perspective) was chosen; and the focus was on one age group, older adults, to try to resolve some of the conflicting findings in this area.

Accordingly this thesis does not examine which time period older adults spend most time focused on (time perspective), but rather the specific components of appraisals for each time period, for example, looking toward the future with hope or optimism, the role of avoiding vs accepting specific aspects of the present, and acceptance of (rather than mere positive or negative focus on) the past.

Ricci Bitti, Zambianchi, and Bitner (2015) also describe temporal dimensions of developmental models of ageing, including *Socio-Emotional Selectivity Theory*, and the *Lifespan Theory of Control* (which are discussed in detail below). Next, a review of developmental models relevant to older adulthood is presented, as many of these provide a context for the importance of both *time* and *acceptance* and the thesis studies.

Erikson's life-span developmental theory

A number of developmental theoretical traditions, focusing either on the life-span or on older adulthood more specifically, converge to suggest that the way we deal with events or issues both in the *present* and in the *past* influence our *current* adjustment and some also hint at the importance of views of the *future*. The first of these is the lifespan model by Erikson (Erikson, 1964; Erikson et al., 1989).

Erikson and colleagues (1989) posits that our ability to deal satisfactorily with the developmental stage of older adulthood is determined both by how each individual has resolved past developmental stages such as trust versus mistrust (leading to the strength of hope) and initiative versus guilt (leading to purpose in life), and also by how he/she deals with issues such as regrets arising from the life review process which he claims is the key task of later life. Erikson argues that if the individual is able to accept their life as it has been lived, including any regrets about the past, then they are able to achieve *ego integrity*, which is his term for a positive adjustment to this life stage. He defines *ego integrity* as "the ego's accrued assurance of its proclivity for order and meaning…It is the acceptance of one's one and only life cycle as something that had to be and that, by necessity, permitted no substitutions" (Erikson, 1964, p. 241). In this final stage, individuals are "struggling to accept the inalterability of the past and the unknowability of the future, to acknowledge possible mistakes and omissions, and to balance consequent despair with a sense of overall integrity that is essential to carry on" (Erikson et al., 1989, p. 56).

Erikson and colleagues (1989) propose that being vitally involved in older age depends on revisiting earlier life stages and reworking them to reach a new resolution. For example, retirement may re-activate issues of initiative versus guilt as fears arise of being seen as unproductive by others or oneself. Thus a reevaluation of values and resetting of

goals may be required to maintain a sense of *purpose* in life; indeed Erikson defines purpose as: "the courage to envisage and pursue valued goals" (Erikson et al., 1989, p. 34). Similarly, the issue of trust may be revisited when some level of dependency on others becomes necessary to deal with the more frequent experience of chronic illnesses later in life leading (if all goes well) to a resurgence of *hope*, defined as: "the enduring belief in the benevolence of fate" (Erikson et al., 1989, p. 34). Thus Erikson's concept of *hope*, with its emphasis on positive beliefs about the future, has much in common with modern concepts of optimism and hope. Erikson also suggests that the early stage of autonomy versus shame and doubt is reworked leading to the ego strength of *will:* a basic sense of control over one's behavior and one's own life, similar to modern concepts of mastery, self-efficacy and perceived control. The adolescent challenge of *identity* is also revisited as the older adult seeks to confirm or rework her/his sense of self based on their memories of self from the past, sense of self in the present, and who he/she wants to be in a shortened and uncertain future, in order to retain a sense of *fidelity*. Erikson's concept of re-evaluating identity is thus relevant to modern views of attitudes to the self, such as self-compassion. Revisiting *generativity* can also result in not only enhanced generativity, but also *grand-generativity* (through caring involvement with grandchildren and others of their generation), both of which could then contribute to meaning and purpose in life in older adulthood, contributing to a multigenerational social support system and enhanced *ego integrity*.

In revisiting these and other prior life stages and life experiences the older adult is said to develop *ego integrity* and the strength of *wisdom*: a "detached concern with life itself, in the face of death itself." (Erikson et al., 1989, p. 37). This leads, as well, to a re-synthesis of prior ego strengths and enhances the resilience already developed at earlier life stages. Avoiding thinking about the past, on the other hand, and thus not performing a life

review and therefore not accepting (coming to terms with) the past was theorised to prevent the development of *ego integrity* and lead to *despair*. The avoidance which Erikson sees as leading to *despair* in later life has similarities with the modern concept of experiential avoidance, discussed in more detail later.

There are several long running longitudinal studies of adult development which have investigated and broadly support Erikson's theory. Whitbourne and colleagues (Sneed, Whitbourne, & Culang, 2006; Sneed, Whitbourne, Schwartz, & Huang, 2012; Whitbourne, Sneed, & Sayer, 2009; Whitbourne, Zuschlag, Elliot, & Waterman, 1992) showed, for example, that stages were reworked with many individuals with earlier developmental problems catching up over time leading to better developmental outcomes at midlife. They also noted that ego integrity began in early to middle adulthood and increased from there (Whitbourne et al., 2009). Westermeyer (1998, 2004, 2013) found that despite increased physical health problems in older men, these were not associated with more mental health problems. Instead it was the psychosocial factors identified by Erikson which were more predictive of wellbeing.

Building on Erikson's work, Vaillant (2002) refers to *developmental tasks* rather than *stages* (in acknowledgement that individuals do not always deal with them in the suggested sequence). In the longest running prospective study, Vaillant (2002) found that the strongest link between a warm loving childhood and a positive old age was a sense of comfort and *acceptance* of one's own emotional life. He interpreted this finding as supporting the importance of a positive resolution of Erikson *ego integrity* task, and hinted at the importance of *acceptance* in contrast to *experiential avoidance:* "*positive aging* at the end of life necessitates an almost Buddhist *acceptance*" (Vaillant, 2002, p. 159, emphasis added). Vaillant (2002) also added additional tasks to Erikson's model of adult

development, between generativity and before ego integrity a "*Keeper of Meaning"* was added *"*to convey to the young that old age is *meaningful* and dignified" (Vaillant, 2002, p. 178). This task was later referred to as *Guardianship* (Vaillant, 2012). To complete this task, older adults would first need to feel a *sense of purpose and meaning* in their own life. This thus supports the contention of this thesis that attaining meaning in life is particularly important in older adulthood.

Research has shown *ego integrity* is prospectively associated with lower depression, and associated generally with positive wellbeing (Westerhof, Bohlmeijer, & McAdams, 2015) and higher scores on several dimensions of eudaimonic wellbeing (see James & Zarrett, 2005, 2006). New research on related areas such as *reminiscence* (eg., see Westerhof & Bohlmeijer, 2014) and *wisdom* (e.g. see Ardelt, 2016) has been published since the collection of data for this study and this more recent research is reviewed in chapter 5 as well as in the final chapter of this thesis. As noted in the overview chapter, the studies have unfolded over a lengthy time period.

In summary, both Erikson and Vaillant emphasize that the developmental tasks of late adulthood involve reviewing the past and *accepting* (coming to terms) with it and drawing meaning from it. *Accepting the past* thus became the primary focus of one of the studies in this thesis (chapter 5); and *ego integrity* and/or *meaning (or purpose) in life* were outcomes measured in all of the thesis studies. The thesis addresses a number of gaps in the research literature with respect to these theoretical propositions.

The possible mechanisms through which *ego integrity* can be achieved were not explicit in Erikson's theoretical work, other than to argue for the process of performing a life review through reminiscence (Boylin, Gordon, & Nehrke, 1976). Since this PhD began several additional mechanisms for attaining ego integrity have been investigated: one is a

sense of coherence (Dezutter, Wiesmann, Apers, & Luyckx, 2013; Wiesmann & Hannich, 2011); and another is forgiveness (Dezutter, Toussaint, & Leijssen, 2016). This thesis will however argue that one further potential mechanism for attaining *ego integrity* (and related aspects of wellbeing such as meaning in life), based on Erikson's writings, is through *acceptance of the past*. *Accepting the past* has been explored as a contributor to depression (Rylands & Rickwood, 2001; Santor & Zuroff, 1994), however, no studies to date have explored whether *accepting the past* (specifically) is associated with negative affect more broadly, or with positive well-being outcomes. In addition, no studies to date have looked at both accepting the past and accepting the present. The study reported in chapter 5 will thus attempt to address these gaps. In doing so, limitations regarding the measurement of *accepting the past* will also be explored.

Self-compassion is another possible mechanism for attaining *ego integrity*. Self-compassion has not been previously linked to *ego integrity*, and not (at the time of writing the published paper) to wellbeing in older adults specifically. Whether self-compassion contributes to *ego integrity* and other aspects of wellbeing in older adults is discussed below (in the section on the positive psychology model of *self-compassion*) and investigated in chapter 4a.

Erikson thus provides one developmental view of *time*, particularly the *past*, and to a lesser extent the *future* through the reworking of the *ego strength* of *hope*. Another, more recent, developmental psychology model also considers time an important dimension influencing an individual's goals, processes of adjustment at different adult ages, and wellbeing. This is *Socioemotional Selectivity Theory* and it will be presented next.

Socioemotional selectivity theory (SST)

In *Socioemotional Selectivity Theory* (SST, Carstensen et al., 1999), Carstensen and colleagues argue that perception of *future* time remaining is a key to motivation throughout adulthood as the amount of time remaining diminishes as we get older and closer to death. According to this theory, this diminished *future time perspective* leads to less emphasis on expansive goals for the future (such as acquiring new knowledge and wider social connections), and more emphasis on *socioemotional goals* focused on emotional wellbeing in the present. SST also predicts that attentional preferences support this prioritising of emotion regulation in older adulthood. Indeed research (e.g. see meta-analysis by Reed, Chan & Mikels, 2014) has shown that younger adults pay more attention to negative than positive information, whereas older adults both attend to and remember more positive information (compared to negative information). This attention and memory effect in older adulthood is known as the *age-related positivity effect*. While this effect has implications for the potential higher wellbeing of older adults, it is less relevant to the main themes of this thesis (such as acceptance) than the theory broader prediction of an overall increased focus on *present* emotional wellbeing with reduced future time perspective and thus with age, and the associated prediction of improved emotion regulation. This latter prediction is also generally supported by research, with most maladaptive strategies such as suppression being shown to decrease with age (John & Gross, 2004), and adaptive strategies, including *acceptance,* being shown to increase with age (Schirda, Valentine, Aldao, & Prakash, 2016).

While this theory strongly suggests the importance of *future time perspective*, the studies in this thesis will instead focus on two other perspectives of the *future* in older adults: *optimism* and *hope*. This decision has since been validated by recent findings questioning the predictive value of Carstensen's concept of *future time perspective*, and

hence of the value of this aspect of *Socioemotional Selectivity Theory* in explaining the enhanced emotional wellbeing of older adults (Gruhn, Sharifian, & Chu, 2016; Kessler & Staudinger, 2009).

The emphasis in *Socioemotional Selectivity Theory* on older adults focusing on goals to maximize the *present*, particularly the emotional quality of their current life, including spending time with familiar people is, however, consistent with Erikson's theoretical propositions (Erikson et al., 1989). The Eriksonian emphasis on *generativity* and *grand-generativity* in older adulthood and Vaillant's addition of a role for older adults as "*keeper of the meaning*" have been interwoven into this model (Lang & Carstensen, 2002) as part of an emphasis on *socioemotional goals* in older adulthood when *time* remaining is limited. *Socioemotional Selectivity Theory* argues that *present* emotional experiences are particularly important for older adults and that the strategies they use to deal with them are important. This thesis will thus focus on two different measures of *acceptance of the present* (chapters 5 and 6) and examine their impact on wellbeing in older adults.

Developmental Theories Related to Adaptation to Age-Related Changes

The selective optimization with compensation model (SOC)

Another theoretical tradition is the *Model of Selective Optimization with Compensation* (SOC) by Paul Baltes and colleagues (Baltes, 1997; Baltes & Baltes, 1990; Freund & Baltes, 1998; Marsiske, Lang, Baltes, & Baltes, 1995). Baltes and colleagues argue that to achieve wellbeing in late life individuals need to adapt to inevitable age related losses. One way to adapt is by *selecting* appropriate goals, a process which in older age in particular, also involves letting go of goals which are no longer achievable. Their model also involves *optimizing* energy and other reserves, for example, through taking rest

breaks and building and maintaining good social relationships. *Compensation* is the third component and involves using alternate means to achieve otherwise unattainable goals, such as using reading glasses or a walking stick, or writing lists to assist memory. The Carstensen SST (above) fits within the overall framework of the *SOC model*, focusing on *selection* in the social domain more specifically. SOC strategies have also been shown to have a protective effect on older adult wellbeing (Freund, 2008), particularly in those with limited resources (Chou & Chi, 2002; Jopp & Smith, 2006). Yet in the young-old group Jopp and Smith (2006) found positive independent effects of resources and SOC strategies which they suggest indicates ageing well is not just about dealing with losses, but may also involve benefiting from enhancing resources to attain developmental gains.

SOC theory suggests that resources (such as optimism, hope or self-compassion) may allow older adults to achieve wellbeing by focusing on fewer goals and adapting the ways they deal with age-related and other changes in their lives.

The lifespan theory of control

Another group of developmental theorists are Heckhausen and Schulz (1995, 1998), who developed the *Lifespan Theory of Control*. This theory distinguishes between primary and secondary control strategies. *Primary control strategies* are focused on changing the world and secondary control strategies aim to change the self to fit in with life circumstances and are typically applied after primary control efforts have failed. These theorists argue that through childhood and well into middle-age the availability and use of primary control strategies grows, but as the challenges and losses associated with ageing increase (such as bereavement and increasing chronic illness and disability) the use and effectiveness of primary control strategies decreases. Secondary control strategies, including the need to *accept* uncontrollable age-related changes and select more attainable

goals, are thus argued to be more adaptive and therefore more often invoked in older adulthood. A subsequent paper modified and extended this theory and relabeled it the *Motivational Theory of Lifespan Development* (Heckhausen, Wrosch, & Schulz, 2010), incorporating concepts from the *SOC model* more explicitly. It is the earlier, simpler model which will be referred to within this thesis.

Dual process theory

Another group of developmental theorists, Brandtstadter and colleagues (Brandtstadter & Renner, 1990; Rothermund & Brandstadter, 2003) developed the *Dual Process Theory* of developmental regulation, in which they distinguish between *assimilative* processes such as tenacious goal engagement and *accommodative* processes such as flexible goal adjustment. Assimilative strategies overlap with what the concept of primary control, and accommodative processes with the Heckhausen and Schulz (1995, 1998) concept of secondary control. *Accommodation* involves *acceptance*, in particular it includes "cognitions …modified to make the given situation appear less negative or more acceptable" (Brandtstadter & Renner, 1990, p. 58). These *accommodative* strategies are argued to be used more frequently with advancing age and to become more effective in that stage of the lifespan.

Summary integrating developmental theories related to adaptation to age-related changes

Several of these theoretical models thus converge to suggest the increased importance of *acceptance* in older adulthood as a mechanism for coping with uncontrollable stressors of this life stage. As noted above, *acceptance* also seems to be a key part of secondary control strategies (Heckhausen, 1997; Heckhausen et al., 2010; Morling & Evered, 2006) and the related construct of accommodative strategies (Brandtstadter & Renner, 1990). Indeed, *acceptance* may be necessary for other processes

of accommodation or secondary control to proceed such as downgrading of and disengagement from unattainable goals, including goals of actively changing circumstances that are uncontrollable.

Research evidence has accumulated for these two closely related models: the *Lifespan Theory of Control* and the *Dual Process model* (e.g. Bailly, Joulain, Hervé, & Alaphilippe, 2012; Bailly et al., 2016; Broadbent, de Quadros-Wander, & McGillivray, 2014). *Acceptance* as both these theories predict, is a better predictor of wellbeing in older than younger adults (de Quadros-Wander, McGillivray, & Broadbent, 2014). Further research in this area will be reviewed in more detail in the introduction section of chapter 5.

Little research has explored the relationship between acceptance and negative affect more broadly, as opposed to psychopathology. The current research will thus aim to clarify the relationship between acceptance and negative affect in older adults. Additionally, very little research to date has examined if acceptance also predicts positive aspects of wellbeing such as positive affect or meaning in life the study in chapter 5 will also address these gaps.

There have been ambitious attempts to integrate these models that emphasize adaptation and propose age differences in developmental regulation and their relationship to wellbeing. For example, Boerner and Jopp (2007) identified conceptual overlap and distinct features of the SOC model, *Dual Process model* and the *Lifespan Theory of Control*. A more formal integration of these three models was presented in the model of *Developmental Regulation across the Lifespan* (Haase et al., 2013). Haase and colleagues point out that all these models suggest that being able to accept that certain goals are unattainable, can lead to disengagement from them (*goal disengagement*), followed by re-

engagement selectively in new goals (*goal engagement*), which are important processes in positive adjustment to ageing. They also add the term *metaregulation* which refers to adaptive goal choices across domains which fit with current circumstances, and ensures goals are spread across domains and have adaptive long-term consequences. *Metaregulation* is thus what is described in the poem (also known as the Serenity prayer) by Reinhold Neibuhr as "the wisdom to know the difference" between things one can and cannot change (and therefore need to accept). The process of *acceptance* of events occurring in the present, and of losses which come with age and with goals that cannot be achieved remains a key concept in each of these models. It is only very recently, however, (after all data were collected for this thesis, and the study focusing on optimism had been published) that the potential role of individual differences (including resources) in developmental regulation was also acknowledged by these theorists (Heckhausen & Wrosch, 2016). One of these resources, *optimism*, is the focus of chapter 3a. This particular resource (optimism) fits clearly within the area of positive psychology.

Positive Psychology Theories

Moving now from developmental models to theoretical models based in positive psychology, the first to be considered here is the *Broaden and Build model of positive affect*. This will be followed by discussion of more specific models of individual positive psychology constructs: *optimism*, *hope*, and *self-compassion*.

The Broaden-and-Build model of positive affect

Within the broad framework of positive psychology, Fredrickson (2001) developed a theoretical model of positive affect known as the *Broaden-and-Build model*. This model suggests an upward spiral of wellbeing whereby positive emotions lead to *broadening* repertoires of thoughts and behaviours in the short-term and that in the long term these

contribute to the *building* of personal resources, which in turn contributes to future success, further increasing positive emotions (Cohn & Fredrickson, 2009). Supporting evidence is available for many aspects of the theory, including findings that positive emotions broaden visual attention, produce thought patterns that are more flexible, inclusive and creative, and broaden social group inclusiveness. There is also evidence that positive emotions contribute to building resources such as improving the quality of relationships (including social support), increasing agency (or perceived control), and increasing the ability to savour positive experiences (e.g. see reviews by Cohn & Fredrickson, 2009; Lyubomirsky, King, & Diener, 2005). While some have questioned the strength of some of the evidence (Heathers, Brown, Coyne, & Friedman, 2015), the theory is quite well supported overall (Fredrickson, 2013).

The *Broaden and Build model* proposes that through these positive spirals and increased resources, the individual is also better prepared to cope with future challenges and stressful circumstances (Fredrickson, 2001), and able to counter the downward spiral of negativity common in various forms of psychopathology (Garland et al., 2010). Garland and colleagues argue that the increase in resources engendered by ongoing positive emotion, for example through mindfulness or loving-kindness interventions, contributes to resilient coping and may undermine the negative affective process in depression and anxiety. This thus confirms that focusing on not just positive affect, but also negative affect is appropriate for the current thesis.

In summary the *Broaden-and-Build model* thus suggests that rather than being merely an outcome variable, predicted by resources (such as optimism, social support and perceived control), positive affect may also serve as a stimulus for building these very resources. Predictions from the *Broaden-and-Build model* will be tested in chapter 3a

exploring relations between positive affect, social support and perceived control; and in chapter 6 exploring relations with hope. Assuming the ability to accept the past can also be considered a resource, this model will also be tested in chapter 5 (examining whether higher positive affect relates to greater acceptance of the past).

From this overarching positive psychology framework, models more specific to individual positive psychology resources and strengths (optimism, hope, and self-compassion) will now be outlined.

Optimism theory

Early work by Seligman on learned helplessness led to the conceptualization of optimism as a situational variable, an "optimistic explanatory style". However, optimism can also be viewed as a stable personality trait, the approach taken in this thesis. A person high in trait optimism holds a generalized expectation that they will obtain good outcomes in life (Carver & Scheier, 2001). According to this model, particularly when confronted with a threat, optimists tend to respond confidently, assuming that the threat can be handled successfully, and they thus pursue goals with more persistent effort and confront problems with more appropriate approach coping strategies, compared to pessimists who are more likely to disengage effort (Carver & Scheier, 2001). This model also argues that when goals are unattainable, optimists and pessimists will both disengage, however optimists are more likely to believe that other valued goals are still attainable and hence re-engage and work towards them. It is thus an *expectancy-value* model of motivation toward goal attainment. The optimists tendency to return to engagement with life after goals are thwarted due to life changes is argued to contribute to successful goal attainment and to wellbeing, and this has been supported empirically (e.g. see Carver, 2014; Carver, Scheier, & Segerstrom, 2010).

The effects of optimism on wellbeing may be mediated through a variety of processes, such as goal attainment, coping strategies, social support, and perceptions of control. The latter two possibilities will be explored in this thesis in the context of older adulthood. It had been suggested that both optimism and perceived control are related aspects of resilience (Cozzarelli, 1993; Maher & Cummins, 2001) and/ or examples of positive cognitive biases (Cummins & Nistico, 2002; Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000) which would be expected to enhance wellbeing.

Empirical research from this theoretical model published prior to the publication of the current research is reviewed briefly in chapter 3a, and more recent evidence including that reviewed in Carver (2014) and Carver and colleagues (2010) is presented in chapter 3b. At the time of publication of this first study, there had not yet been any studies considering both potential mediators (perceived control and social support) together, nor studies examining their potential joint contributions to purpose or meaning in life. The study in chapter 3a was designed to fill these gaps.

Hope theory

Within Erikson's developmental theory, *hope* is defined as an *ego strength*, and more specifically as the "enduring belief in the attainability of fervent wishes" (Erikson, 1964, p. 118). Within positive psychology hope is also viewed as an important psychological *strength* (Dahlsgaard, Peterson, & Seligman, 2005, p. 205). Snyder (2002) defines trait hope as a generalized positive future oriented thinking style involving a belief in the attainability of goals and the motivation to achieve them. It is thus largely cognitive, and incorporates both agency and pathways thinking. *Agency* is the motivation to work toward and attain desired goals and includes a generalized sense of self-efficacy. *Pathways thinking* is the ability to come up with multiple ways to achieve a goal, even when

difficulties arise. Note the concept of pathways thinking thus overlaps with *accommodative processes*, especially flexible goal adjustment from the *Dual Process model*.

There are some important conceptual similarities and differences between optimism and hope. For example, optimism involves generalized positive expectancies, whereas hope involves positive expectancies about goal attainment more specifically. Further, hope includes the pathways thinking component (incorporating strategies such as coming up with multiple ways to attain a goal or get out of a difficult situation) which is not part of optimism. The two constructs also have somewhat divergent theoretical models. Thus it was decided that examining both these forms of positive views about the future could be informative.

Turning now specifically to *Hope theory,* Snyder (2002) argues that goals toward which one wishes to strive (and indeed also those which one wishes to avoid) are at the heart of hopeful thinking. This theory posits that the more confident one feels about attaining a desired goal, and the greater the perceived ability to come up with more than one potentially useful path to attaining it, the more likely the individual is to achieve that goal. This successful goal attainment then produces positive emotions, whereas blocked goals tend to produce negative emotions. Thus the theory predicts that higher trait hope should be associated with both higher positive affect and lower negative affect. In addition, *Hope theory* also proposes feedback loops such that prolonged negative affect can feed-back to reduce hope, and that (consistent with the *Broaden-and-Build model*) higher positive affect can also increase one's sense of hope (Snyder, Cheavens, & Michael, 2005).

From a developmental lifespan perspective hope should be particularly important to older adults. In later old age in particular, Erikson argues that the issue of *trust vs mistrust* and thus the maintenance of *hope* is challenged by physical deterioration and loss of

independence such that hope can give way to *despair* (Erikson et al., 1989). Also, the *SOC model* (Baltes & Baltes, 1990) would suggest that older individuals with high hope, by focusing on fewer goals and adapting pathways to maximize their strengths and reduce the effect of their losses, can maintain optimal levels of wellbeing (see Wrobleski & Snyder, 2005).

Consistent with *Hope theory*, trait hope has been found to be associated with depression in older adults with functional impairments (Hirsch, Sirois, & Lyness, 2011). Trait hope has also been related to sense of meaning in life, in a study with college students (Feldman & Snyder, 2005; Mascaro & Rosen, 2005). The current research sought to explore whether this association also applied in older adults. Empirical research evidence supporting hope theory is reviewed in chapter 6. There is little work yet on the associations of hope with positive and negative affect specifically in older adults (with one exception, Moraitou & Efklides, 2013). The current research sought to make a novel contribution by considering contributions of both hope and views of the present such as acceptance/ experiential avoidance in relation to wellbeing in older adults.

The self-compassion model

The concept of self-compassion was developed as a way of describing "a healthy attitude and relationship to oneself" (Neff, 2003b, p. 86) distinct from self-esteem which is defined as judging the self to be competent, often in comparison to others. Self-compassion has roots in Buddhist philosophy and is focused on the central idea of giving oneself compassion (Neff, 2003b). Neff (2003a) also explicitly argues that the study of self-compassion fits well with the goals of the positive psychology movement. She defines self-compassion as being comprised of three dimensions: *mindfulness*, *common humanity*, and *self-kindness*. *Mindfulness* involves a nonjudgmental acknowledgement of suffering, in this

case being aware of one's own suffering, which gives greater insight and generates a desire to relieve that suffering. The opposite of mindfulness is *over-identification*, which includes avoiding, repressing, or taking negative self-directed thoughts and feelings too literally. The second component, *common humanity* involves seeing one's own suffering in the light of the recognition of oneself as being a human and thus worthy of respect and compassion. The opposite of common humanity is thus *isolation*, which involves feeling alone in experiencing failure and inadequacies. *Self-kindness*, the third component involves giving the same kindness, understanding and compassion to oneself that would be given to a friend. Its opposite is thus *self-judgement*, which involves being harsh, unkind, impatient and judgmental toward oneself.

Neff (2003b) argues that for those with high self-compassion, the pain and failure experienced (by all individuals) is not amplified and perpetuated through over-identifying with thoughts and emotions, harsh self-criticism, and feeling isolated. This then leads to lower levels of negative affect, depression and anxiety. Neff thus argues that self-compassion is an emotion regulation strategy. Through self-compassion negative emotions are "transformed into a more positive feeling state, allowing for…the adoption of actions that change oneself and/ or the environment in appropriate and effective ways" (Neff, 2003a, p. 225). As Neff and Dahm (2015) have since argued, being able to mindfully embrace both positive and negative emotions (which is part of self-compassion) allows the development of *strengths* such as emotional intelligence and feelings of social connectedness which are part of a meaningful life.

Fitting with the theme of *acceptance* emphasized in this thesis, Kristen Neff describes self-compassion as "a healthy form of self-acceptance" (Neff, Rude, & Kirkpatrick, 2007, p. 908). Integrating developmental (Erikson et al., 1989) and positive

psychology (Neff, 2009) theories, it will be argued that self-compassion may assist in the achievement of Erikson's stage of *ego integrity* and, in particular, in coming to accept their life by compassionately reviewing their life, and perhaps by reducing the self-criticism which may lead to life regrets.

Meta-analyses, predominantly with younger adults, show that low self-compassion is strongly related to depression, anxiety & stress (MacBeth & Gumley, 2012) and that high self-compassion is associated with more positive aspects of wellbeing, such as positive affect (Zessin, Dickhäuser, & Garbade, 2015). Research prior to the submission for publication that informed the second study in this thesis is reviewed in more detail in the introduction section of chapter 4a and more recent studies, particularly those on self-compassion in older adults, are briefly reviewed in chapter 4b. At the time this study was submitted for publication, there was no existing published research on self-compassion in older adults, and no research in any age group on whether self-compassion is associated with meaning in life or ego integrity. This study (chapter 4a) was designed to fill these gaps, and also to explore the measurement of self-compassion in older adults.

Summary

These theories of positive psychology have only fairly recently been tested in older adults (and in the case of self-compassion, had not been studied in older adults at all prior to submission of the paper in chapter 4a) and so this thesis aims to bring the developmental theories regarding adaptive ageing together with positive psychology to better understand determinants of wellbeing in older adults.

Acceptance and Commitment Therapy (ACT) Model (also known as the Model of Psychological Flexibility)

In addition to positive psychology, a related area known as the third wave of behavioural therapies, particularly *Acceptance and Commitment Therapy* (ACT) has also influenced the research in this thesis. Following Kashdan and Ciarrochi (2013), the integration of ideas from positive psychology and these "*third wave*" therapies are viewed as helpful for understanding the development and maintenance of happiness and meaning in life. A focus on ACT theory was incorporated in this thesis, as while acceptance of the *present* is a part of *mindfulness* (which in turn fits within positive psychology) *acceptance* versus *avoidance* of emotions, thoughts and memories is more directly addressed in the ACT model.

The model of ACT, or *psychological flexibility* as it is also known, is based in a larger theoretical framework known as *Contextual Behavioural Science* (Hayes, Levin, Plumb-Vilardaga, Villatte, & Pistorello, 2013) and more specifically *Relational Frame Theory*, a contextual model of language and cognition (see Hayes, 2004; Hayes et al., 2013). ACT includes concepts such as experiential avoidance, cognitive fusion and values-based-action (Hayes, Luoma, Bond, Masuda, & Lillis, 2006, p. 6) as well as mindful acceptance. As discussed earlier, time is a key overarching theme in this thesis, and time perspective (particularly problems arising from an overemphasis on the past and/or the future) is also included in this theoretical model, though generally underemphasized. Within the ACT model emphasis is given to the concept of experiential avoidance, which is the opposite of experiential acceptance. *Experiential avoidance* involves attempts to avoid, suppress or distract away from private events including emotions, cognitions and memories (Hayes, 2004).

A point of difference between the ACT model and positive psychology, and related emotion regulation and coping literatures, is that within the ACT model, acceptance is not viewed as an emotion regulation strategy (Ciarrochi et al., 2013). Indeed the aim of acceptance within ACT is to be with emotions and thoughts (whether good or bad) without trying to change or regulate them, as attempts to avoid or change emotions often backfire and increase experiential avoidance and negative emotions such as anxiety ultimately leading to psychopathology (Ciarrochi et al., 2013). According to this model avoidance increases the salience of the avoided emotion or thought, and also takes attention and motivation away from acting in a manner that is consistent with values, because many behaviours are then also avoided because they evoke these feared emotions (Hayes et al., 2006). High experiential avoidance is thus viewed as contributing to psychopathology, but also to increased negative emotions, and reduced positive emotions. Thus while the ACT model was developed to explain psychopathology, and has traditionally been tested in that context, it also makes predictions about positive affect. This model was chosen because, unlike other theories in the area such as Aldwin's resiliency model (Aldwin & Igarashi, 2012) or Ong's model of resiliency in later life (Ong, Bergeman, & Boker, 2009), the ACT model makes specific predictions about acceptance, a key theme of this thesis, being associated with positive wellbeing outcomes. These predictions are now beginning to be tested (e.g., Kashdan, Barrios, Forsyth & Steger, 2006; Steger, Sheline, Merriman, & Kashdan, 2013), but not yet in older adults. In addition, through reducing values-based-action, experiential avoidance may also decrease the sense of having a purposeful and meaningful life. The use of the ACT model in this context is thus a novel approach.

Experiential avoidance has been shown to be a good predictor of a range of psychopathologies (e.g. Bond et al., 2011), and positive mental health indicators (Fledderus, Oude Voshaar, ten Klooster, & Bohlmeijer, 2012), though little work has been

done with older adults. In addition a reliable measure of experiential avoidance had not yet been used with older adults. Further research supporting predictions from this theory will be reviewed in the introductory section in chapter 6. The concept of experiential avoidance versus acceptance appears to be associated with wellbeing as predicted by the ACT model, but is relatively unexplored in older adults and will therefore be examined in this thesis as one approach to measuring acceptance of the present. This study (chapter 6) will also make a novel comparison through exploring the relative strength of associations for hope and experiential avoidance with wellbeing in older adults.

The Current Research

How individuals come to terms with the ups and downs of their own individual life, including the developmental changes and losses associated with growing older is a recurring theme in the above theories. Erikson et al. (1989) argued that older adulthood involves reviewing the whole of one's life, trying to *accept* past choices and often *revisiting tasks from past stages*, resolving them where possible, integrating this into a sense of *integrity* rather than *despair*, and maintaining this through *vital involvement* in the family and community. The importance of *accepting the past*, while remaining involved in the *present* is thus viewed as key to wellbeing in older adulthood. The potential resurgence of the strength of *hope* hints that envisioning a positive *future* (however brief) may also be important. Also, building on Erikson, this thesis will argue that the strength of *ego integrity* (and thus *positive ageing*) involves being able to act in ways consistent (or authentic) with one's true self, consistent with a commitment to *values based action* in the ACT (Hayes, 2004), and with the concept of eudaimonia, particularly a sense of having a meaningful life (Steger, 2016). Following Kivnick and Wells (2014), this thesis will also argue that

developmental models including SOC, *Lifespan Theory of Control* and SST suggest the *processes* by which all Eriksonian stages/themes may be reworked.

Hedonic wellbeing (positive and negative affect) has been widely studied, but eudaimonic wellbeing and in particular *meaning in life* has received less attention in developmental models and research. Meaning in life and the closely related concept of purpose in life equate more closely to Erikson's concept of *ego integrity* and thus it will be argued in this thesis that attaining meaning and purpose in life forms a central goal of later life. The importance of working toward meaningful goals in older adulthood is also consistent with *Socioemotional Selectivity Theory* (Carstensen et al., 1999). Positive psychology models (such as the *Broaden-and-Build model*, and models of *optimism, hope,* and *self-compassion*) also have much to say about the prediction of and importance of not just positive affect, but also to some extent, about eudaimonic outcomes such as meaning.

In addition to these models, a range of theorists (e.g. Hobfoll & Wells, 1998) and researchers (e.g. Jopp & Smith, 2006) posit *resources* as being particularly important for wellbeing in older adulthood. Influential resources include *physical resources* such as health & income (Steverink, Westerhof, Bode, & Dittmann-Kohli, 2001), *social resources* such as social support (Fiksenbaum, Greenglass, & Eaton, 2006), and *psychological resources* such as control beliefs (Gerstorf et al., 2014; Infurna, Gerstorf, Ram, Schupp, & Wagner, 2011; Krause & Shaw, 2003; Kunzmann, Little, & Smith, 2002; Rodin & Langer, 1977) and optimism (Isaacowitz & Seligman, 2002). The emphasis on *optimizing resources* in SOC theory also fits with Hobfoll's (1989) *Caravan of Resources* model and with positive psychology concepts and models particularly Fredrickson's *Broaden & Build model* (Fredrickson, 2001).

Another way to frame these *resources* is to view them as *strengths* to aid development and wellbeing (and thus distinct from *vulnerabilities*). Note the term *strength* is used in this broad way in the current thesis, rather than referring to the specific character strengths or virtues identified in models such as the *Values in Action model* (VIA, Seligman, Park, & Peterson, 2004). However, *integrity*, *hope*, *optimism*, and *purpose*, which Peterson and Seligman (2004) have included in their positive psychology classification of *character strengths* and virtues, are also found in Erikson's earlier writings and are thus included in this thesis. Erikson and colleagues (1989) suggest that different *resources* and *strengths* may be particularly important at different stages of the lifespan, with developing *ego integrity* the key task of older adulthood. To test this, a key aim of this thesis is to take concepts shown to influence wellbeing in other age groups (including optimism, hope, self-compassion and experiential avoidance versus acceptance) and see if they are also associated with wellbeing in older adults.

Note that while Ardelt, Landes, Gerlach, and Fox (2013) found that *strengths* were more positively related to hedonic wellbeing than any objective measures (such as socio economic status and health), nonetheless, demographic and physical resources including socioeconomic variables (education and income), perceived health, and age are used as control variables in all but the first study of this thesis.

Overview of Thesis, Studies and Their Rationale

The overarching aim of this thesis was thus to apply positive psychology principles relating to the past, the present, the future and the self to the prediction of wellbeing in older adults; and to integrate these with developmental psychology and ACT theory principles, particularly those relating to time and acceptance.

More specific aims were:

1. To explore social support and perceptions of control as potential mediators of the beneficial effects of optimism on well-being (positive affect and purpose in life) in older adults (Study 1, chapter 3a).

2. To explore whether self-compassion may be associated with four aspects of well-being, including two indicators of hedonic well-being (positive affect and negative affect) and two aspects of eudaimonic well-being (ego integrity and meaning in life) in older adults (Study 2, chapter 4a).

3. To explore the effects of acceptance of both the present and the past on negative affect and also on two aspects of positive well-being, positive affect and meaning in life, in older adults (Study 3, chapter 5).

4. To explore whether hope and experiential avoidance are related to three aspects of well-being: positive and negative affect (indicators of hedonic well-being) and meaning in life (as a key indicator of eudaimonic well-being) in older adults (Study 4, chapter 6).

In addition, some of the measures used in this thesis had not previously been administered to samples of older adults specifically, others measures had been used, but not had their structure and validity confirmed with this age group. A further scale, while developed specifically for older adults, had not had its structure sufficiently explored. A secondary aim of this thesis was therefore to explore the structure and reliability of these positive psychology (and ACT) measures in older adult samples.

To avoid further repetition, specific hypotheses for each study are presented in the relevant chapters (chapters 3a, 4a, 5 and 6). The next chapter presents Study 1 (focused on optimism) in the form of a published paper. First, however, Figure 2.1 below shows a diagrammatic representation of the inter-relationships between the two themes of the thesis

(time and acceptance) and the major theoretical models. Note that the figure does not show the full range of theories, as to do so would have made the figure too confusing. The additional theories more peripheral to the thesis and not covered in the figure (SOC, Lifespan Theory of Control, Dual Process Theory and the model of Developmental Regulation across the Lifespan) are already summarised on pp. 30-32. This is followed by Table 2.1 below which provides a more specific overview of the four empirical studies of this thesis. All are cross-sectional surveys of older adults in Sydney Australia.

Figure 2.1 Diagram of Inter-relationships between the thesis themes and major theoretical models

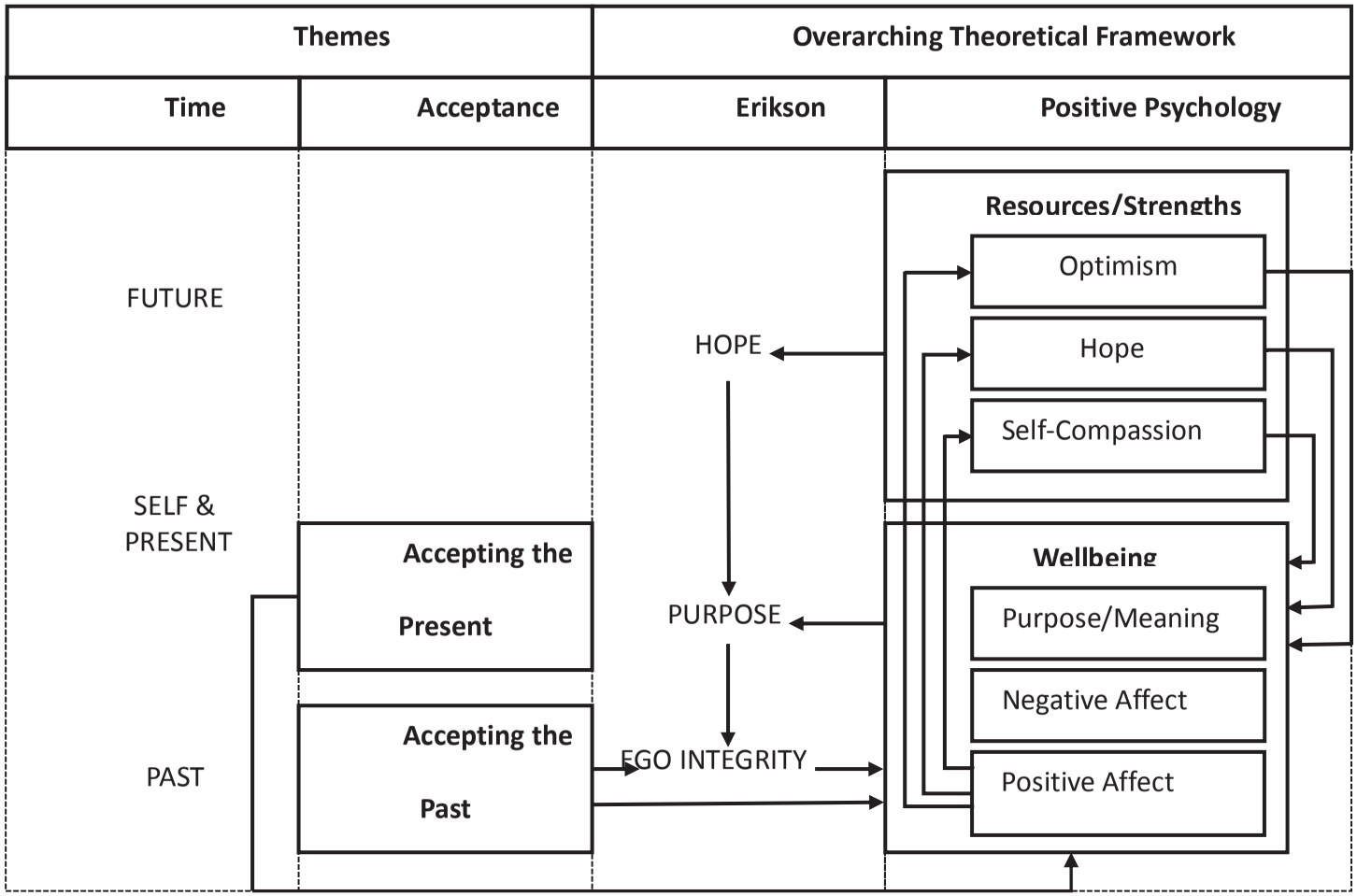


Table 2.1 Overview of thesis studies and their rationale

	Rationale	Sample(s)	Measures
Study 1 Chapter 3a Optimism	**Optimism and wellbeing in older adults: The mediating role of social support and perceived control** *Theoretically*, Carver and Scheier's Optimism Model argues optimists pursue goals with greater effort and persistence and are thus more likely to achieve their goals, which leads to higher wellbeing. *I argue*, optimists may also: • attract more social support, which leads to greater wellbeing • feel positive outcomes are both more likely and under their control and hence experience greater wellbeing • may also have higher purpose (or meaning) in life in older adults through these mediating processes. *Dispositional optimism had been previously associated with*: • positive and negative affect • meaning in life in doctors and nurses, but not yet in other populations such as older adults. *Two potential mediators* of the effects of optimism on wellbeing in older adults are suggested: social support and perceived control.	225 participants 65 to 94 years Recruited from retirement villages, volunteer and other community organizations All completed paper surveys	• Life Orientation Test-Revised (LOT-R) • Purpose in Life subscale from Ryff Psychological Wellbeing Scales • Positive Affect subscale from Affect Balance Scales (ABS) • Satisfaction subscale from Social Support Questionnaire - Short Form (SSQ-R) • Perceived Control Scale

	Rationale	Sample(s)	Measures
Study 2 Chapter 4a Self-compassion (S-C)	**Self-compassion: A resource for positive ageing** *Theoretically* it can be argued S-C: • may contribute to higher positive affect and reduced negative affect by mindfully focusing on and accepting emotions, thoughts and the self, acknowledging oneself as part of a flawed common humanity, and being kind to oneself (Neff's model of Self-Compassion) • may help achievement of ego integrity (EI). *At the time:* no papers on self-compassion in older adults. *Meta-analyses show:* • S-C associated with wellbeing *but*, most study hedonic wellbeing only and in younger adults. *Self-compassion (S-C) important in older adulthood because* S-C • increases with age • may buffer stress including, perhaps multiple losses of older adulthood • has been associated with wisdom Self-compassion measure will be investigated with older adults	185 participants 65 to 92 years Recruited from retirement villages and clubs, and through acquaintances of the researchers 124 paper surveys 61 online surveys	• Self-Compassion Scale (SCS) • Ego Integrity subscale of Inventory of Psychosocial Development (IPD-EI) • Meaning in Life Questionnaire- Presence subscale (MLQ-P) • Positive and Negative Affect Scale (PANAS)

	Rationale	Sample(s)	Measures
Study 3 Chapter 5 Accepting Past and Present	**Accepting the past and present situations: The associations of acceptance with wellbeing in older adults** *Theoretically*: • acceptance is part of accommodative coping and secondary control, which the Dual Process Model and the Lifespan Theory of Control argue this increases with age and becomes increasingly effective • Erikson argued life review and acceptance are crucial for ego integrity in older adulthood and hence should contribute to greater wellbeing. Accepting the past and the present have not previously been studied together to see which is more strongly associated with which aspects of wellbeing. **Accepting the present** *Acceptance of present stressors is:* • the only coping strategy to increase with age • associated with reduced anxiety and depression adults generally • but, some conflicting findings, particularly in older adults • little research has explored the relationship between acceptance and negative affect more broadly • very little research to date has examined if acceptance also predicts positive aspects of wellbeing such as positive affect or meaning in life. **Accepting the past** • accepting the past studied with depression, not negative affect or positive affect or meaning in life • related constructs, such as ego integrity and resolving regrets are associated with lower depression and higher wellbeing • limitations with measures used	169 participants 65 to 97 years Recruited from community groups and retirement villages (including self-care units and low care hostels) All completed paper surveys	• Accepting the Past scale (ACPAST) • Acceptance subscale (4 items) of the Cognitive Emotion Regulation Questionnaire (CERQ-A) • MLQ-P • PANAS

	Rationale	Sample(s)	Measures
Study 4 Chapter 6 Hope and Experiential Avoidance	**Hope for the future and avoidance of the present: Associations with wellbeing in older adults** *Theoretically:* • hope should increase goal attainment and therefore wellbeing, and reduce negative affect associated with blocked goals (Snyder's Hope Model) • acceptance and other effective coping strategies should increase in older adulthood and predict meaning in life as well as affect (Socio-emotional Selectivity Theory, SST). • acceptance also part of accommodative coping and secondary control (see Study 3 above) • EA likely to be associated with psychopathology and reduced wellbeing (ACT theory). Hope and EA have not previously been studied together to see which is more strongly associated with which aspects of wellbeing. *Trait hope associated with*: • depression and anxiety in college students and functional impairments in older adults • reduced stress reactions and increased life satisfaction in older adults • meaning in life (college students) *Experiential avoidance (EA) vs acceptance associated with*: • a range of psychopathology and positive mental health. *But*, • limited research with older adults and limitations with measures used	259 participants 65 to 94 years Recruited from clubs and retirement villages in Sydney, Australia, and through snowballing via acquaintances of the researchers All completed paper surveys	• Trait Hope Scale • Acceptance and Action Questionnaire (AAQii) • MLQ-P • PANAS • SSQ-Number subscale

CHAPTER 3:
OPTIMISM

Chapter 3a:
Optimism and well-being in older adults: The mediating role of social support and perceived control

Susan Jeanne Ferguson (Sue) and Andrea D. Goodwin

Published paper

Ferguson, S. J., & Goodwin, A. D. (2010). Optimism and well-being in older adults: The mediating role of social support and perceived control. *The International Journal of Aging & Human Development, 71*(1), 43-68. doi: 10.2190/AG.71.1.c
(see Appendix E for published format)

Author contributions. The candidate conceptualized the study, selected measures for the questionnaire, applied for the ethics approval, trained and supervised the students undertaking the data collection; and also conducted the literature search. The candidate and Dr. Alan Taylor conducted the majority of the statistical analyses together, though Dr Taylor did the MPlus analyses alone. The co-author of paper 1 (Chapter 3a), was a student of the candidate and helped come up with the idea of the specific multiple mediations to test for optimism, and helped draft the method section and to a lesser extent contributed to an initial draft of the introduction.

Acknowledgements. The authors thank Dr. Alan Taylor for his analysis of the data and for his invaluable statistical advice. We also thank Doone Richmond and Tanya Gebbie for their involvement in the selection of measures and collection of data and Dr. Catherine McMahon, Associate Professor Kay Bussey, Dr. John Cunningham and the anonymous reviewers for helpful comments on drafts of this paper.

Abstract

To investigate how psychosocial resources may improve well-being for older adults, this study explored the relationship among questionnaire measures of optimism, social support and perceptions of control in predicting subjective well-being (measured with the positive affect subscale of the Affect Balance Scale) Bradburn (1969) and psychological well-being (measured with the purpose in life scale of the Ryff Psychological Well-being scales (Ryff & Keyes, 1995) among older adults. The potential mediating roles of perceived social support and perception of control were also explored. Participants were 225 adults aged from 65 to 94 years. Optimism was found to be a predictor of both subjective and psychological well-being, and perceived social support was found to mediate the relationship between optimism and subjective well-being, but not psychological well-being. In contrast, perception of control was found to mediate the relationship between optimism and psychological well-being, but not subjective well-being. Longitudinal research is needed to confirm these pathways.

Introduction

Understanding and promoting positive aspects of well-being in older adults is important given the growing number of older adults, particularly in Western industrialized countries such as Australia where, for example, the over 65s were 9% of the population in 1976, yet are projected to be 26% of the population by 2050 (Australian Bureau of Statistics, 2008). Most studies in this age group have focused on depression, stress and distress, rather than the positive aspects of well-being. Positive well-being has been conceptualized according to Ryff and colleagues (Keyes, Shmotkin, & Ryff, 2002; Ryff, Singer, & Dienberg Love, 2004) and others (Ryan & Deci, 2001; Waterman, Schwartz, & Conti, 2008) as *subjective* (hedonic) well-being, which emphasizes happiness and pleasure; and *psychological* (eudaimonic) well-being, which focuses on the fulfilment of human potential. Most recently an entire issue of the Journal of Happiness Studies (2008, volume 9, issue 1) has been devoted to eudaimonic approaches to well-being, beginning with Deci and Ryan (2008) discussing its distinction from hedonic well-being. There is also growing empirical evidence for these two aspects of well-being being related but distinct (e.g. Compton, Smith, Cornish, & Qualls, 1996; Ryff & Keyes, 1995). Keyes et al. (2002), for example, in both exploratory and confirmatory factor analyses supported a higher order well-being factor with two distinct oblique factors: psychological and subjective well-being. The highest loading for subjective well-being (SWB) was positive affect and the highest for psychological well-being (PWB) was purpose in life. Similarly, McGregor and Little (1998) found two factors: subjective well-being (which included positive affect) and psychological well-being (which included purpose in life). Ryff et al. (2004) have even found different biological correlates for these two aspects of well-being.

Further to this argument for focusing on positive aspects of well-being, Salsman, Brown, Brechting, and Carlson (2005) have suggested that although many studies have

examined relationships between individual positive psychology variables and outcomes, there are few studies that have examined the relationships among multiple positive psychology variables. A greater understanding of the role of multiple positive psychological influences and outcomes would enable the development of programs to improve well-being in older adults.

In this study, positive affect is used as a measure of subjective well-being because it is comparatively modifiable and has a present orientation to life experiences (compared with a past orientation of life satisfaction). While several studies (e.g. Diener & Suh, 1998) and a meta-analytic review (Pinquart, 2001) found that positive affect decreases with age, a longitudinal study over 23 years found that positive affect tends to remain fairly stable with age (Charles, Reynolds, & Gatz, 2001), but with a slight decrease in the oldest ages. Thus maintenance of positive affect in older adults is of particular interest. While there is no agreed definition for psychological well-being, which makes comparison of studies difficult, discussions of this concept uniformly assert that well-being is more than just happiness and focuses on the realization of a person's true potential: on growth and purpose in life (Ryff, 1989). Ryff and Singer (1998) identified purpose in life as a proactive and intentional aspect of well-being and a central component of positive mental health, so this construct will be used as a measure of psychological well-being in this study. Pinquart's (2002) meta-analysis of purpose in life in old age found a small age-associated decline in purpose in life, as did Ryff and Keyes (1995).

Given the clear distinction between the two types of well-being, it is important to determine whether the psychosocial variables included in the current study differentially relate to psychological well-being and subjective well-being. If differences are found, then

this will facilitate the development of more specific goals for interventions and strategies to improve well-being in older adults.

Predictors of Well-being

(1) Optimism. Dispositional optimism has been defined as the generalized expectation that a person will obtain good outcomes in life (Carver & Scheier, 2001). It is construed as a stable personality characteristic. The positive effects of optimism have been demonstrated across diverse stressful situations (see Lightsey, 1996; Michael F. Scheier & Carver, 1985; & Michael F. Scheier, Carver, & Bridges, 1994, for reviews). Positive effects of optimism could either be mediated through positive coping strategies, for example, optimists use more problem-focused strategies, information seeking and positive reframing (M. F. Scheier, Carver, & Bridges, 2001), or through psychosocial variables such as perceived social support and perception of control. It is these potential mediating relationships that are the focus of the current study.

(2) Social Support. In older adults perceived social support is associated with greater positive affect (Jones, Rapport, Hanks, Lichtenberg, & Telmet, 2003; Stephens, Druley, & Zautra, 2002) and life satisfaction (Jones et al., 2003; Newsom & Schulz, 1996). In addition, Kahn, Hessling, and Russell (2003) found that in older adults, social support predicted 57% of the variance in life satisfaction after controlling for dispositional negative affectivity (neuroticism). Therefore, the social support and subjective well-being relationship does not appear to be spurious and applies to various dimensions of subjective well-being in older adults. The relationship between social support and psychological well-being has not been explored as thoroughly. While Pinquart (2002) meta-analytic review concluded that high-quality social relationships promote purpose in life, he did not find any studies specifically using perceived social network support measures. He argued high-

quality relationships motivate people to do positive things for others, which then give them a sense of being useful and respected. Thus we would expect social support to also be associated with purpose in life.

Social support has been found to mediate the relationship between optimism and distress in breast cancer survivors (Trunzo & Pinto, 2003), in disaster workers (Dougall, Hyman, Hayward, McFeeley, & Baum, 2001) and in college students (Brissette, Scheier, & Carver, 2002). To our knowledge, the current study will be the first to explore the potential mediating role of social support between optimism and well-being in older adults, particularly with positive aspects of well-being, though there has been suggestive evidence using the construct of relationship harmony in predicting life satisfaction in Hong Kong Chinese older adults (Leung, Moneta, & McBride-Chang, 2005).

(3) Perceived control. The degree to which people believe they can bring about desired outcomes in their environment and avoid undesirable ones has been conceptualized as generalized control (Skinner, 1996). Control is related to positive aspects of subjective well-being, for example, happy people typically feel that they have personal control over their own lives (see reviews by Cummins & Nistico, 2002; and Myers & Diener, 1995). A sense of control has been repeatedly identified as an important factor in the well-being of older adults in particular (see S. C. Thompson & Spacapan, 1991 for a review). For example, Kunzmann, Little, and Smith (2002) found perceived control was related to positive and negative affect in older adults. Although the degree of control is lower in older ages (McConatha, McConatha, Jackson, & Bergen, 1998), the need for control has an increasing contribution to happiness with increased age (Cummins & Nistico, 2002).

It could be argued that individuals need to have a sense of control in their lives to enable them to set and pursue goals in a purposeful and meaningful way, and hence

achieve high psychological well-being, though few studies have explored this. Sinha, Nayyar, and Sinha (2002) found that perception of control was related to existential meaning and purpose in life in older adults in India; and social support enhanced perceived control and purpose in life. The related concept of internal locus of control predicted purpose in life in an African American sample aged 18-68 years (M. P. Thompson, Kaslow, Short, & Wyckoff, 2002). Additionally, Ahrens and Ryff (2006) found perceived control moderates some of the relationships between role stress in midlife and well-being measures, though not purpose in life. They do not, however, report tests for direct relationships between perceived control and purpose in life.

One possibility, based on Taylor and colleagues' cognitive adaptation theory (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000), is that optimism and perceived control are largely independent personal resources, or cognitive illusions, which have protective psychological effects and hence contribute to well-being, particularly under conditions of stress (for empirical support see Ratelle, Vallerand, Chantal, & Provencher, 2004; Taylor et al., 2000; Wanberg & Banas, 2000). Similarly, Cummins and Nistico (2002), argue that cognitive schemata result in 'positive cognitive biases' (e.g. control and optimism), which homeostaticly maintain life satisfaction. A second possibility (Cozzarelli, 1993; Maher & Cummins, 2001) is that these two resources may reflect overlapping constructs, but Christensen, Stephens, and Townsend (1998) found mastery (which overlaps with perceived control) predicted life satisfaction even after controlling for dispositional optimism.

This study explores an interesting third possibility: that optimism contributes to control beliefs and strategies. The positive mental set which is part of an optimistic personality may also contribute to high perceptions of control over the environment and,

through those perceptions, may lead to well-being. To date, neither research nor theory has explored the potential relationship between optimism and perception of control: a condition necessary to develop a hypothesis for a potential mediating relationship. This study explores whether perceptions of control mediate the relationship between optimism and subjective well-being; and/or between optimism and psychological well-being.

Aims of the Study

In summary, the research literature has not yet explored the relationship between psychosocial variables and multiple positive aspects of well-being in relation to older adults. Although studies have examined relationships between optimism, well-being and perceived social support and between optimism, well-being and perception of control, it appears that none have examined these constructs together. Additionally, research has not yet explored the relationships among these psychosocial variables with a view to examining potentially differential outcomes for subjective well-being and psychological well-being. Therefore, the first aim of the study was to extend the positive psychology and gerontology literature by examining the relationships among optimism, social support, perceptions of control and both subjective well-being and psychological well-being. A further aim was to explore social support and perceptions of control as potential mediators of the beneficial effects of optimism on well-being in older adults. As an exploratory step, it was proposed to include both potential mediators in the analyses for each type of well-being separately to determine if relationships between variables are robust. These posited models, with both social support and perception of control partially mediating the effects of optimism on each type of well-being (purpose in life and positive affect), are shown in Figure 3.1. Note, however that while each measure of well-being will be examined separately, they have been amalgamated into a single diagram here for illustrative purposes as the proposed paths to well-being in these initially posited models are the same.

Finally, alternate models of the relationships between these variables will also be explored. Specifically, the possibility that positive affect may lead to higher perceptions of social support as suggested by Cummins and Nistico (2002), and Myers and Diener (1995) will be tested. Also, in the same alternate model, whether positive affect leads to higher perceptions of control will also be tested based on McAvay, Seeman, and Rodin (1996) finding that negative affect led to lower control perceptions. Finally, to see if these effects (if they occur) are unique to affect or generalize to other aspects of well-being, whether having a sense of purpose in life may also contribute to higher perceived support and higher perceived control will also be explored.

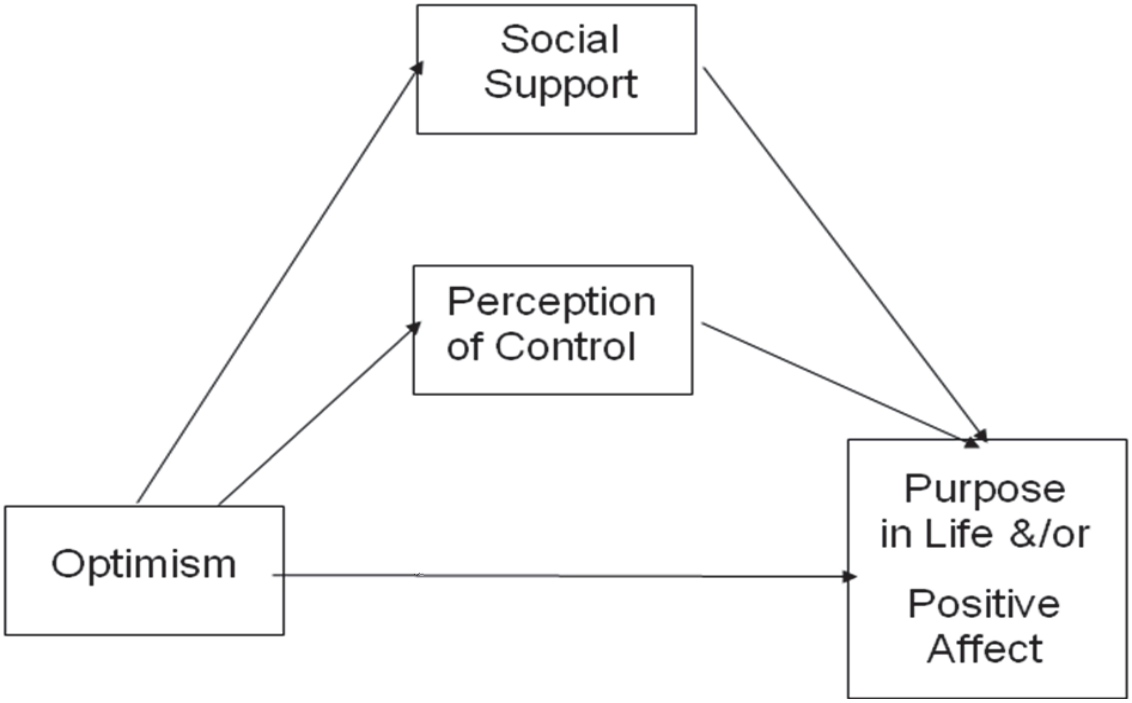


Figure 3.1 **Posited model with hypothesized mediating roles of perception of control and social support on the relation between optimism and both purpose in life (psychological well-being) and positive affect (subjective well-being)**

Method

Participants

A total of 225 participants (145 women; 80 men), aged from 65 to 94 years (mean of 73 years), were recruited in Sydney from retirement villages, volunteer and other community organizations. Most were married (52.4%), followed by widowed (24.4%), never married (14.2%) and divorced (8.9%). Sixty one percent had someone living with them. Participants' education ranged from 3 years up (mean 12.95 years). Seventy six percent were born in Australia; other birthplaces included United Kingdom or Ireland (12.9%), New Zealand (2.2%), China (.5%), India (.5%). Whilst only 34% of participants belonged to a formal volunteer organization, 74% undertook volunteer work of some type. Eighty percent of participants rated their health as good or better (excellent: 8.9%, very good: 27.6%, good: 43.6%); the remainder rated their health as fair (16%) or poor (4%). Fifty seven percent rated their income as adequate; quite good: 24%, very good: 14%, and insufficient: 12%.

Questionnaires

All measures used are existing published scales. Alpha reliabilities from the current study are reported for each scale in Table 3.1. All scales were scored so that higher scores represented higher levels of that variable.

Two outcome variables were used to measure well-being: psychological well-being and subjective well-being.

Psychological well-being (PWB). The Purpose in Life sub-scale from (Ryff, 1989) psychological well-being measure was used as the measure of PWB. It has a mix of positively (e.g. "I enjoy making plans for the future and working to make them a reality") and negatively worded items (e.g. "I used to set goals for myself, but now that seems a

waste of time"). The 14 item version was used, which has an internal consistency alpha of .88 and demonstrated correlations with other positive well-being measures (Ryff, Lee, Essex, & Schmutte, 1994). According to (Ryff & Singer, 2006) the subscales show good discriminant validity.

Subjective well-being (SWB). The Affect Balance Scales (ABS) (Bradburn, 1969) five item subscale of Positive Affect was used as the measure of subjective well-being. Respondents indicated yes or no about feelings during the 'past few weeks'. An example item is: "did you ever feel particularly excited and interested in something?" In older adults reliabilities ranging from .65 and .70 have been found (Himmelfarb & Murrell, 1983). Bradburn (1969) provided evidence of correlations with other well-being measures and social participation.

Dispositional optimism. The predictor variable, dispositional optimism, was measured using the Life Orientation Test - Revised (LOT-R) (Michael F. Scheier et al., 1994). The LOT-R consists of 10 items (four of which are fillers). Three items reflect an optimistic disposition, for example: "In uncertain times I usually expect the best". Only the optimistic item total was used in this study, as previous studies have indicated optimism and pessimism load on separate factors (e.g. Chang, Maydeu-Olivares, & D'Zurilla, 1997).

Social support. The Social Support Questionnaire-Short Form (SSQ-R) (Sarason, Sarason, Shearin, & Pierce, 1987) support satisfaction subscale was used to measure social support. Participants were asked to state how many people they could count on in a given situation and how satisfied they were with the level of support they received. For the latter, participants indicated on a scale from 1 to 6 whether they were very dissatisfied (1) or very satisfied (6) about the support they received (e.g. "Whom can you really count on to be dependable when you need help?"). The participant's support satisfaction score (SSQ-SR)

was the sum of his or her satisfaction responses divided by the number of items (6). Sarason et al. (1987) found internal consistency alphas of between .90 and .93 for the satisfaction scale, and demonstrated good scale validity (through relationships with other measures of support and with loneliness, depression and anxiety).

Perceived control. A scale with three questions was used to measure perceived control (McConatha et al., 1998) , with each question rated on a 5-point scale from 1 = *strongly disagree* to 5 = *strongly agree.* Items were: (1) "I often feel that most situations are out of my control"; (2) "Usually I feel that I have control over what is going on in my life"; and (3) "Life is complicated; a person like me can't understand what is going on". The scale internal-consistency alpha was .60 in McConatha and colleagues' (1998) study, and .71 in the current study. These researchers also demonstrated the control scale's validity through its relationship to life satisfaction, health and fitness. A later study (McConatha & Huba, 1999) also showed discriminant validity for the perceived control scale showing different age changes compared to those found with a measure of control over emotions.

Procedure

After receiving institutional ethics approval, approval from the community and volunteer organizations and retirement villages was obtained. Then several strategies were used to contact potential participants, distribute and collect questionnaires. These included: (i) leaving bulk questionnaires at drop-off points with a secure collection box and collecting completed questionnaires at a later date; and (ii) researchers attending meetings of members/residents to explain the purpose of the study and answer questions: interested members could collect a questionnaire from the researcher, with the researcher who returned to the next scheduled meeting to collect completed questionnaires. Stamped

addressed envelopes were also given to members/residents to return completed questionnaires to the project supervisor by mail if they preferred. Confidentiality was assured, as was the voluntary nature of participation. Participants had to be 65 years of age or more. The questionnaire took approximately 45 minutes to complete.

Results

Descriptive statistics and correlations were first obtained using SPSS 16. Path analyses were then carried out with Amos 7 (Arbunkle, 2006) in order to test a series of potentially mediating relationships, using the maximum-likelihood method. The significance of indirect effects was tested using bootstrapped standard errors in Amos and in Mplus 5 (Muthen, 1998-2007). Initial mediations were tested with two types of well-being as outcome variables (psychological well-being and subjective well-being), one predictor variable (optimism) and two potentially mediating variables (social support and perception of control). For all tests the type I error rate was set at $\alpha = .05$.

Descriptive Statistics

Descriptive statistics for the two outcome variables, psychological well-being (Purpose in Life) and subjective well-being (Positive Affect); the predictor variable, optimism; and the two mediator variables, social support and perception of control are presented in Table 3.1.

Participants reported high scores for each variable. For example, for psychological well-being with a possible range of 6-84, the obtained range was 39-84 with a mean score of 66.56 (SD = 10.51).

Table 3.1 Ranges, means, standard deviations, and reliabilities of major variables

Variable	N	Possible range	Obtained range	Mean	Standard deviation	Scale alpha
Purpose in Life (OV)	223	6-84	39-84	66.56	10.51	.85
Positive Affect (OV)	212	0-5	0-5	3.86	1.19	.57
Optimism (PV)	226	0-12	3-12	8.38	2.00	.76
Social support (MV)	210	1-6	2-6	5.19	.75	.92
Perception of control (MV)	225	3-15	5-15	11.71	2.05	.71

OV = Outcome variable, PV = Predictor variable, MV = Mediator variable.

Note: Scales were scored so that higher means represent high Purpose in Life (psychological well-being), Positive Affect (subjective well-being), Optimism, Social Support and Perception of Control.

Correlational Analyses

Correlations among the two measures of well-being, optimism, social support and perception of control are presented in Table 3.2. Optimism (OPT) showed a significant moderately positive association with Purpose in Life (PIL), Positive Affect (PA) and the two mediator variables - social support (SS) and perception of control (POC). Age was not correlated significantly with any of the variables, so it was not considered in further analyses.

Table 3.2 Correlations among variables

	Variable	*1*	*2*	*3*	*4*	*5*
1	Purpose in life (OV)	-				
2	Positive Affect (OV)	.39**	-			
3	Optimism (PV)	.46**	.44**	-		
4	Social support (MV)	.30**	.37**	.33**	-	
5	Perception of control (MV)	.58**	.29**	.45**	.28**	-

OV = Outcome variable, PV = Predictor variable, MV = Mediator variable.

**p<.01

Mediational Analyses

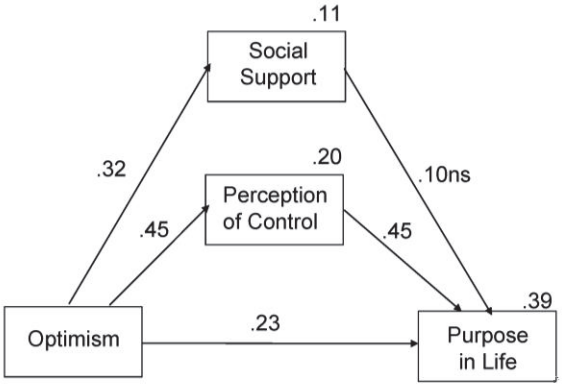
The following four conditions must be met to establish mediation (Baron & Kenny, 1986); variables in the current study are included in brackets. Step 1: the predictor variable (optimism) is related to the outcome variable (purpose in life and positive affect). Step 2: the predictor variable (optimism) is related to the potential mediator (social support and perception of control). Step 3: the mediator (social support and perception of control) is related to the outcome variable (purpose in life and positive affect), and this relation remains once the predictor variable (optimism) is included in the model. Step 4: the relation between the predictor variable and the outcome variable significantly decreases once the mediator is included in the model.

All analyses were carried out with cases with missing data on any of the key variables removed, leaving a sample size of 197 for model testing. Comparisons of those included in the final models with those excluded due to missing data found no differences between the groups on age, perceived health, marital status or volunteering. There was, however a trend for slightly more females than males to be excluded from the model testing due to missing data $\chi 2$ (224) = 3.792, p = .067. There was also a borderline difference between groups on education t (217) = 1.959, p = .051, with those excluded having slightly fewer years of education (M = 11.58, SD = 3.711) than those included in model testing (M = 13.15, SD = 3.847). Those excluded were also significantly slightly more likely to have insufficient income $\chi 2$ (224) = 8.235, p = .040. Thus there is a slightly disproportionate loss of data from those with lower socioeconomic status, but not from those of greater age or poorer health, which might have affected the models' wellbeing outcomes.

The posited models above (separately for PIL and PA) were fitted first. Tests of alternate models were then carried out. The p values for the path coefficients for all models fitted were checked against bootstrapped estimates and found to be consistent; therefore any slight variations from normality in distributions did not make a difference to the results. The majority of remaining direct paths are significant in all models, the exceptions are marked 'ns' in Figures 3.2 and 3.3.

As suggested by Kline (2005), the model $\chi 2$ was used as a "badness-of-fit index, as the higher its value, the worse the model's correspondence to the data" (p.135). Kline also recommends the use of the Root Mean Square Error of Approximation (RMSEA, Browne & Cudeck, 1993), as a further test of model fit because it is does not assume the researcher's model is perfect. Higher values again indicate worse model fit (RMSEA of >.1 suggests poor fit). Thirdly, Kline (2005) recommends the use of the Comparative Fit Index (CFI) (Bentler, 1990), and suggests that values >.9 may indicate good fit of the researcher's model. Finally, the Tucker-Lewis Index (TLI) is also reported for each model as it is a fit index relatively unaffected by sample size (Marsh, Balla, & McDonald, 1988), values closer to 1 indicating better model fit. Each of these fit indices is reported for all models in Figures 3.2 and 3.3.

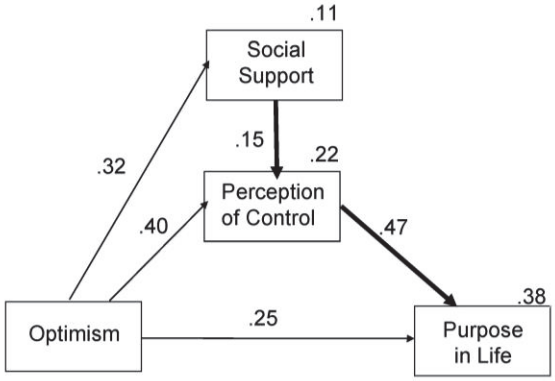
In all models with acceptable fit, bootstrapping was then used to test the significance of indirect paths (and therefore if mediation was occurring), that is, testing step 4 in Baron and Kenny's (1986) procedure. When models contained only one indirect path to any variable from the same origin, p-values were provided by AMOS.



Model 1 (Posited Model)

Note: Poor model fit

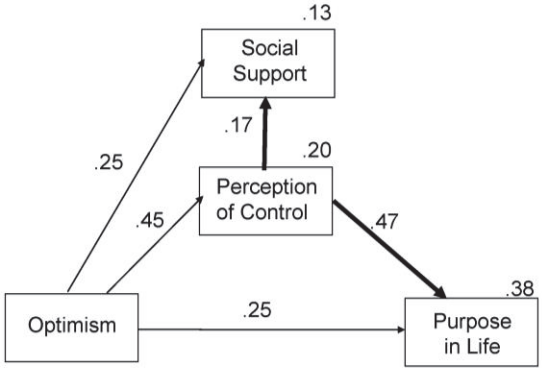
$\chi^2(1) = 4.966$, $p = .026$; TLI = .854; CFI = .976; RMSEA = .142



Model 2

χ^2 (1) = 2.961, $p = .085$; TLI = .928; CFI = .988; RMSEA = .100

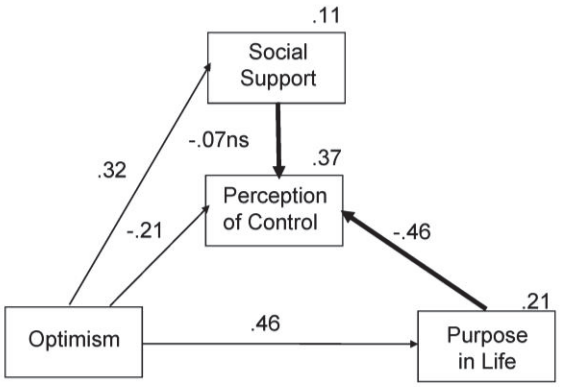
Specific Indirect effects
1.OPT→POC→PIL coefficient = 0.186, $z = 5.035$, $p < .0005$
2.OPT→SS→POC→PIL coefficient = .023, $z = 1.984$, $p = .047$



Model 3 (Final Model)

χ^2 (1)= 2.961, $p = .085$; TLI = .928; CFI = .988; RMSEA = .100

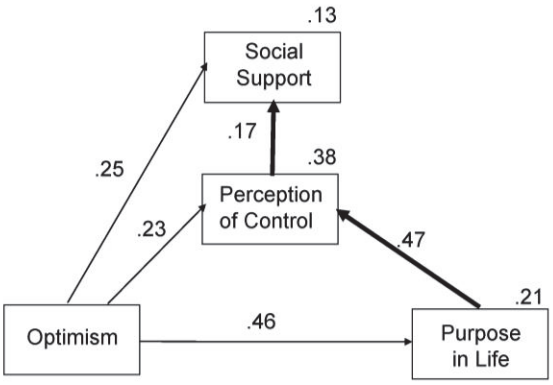
Specific Indirect effects
1.OPT→POC→PIL coefficient = 0.209, $z = 4.644$, $p = .003$
2.OPT→POC→SS coefficient = 0.075, $z = 2.027$, $p = .034$



Model 4

Note: nonsignificant path from social support to perception of control and poor model fit

χ^2 (1) = 6.53, $p = .011$; TLI = .796; CFI = .966; RMSEA = .168



Model 5

χ^2 (1) = 2.961, $p = .085$; TLI = .928; CFI = .988; RMSEA = .100

Specific Indirect effects
1. PIL→POC→SS coefficient = .079, z = 2.079, $p = .041$
2. OPT→POC→SS coefficient = .075, $z = 2.027$, $p = .034$
3. OPT→ PIL→POC coefficient =.217, $z = 5.425$, $p = .003$

Figure 3.2 Models of Purpose in Life

Each model shows standardized path coefficients for optimism, perception of control, social support and purpose in life (psychological well-being). All path coefficients in each model are significant except those labeled ns. Arrows showing paths that differ between models are highlighted. Under each model are the Model Fit Indices, and where there is acceptable model fit, then standardized coefficients are presented for each indirect path. Note: OPT = Optimism, SS = social support, POC = Perceptions of Control, PIL = Purpose in Life.

When more than one indirect path was found to any terminating variable from the same originating variable in a model, the specific indirect paths were checked for significance with the Mplus program (Muthen, 1998-2007), which also bootstraps to provide tests of significance. Results of these AMOS, and where appropriate, Mplus bootstrap analyses of indirect effects are presented in Figures 3.2 and 3.3 (for PIL and PA respectively), in the form of standardised coefficients for the indirect paths and z tests of significance with resulting p values of significance.

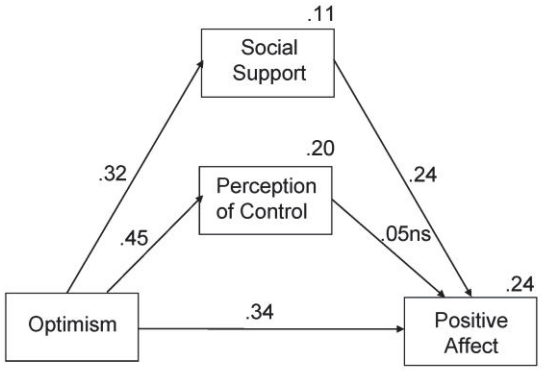
Optimism was retained in all models as an exogenous variable, as it is measured in this study as a stable personality trait. All models for Purpose in Life are presented in Figure 3.2, and all models for Positive Affect are presented in Figure 3.3.

Testing Models of Purpose in Life. Looking first at the models for purpose in life, Figure 3.2 shows the estimates for model fit. The posited model (Model 1) was not a good fit and there was no significant path from SS to PIL; this path was therefore dropped from all subsequent model tests. A replacement path was required to proceed with the path analysis. The model clearly requires a link between SS and POC, as these two variables are significantly correlated. Given both directions of this new path were plausible; models were constructed separately for each. Hence models 2 and 3, were added to those originally proposed (see Figure 3.2). Next, models were constructed to test the possibility, mentioned in the introduction, that well-being may contribute to perceptions of control, rather than the other way around. The unexpected need for the additional pathway between SS and POC

(see above) necessitated two models here as well. Thus Models 4 and 5 were also constructed and tested. The paths that vary between models are shown in bold in Figure 3.2.

Model 4 does not have acceptable fit so it was rejected. Models 2, 3, and 5 showed equivalent acceptable fit. Models 2 and 3 both have the best statistical fit for the data and best predictive value for PIL; they differ only in the direction of the path between SS and POC. Following rejection of Models 1 and 4, in the remaining mediational models tested, Steps 1 to 3 requirements for mediation (as outlined above) were met for all remaining paths as illustrated in Figure 3.2, with all required direct path coefficients reaching statistical significance. Further testing within these models for mediation effects (Step 4) was then done by examining specific indirect effects (see Figure 3.2).

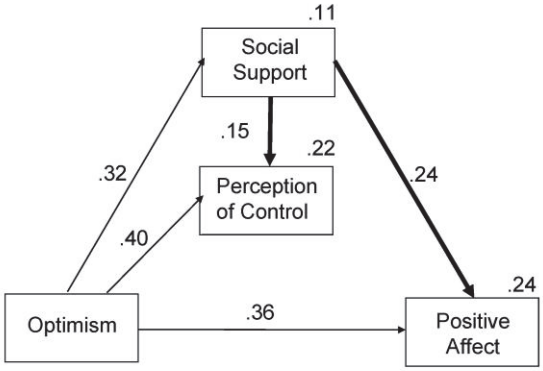
In Model 2 for PIL, the indirect path from OPT to POC to PIL is highly significant; but the path from OPT via both SS and POC to PIL is also significant, but at a lower level. Thus, the significant mediation in Model 2 is predominantly the path originally posited, where POC partially mediates the relationship between OPT and PIL, but with a small contribution to PIL also coming from the second indirect path from OPT through first SS and then POC. In Model 3 for PIL, there are two indirect paths, one from OPT to POC to PIL, as originally posited, this was again highly significant; and the second indirect path was from OPT to POC to SS, this was also significant. Model 5 had no indirect paths to PIL, but two indirect paths to SS and one to POC. The first specific indirect path was from PIL to POC to SS and was significant; the second indirect path was from OPT to POC to SS and was also significant. The third indirect path in Model 5 is from OPT to PIL to POC and was highly significant.



Model 1 (Posited Model)

Note: Poor model fit

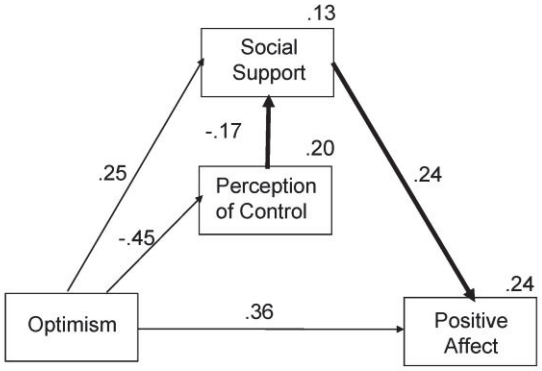
$\chi^2(1) = 4.966$, $p = .026$; TLI = .801; CFI = .967; RMSEA = .142



Model 2 (Final Model)

$\chi^2(1) = .563$, $p = .453$; TLI = 1.022; CFI = 1.0; RMSEA = .000

Specific Indirect effects
1.OPT→SS→PA coefficient = 0.079, $z = 2.821$, $p = .002$
2.OPT→SS→POC coefficient = 0.049, $z = 1.885$, $p = .022$

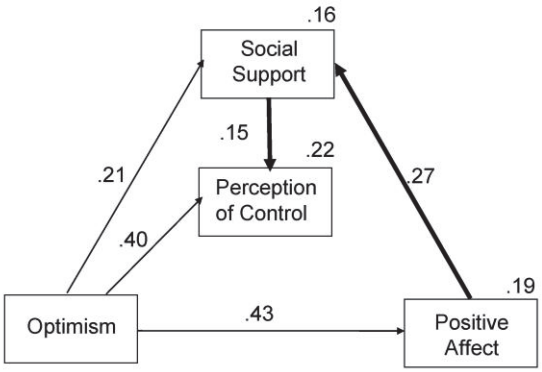


Model 3

Note: nonsignificant indirect path

$\chi^2(1) = .563$, $p = .453$; TLI = 1.022; CFI = 1.000; RMSEA = .000

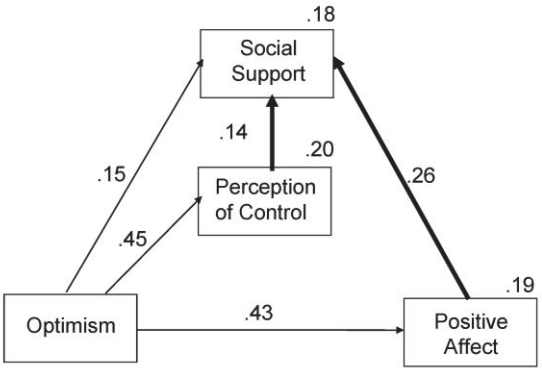
Specific Indirect effects
1. OPT→SS→PA coefficient = 0.061, $z = 2.545$, $p = .011$
2. OPT→POC→SS→PA coefficient = 0.018, $z = 1.868$, $p = .062$
3. OPT→POC→SS coefficient = 0.075, $z = 2.168$, $p = .030$



Model 4

$\chi^2(1) = .563$, $p = .453$; TLI = 1.022; CFI = 1.000; RMSEA = .000

Specific Indirect effects
1. PA→SS→POC coefficient = 0.040, $z = 1.739$, $p = .025$
2. OPT→SS→POC coefficient = 0.117, $z = 3.250$, $p = .003$
3. OPT→PA→SS→POC coefficient = 0.049, $z = 1.885$, $p = .025$



Model 5

$\chi^2(1) = 1.646$, $p = .199$; TLI = .968; CFI = .995; RMSEA = .057

Specific Indirect effects
1. OPT→POC→SS coefficient = 0.065, $z = 1.922$, $p = .055$
2. OPT→PA→SS coefficient = 0.111, $z = 3.221$, $p = .001$

Figure 3.3 Models for Positive Affect

Each model shows standardized path coefficients for optimism, perception of control, social support and positive affect (subjective well-being). All path coefficients in each model are significant except those labeled ns. Arrows showing paths that differ between models are highlighted. Under each model are the Model Fit Indices, and where there is acceptable model fit, then standardized coefficients are presented for each indirect path. Note: OPT = Optimism, SS = social support, POC = Perceptions of Control, PA = Positive Affect.

In summary, for purpose in life, Models 2 and 3 explain the most variance in PIL (38%, compared to 21% for Model 5), and both show the simple partial mediation of the OPT to PIL relationship via POC, and they differ only in the proposed direction of the relationship between SS and POC. Model 3 (Figure 3.2) was chosen as the final model for purpose in life as it is the most parsimonious (with only one indirect path to PIL), yet still explains 38% of the variance in PIL; it also has good model fit, and all direct and indirect paths are significant. This final model has a highly significant indirect path showing partial mediation of the effects of OPT on PIL by POC, as originally posited.

Testing Models of Positive Affect. Now turning to models for positive affect, Figure 3.3 shows the estimates for model fit. Here also, as with the model of PIL, the posited model (Model 1) was not a good fit.

Additionally, there was no significant path from POC to PA, necessitating the removal of this path from subsequent models. As with the PIL models, in predicting PA the model clearly does require a link between SS and POC. Models 2 and 3 for PA were thus constructed in the same manner as for PIL and can be seen in Figure 3.3. Next models were constructed to test the possibility mentioned in the introduction that positive affect may contribute to social support, rather than the other way around. Again the addition of the two alternate directions of the pathway between SS and POC necessitated 2 models for this, Models 4 and 5. All models for PA are shown in Figure 3.3, again with the paths that vary between models bolded.

Model 5 for PA does have acceptable statistical fit (see Figure 3.3). However, Models 2, 3 and 4 all have identical excellent fit indices. In summary, for the prediction of Positive Affect, Models 2, 3, 4, and 5 all had acceptable fit. Thus mediation effects were tested for each of these models (in the same manner as for the PIL models). Following the rejection of Model 1 (the posited model), in the remaining mediational models tested, Steps 1 to 3 requirements for mediation (as outlined above) were met for all remaining direct paths as illustrated in Figure 3.3, with all required path coefficients reaching statistical significance. As with the models of PIL above, further testing within these PA models for mediation effects (Step 4) was then done by examining specific indirect effects (see Figure 3.3).

Model 2 has two indirect paths, one from OPT to SS to PA, which was highly significant. Thus the relationship between OPT and PA was partially mediated by social support as originally posited. The second indirect path from OPT to SS to POC was also significant, but only at the $p<.05$ level. Model 3 had two indirect paths to PA, and one to SS. The first specific indirect path is from OPT to SS to PA and it was significant here, as it was in Model 2. Indirect path 2 in Model 3, from OPT to POC to SS to PA was not significant. The third indirect path from OPT to POC to SS was significant. Due to the non-significant indirect path Model 3 was rejected. Model 4 has three indirect paths, path 1 is from PA to SS to POC, and it was significant but only at the .05 level. Indirect path 2 was from OPT to SS to POC and it was highly significant. The third indirect path for Model 4 was from OPT to PA to SS to POC and this was also significant, but only at the .05 level. Finally, Model 5 has two indirect paths, both from OPT to SS. The first path is from OPT to POC to SS, this was not significant; the second path was from OPT to PA to SS and it was significant. Given the presence of a non-significant indirect path, Model 5 was rejected.

While there is some evidence for a role of PA in affecting SS rather than the other way around (Model 4), Models 2 and 3 explain the most variance in positive affect (24% compared to 19%). Model 3 contains one indirect path that is, in fact, not significant (see Figure 3.3), so it was rejected. Model 2 was thus chosen as the final model for positive affect, as it seems to be the best explanation for the data, given the good model fit, significance of all direct and indirect paths, and that the aim was to predict positive affect. This final model has a highly significant indirect path from OPT to SS to PA. Thus the relationship between OPT and PA was partially mediated by SS as originally posited.

Discussion

Optimism was a strong predictor of both types of well-being. Its effects were, however, predominantly mediated by different variables, depending on the outcome being tested. When multiple mediators were entered into the same model, social support, but not perceived control, mediated the effects of optimism on positive affect, our measure of subjective well-being; however, while perceived control mediated optimism in predicting purpose in life, our measure of psychological well-being, social support was not a significant mediator for psychological well-being. Thus, this study provides conditional evidence for the mediating role of social support and perception of control in the relation between optimism and well-being because the significance of the mediating role is conditional upon the type of well-being measured: subjective well-being or psychological well-being. Findings regarding different mediators for subjective well-being and psychological well-being, while not supporting the original posited models shown in Figure 3.1, do provide support for previous findings that hedonic (subjective) and eudaimonic (psychological) views of well-being represent two separate dimensions and

theoretical positions (Keyes et al., 2002; Ryan & Deci, 2001; Ryff et al., 2004; van Dierendonck, 2004) and have different, though overlapping predictors.

Finding for Subjective Well-being (Measured as Positive Affect)

While not supporting the full posited model, this study did find evidence for the posited mediating role of social support between optimism and subjective well-being in the final model (Model 2) for Positive Affect. Although research had not yet explored these relationships with older adults, this result is consistent with findings of other studies in a range of populations (Brissette et al., 2002; Trunzo & Pinto, 2003). Further, the relationship between perceived social support and subjective well-being implicit in the mediation results is consistent with the findings of studies with older adults in a range of settings (Jones et al., 2003; Newsom & Schulz, 1996; Stephens et al., 2002).

Note that interestingly, this final model also includes two additional paths. The first was from optimism to perceptions of control consistent with predictions that positive views of the future would contribute to a sense of being able to control aspects of one's life. The second additional path supported in the final model is from social support to perceptions of control. This finding is consistent with Bandura's (1997) conceptualization in which having support from others maintains perceptions of domain specific efficacy, and is consistent with research findings of Sinha et al. (2002), Krause (2007) and McAvay et al. (1996). The results of the present study suggest that this effect of social support on efficacy generalizes to broader perceptions of control.

What factors underlie the optimism to perceived social support to subjective well-being mediational pathway demonstrated in the final model (Model 2) for positive affect? People with a more optimistic disposition may be more attractive to others as they have a positive outlook. Thus they may attract more people, develop more friendships and

maintain closer relationships with their family, whereas people may feel uncomfortable and perhaps overwhelmed in the company of pessimistic people and avoid being with them (Brissette et al., 2002; Dougall et al., 2001). By attracting more people, optimists may increase the size of their support network, which could potentially increase the number of people who are available and willing to help them (Dougall et al., 2001; Trunzo & Pinto, 2003), and thus they may be more likely to express satisfaction with their level of social support. Older adults who are more optimistic therefore tend to have greater perceived social support (Brissette et al., 2002; Dougall et al., 2001). Through perceiving friends and family as supportive, it is more likely that optimistic older adults, in contrast to pessimistic older adults, will feel more satisfied with their lives and experience more positive affect, as found in the current study, because as previous research has shown (Jones et al., 2003; Stephens et al., 2002), higher social support is associated with higher positive affect.

Finding for Psychological Well-being (Measured as Purpose in Life)

This study also, while not supporting the posited model for purpose in life, did find evidence for a mediating role of perception of control between optimism and psychological well-being as seen in Models 2 and 3 for Purpose in Life. Although previous studies have not explicitly examined multiple mediators, our results are consistent with findings of associations between optimism and well-being (e.g. Chang et al., 1997) in younger samples, and perception of control and well-being (e.g. Lu, Shih, Lin, & Ju, 1997; Sinha et al., 2002) in various age groups, including between control and purpose in life specifically (Jackson & Coursey, 1988).

Note Model 3 was chosen as the Final model for PIL as it is the most parsimonious, yet it still also includes a second indirect path, in this case from optimism to perception of control and then to social support. Thus while social support is not predicting purpose in

life, optimism is having multiple impacts on older individuals in this sample, being associated both directly and indirectly with not just purpose in life but also perceptions of control and social support (which is also true in Model 2). This path from perception of control to social support (as seen in Models 3 and 5 for both forms of well-being) is consistent with M. P. Thompson et al. (2002) who suggested that self-efficacy beliefs are predictive of social support, however, their study was cross-sectional & did not test alternative models. Additionally, there are as yet no longitudinal studies supporting this direction of the relationship between support and control, whereas several studies have found the reverse, that is, social support leading to measures of efficacy or role specific control (Krause, 2007; McAvay et al., 1996; Sinha et al., 2002). This contradiction implicit in previous findings regarding the direction of this effect informed our approach of testing both directions of effect in the present study. While statistically significant in models of both types of well-being, the relationship is small (.15 to .17), however, and the direction remains inconclusive.

What factors underlie the optimism to perception of control to psychological well-being mediational pathway found in both Models 2 and 3 for purpose in life? It could also be argued that the present study's findings of effects for optimism and perceived control on well-being partially support Taylor et al.'s (2000) cognitive adaptation theory and research on positive illusions which posit that both optimism and perception of control act as protective resources to promote well-being and contribute to an individual's ability to find meaning from adverse experiences (Taylor et al., 2000). Meaning is a key aspect of psychological well-being and is part of the purpose in life construct, so this model would predict purpose in life from optimism and control. This study's findings could also be argued to support an expansion of Cummins and Nistico's (2002) homeostatic model of

life satisfaction to include the prediction of other positive aspects of subjective well-being (such as positive affect).

There are, however, several problems with interpreting the current results as supportive of these theories. First, the lack of support for control acting either directly or as a mediator in predicting positive affect goes against this argument. Secondly, neither of these theoretical models can account for the mediating pathways found in the present study, as both consider optimism and control perceptions separately, assuming that each makes an independent contribution to well-being. Now, while it is possible that both control and optimism act as positive illusions and bias the processing of incoming information, as these theories both suggest, they would need to be modified to take into account the path from dispositional optimism to perceived control to well-being found in the current study. Thirdly, neither theory can explain the role of social support in well-being, though perhaps they could be extended to argue that perceptions of social support may also be a product of positively biased interpretations of incoming information. Fourthly, neither theory allows for the possibility of potential reversing of their proposed causal direction, or for bidirectional influences. Finally, neither theory takes into account the differences between subjective and psychological well-being and thus cannot account for the discrepant findings between these two outcomes.

Tentatively one could argue instead that optimistic older adults, rather than just having control perceptions distorted through an interpretative positivity bias, may adopt active coping strategies to achieve their goals or to reengage with alternative goals, which in turn would bolster, develop and enhance their sense of personal control. They may subsequently reevaluate their goals and priorities, which would enable them to find a sense of meaning from their experiences and a sense of purpose for the future. This process is

similar to Baltes' Selective Optimization with Compensation theory (Baltes & Baltes, 1990) and could perhaps be further explored in that context. Each aspect of this proposed pathway needs to be explored and validated in future research, though there is evidence for the first step, i.e. optimistic adults do tend to use more active, problem-focused coping strategies (M. F. Scheier et al., 2001); and the current study provides evidence that perceived control is linked to a sense of purpose in life, though the processes by which this occurs remain to be explored.

Tests of Alternate Direction of Effects (from Well-being to Social Support and/or Control)

Several of the models statistically supported in the current study (Model 5 for purpose in life and Models 4 and 5 for positive affect) suggest that the causal direction may be the reverse of what was predicted. Well-being, particularly positive affect, may contribute to perceptions of social support; or in the case of purpose in life, to perceptions of control over outcomes. Given the cross-sectional nature of these findings, what evidence is there from previous longitudinal studies to suggest that this or the originally posited causal direction is more plausible? While Myers and Diener (1995) suggested the causal direction from traits to subjective well-being may be reversed, they provided no evidence for this. Diener, Oishi, and Lucas (2003) again make this claim, but the only evidence they cited are Cunningham (1988) and Isen (1987) that inducing positive moods leads to greater sociability, which they equate with extraversion. While this could potentially contribute to greater perceptions of social support, the link is rather tenuous at this stage. Indeed, longitudinal studies such as (Russell & Cutrona, 1991) found in older adults that social support predicted levels of depression 12 months later. Similarly, Stephens et al. (2002) linked prior levels of social support to later improvements in knee pain and positive affect in osteoarthritis patients. Results of longitudinal studies also suggest that perceptions of

control (mastery) precede well-being (Martire, Stephens, & Franks, 1997; Townsend, Noelker, Deimling, & Bass, 1989). Thus, despite quite good statistical model fit for some models with pathways from well-being to other variables (Models 5 for both and Model 4 for positive affect only), these models are less plausible than the remaining models as prior evidence does not support them. Additional longitudinal studies need to be conducted to confirm this conclusion.

Overall Findings

Overall, this study provides consistent evidence of, and further support for, the beneficial effects of optimism on both types of well-being in older adults, both directly and when mediated through perceived social support or perception of control. For example, the direct effect of optimism on purpose in life accounts for 21% of the variance (in Models 4 and 5 where there is no indirect path to optimism); and the direct effect of optimism on positive affect accounts for 19% (in corresponding models). When indirect paths are included, the variance explained by optimism is raised to 38% for purpose in life, and to 24% for positive affect. Optimism, then, appears to be quite a strong contributor to well-being in older adults, and to have its effect at least partially through its influence on positive perceptions (e.g. of the provision of social support) and expectations (e.g. of control over outcomes). This explanation is supported by Leung et al.'s (2005) finding that the effects of optimism on life satisfaction (a measure of subjective well-being) were mediated by expectations (of relationship harmony) and perceptions (of financial status) in Chinese older adults in Hong Kong.

Limitations and Future Research

Some limitations of this study should be noted. First, the research is limited by the exclusive use of self-report measures, thus the potential constraints of shared method

variance is potentially problematic. Further studies using multiple informants would enhance the validity of these findings.

The use of single aspects of both subjective well-being and psychological well-being may have limited the extent to which these concepts were examined and the generalizability of the conclusions. A positive affect scale with greater reliability such as the Positive and Negative Affect Scales (PANAS) (Watson, Clark, & Tellegen, 1988) could be used in future research. Also, additional dimensions of psychological well-being (e.g. personal growth) and of subjective well-being (e.g. negative affect or life satisfaction) could be included to see if the same mediational relations hold for each type of well-being. Also, another measure of perceptions of control could be used to clarify whether the current findings have been influenced by two of the three items used being negatively worded. Future research could include a wider range of variables and their relations with each other and with the two types of well-being. In particular, self-esteem could be included, as it is mentioned in both theoretical models mentioned previously (Cummins & Nistico, 2002; Taylor et al., 2000). Optimism may be mediated through self-esteem for some aspects of well-being. Revisions to these models could be proposed following additional confirmation of the mediational pathways found in the current study.

A further limitation to the generalizability of the findings is that the sample was not representative of all older adults, as the majority of participants were community dwelling, engaged in volunteer activities, rated their health as good (or better) and were highly educated for their age group. Future research could explore the generalizability of these findings, not only to frail older adults, but also to older adults who are not involved in volunteer work and those from non-Western cultures.

While the models choice following rejection of the original models was not haphazard, each model being based on either past empirical relations or theoretical propositions, there is still a danger that fitting the models could capitalize on the peculiarities of this sample rather than being generalizable. Thus the final models need to be confirmed in an independent sample.

As the study was cross-sectional, there is more than one way to interpret the data, since the direction of the relation is not known. Longitudinal studies that examine changes in relationships among variables over time would help to define more clearly issues of direction. There was minimal guidance from theory regarding the relationships among the variables. Further exploration of theoretical bases for relationships, such as social cognition models would be useful in future research.

Finally, given the plethora of terms used, researchers need to define clearly the type of social support (Barrera, 1986; Thoits, 1995) and the type of control (Haidt & Rodin, 1999; Kort, Midden, Aarts, & Van Wagenberg, 2001; S. C. Thompson & Spacapan, 1991) they include in their future studies to ensure that the correct construct is being examined.

Conclusion

The results of this study indicate that optimism is a powerful predictor of well-being in older adults, and that both perceived social support and perception of control are powerful predictors of well-being, but importantly that they differentially relate to psychological well-being and subjective well-being. One implication is that it is important to consider different psychosocial variables and different processes in the context of, the specific type of "well-being". Optimism seems to work in part by increasing older adults' perceptions of support from friends and family and this then makes them happy; but to feel a sense of purpose and meaning in life optimism works in part through fostering a sense

that they have some control over their environment. This may be because of the different focus of the resource, with social support as a ‘social’ resource and optimism and perception as ‘personal’ resources, but further research is required to explore these relations in domain-specific contexts, for example, when older adults relocate to a retirement village or a nursing home, so that appropriate resources may be provided to maintain and enhance levels of both subjective and psychological well-being. This distinction between types of well-being and their predictors is important for research and also when developing policies and designing and implementing interventions aimed at promoting enhanced quality of life for older adults.

References

Ahrens, C., & Ryff, C. D. (2006). Multiple roles and well-being: Sociodemographic and psychological moderators. *Sex Roles, 55*(11), 801-815. doi:10.1007/s11199-006-9134-8

Arbunkle, J. L. (2006). *AMOS 7.0 User's guide*. Chicago, Ill: SPSS Inc.

Australian Bureau of Statistics. (2008). *Yearbook Australia*. Canberra, ACT, Australia: Bureau of Statistics.

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1-34). New York, NY: Cambridge University Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W H Freeman/Times Books/ Henry Holt & Co.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173

Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology, 14*(4), 413-445. doi:10.1007/BF00922627

Bentler, P. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. doi:10.1037/0033-2909.107.2.238

Bradburn, N. M. (1969). *The structure of psychological well-being*. Oxford, England: Aldine.

Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology, 82*(1), 102-111. doi:10.1037/0022-3514.82.1.102

Browne, M. W., & , & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & Long, J.S. (Ed.), *Testing structural equation models.* (pp. 136-162). Newbury Park, CA: Sage.

Carver, C. S., & Scheier, M. F. (2001). Optimism, pessimism, and self-regulation. In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice* (pp. 31-51). Washington, DC: American Psychological Association.

Chang, E. C., Maydeu-Olivares, A., & D'Zurilla, T. J. (1997). Optimism and pessimism as partially independent constructs: Relationship to positive and negative affectivity and psychological well-being. *Personality and Individual Differences, 23*(3), 433-440. doi:10.1016/S0191-8869%2897%2900040-8

Charles, S. T., Reynolds, C. A., & Gatz, M. (2001). Age-related differences and change in positive and negative affect over 23 years. *Journal of Personality and Social Psychology, 80*(1), 136-151. doi:10.1037/0022-3514.80.1.136

Christensen, K. A., Stephens, M. A. P., & Townsend, A. L. (1998). Mastery in women's multiple roles and well-being: Adult daughters providing care to impaired parents. *Health Psychology, 17*(2), 163-171. doi:10.1037/0278-6133.17.2.163

Compton, W. C., Smith, M. L., Cornish, K. A., & Qualls, D. L. (1996). Factor structure of mental health measures. *Journal of Personality and Social Psychology, 71*(2), 406-413. doi:10.1037/0022-3514.71.2.406

Cozzarelli, C. (1993). Personality and self-efficacy as predictors of coping with abortion. *Journal of Personality and Social Psychology, 65*(6), 1224-1236. doi:10.1037/0022-3514.65.6.1224

Cummins, R. A., & Nistico, H. (2002). Maintaining life satisfaction: The role of positive cognitive bias. *Journal of Happiness Studies, 3*(1), 37-69. doi:10.1023/a:1015678915305

Cunningham, M. R. (1988). What do you do when you're happy or blue? Mood, expectancies, and behavioral interest. *Motivation and Emotion, 12*(4), 309-331. doi:10.1007/BF00992357

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies, 9*(1), 1-11. doi:10.1007/s10902-006-9018-1

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, Culture, and Subjective Well-Being: Emotional and Cognitive Evaluations of Life. *Annual Review of Psychology, 54*, 403-425. doi:10.1146/annurev.psych.54.101601.145056

Diener, E., & Suh, M. E. (1998). Subjective well-being and age: An international analysis. In K. W. Schaie & M. P. Lawton (Eds.), *Annual review of gerontology and geriatrics, Vol 17: Focus on emotion and adult development* (pp. 304-324). New York, NY: Springer Publishing Co.

Dougall, A. L., Hyman, K. B., Hayward, M. C., McFeeley, S., & Baum, A. (2001). Optimism and traumatic stress: The importance of social support and coping. *Journal of Applied Social Psychology, 31*(2), 223-245. doi:10.1111/j.1559-1816.2001.tb00195.x

Haidt, J., & Rodin, J. (1999). Control and efficacy as interdisciplinary bridges. *Review of General Psychology, 3*(4), 317-337. doi:10.1037/1089-2680.3.4.317

Himmelfarb, S., & Murrell, S. A. (1983). Reliability and validity of five mental health scales in older persons. *Journal of Gerontology, 38*(3), 333-339. doi:10.1093/geronj/38.3.333

Isen, A. M. (1987). Positive affect, cognitive processes, and social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology, Vol 20* (pp. 203-253). San Diego, CA: Academic Press.

Jackson, L. E., & Coursey, R. D. (1988). The relationship of God control and internal locus of control to intrinsic religious motivation, coping and purpose in life. *Journal for the Scientific Study of Religion, 27*(3), 399-410. doi:10.2307/1387378

Jones, T. G., Rapport, L. J., Hanks, R. A., Lichtenberg, P. A., & Telmet, K. (2003). Cognitive and psychosocial predictors of subjective well-being in urban older adults. *The Clinical Neuropsychologist, 17*(1), 3-18. doi:10.1076/clin.17.1.3.15626

Kahn, J. H., Hessling, R. M., & Russell, D. W. (2003). Social support, health, and well-being among the elderly: What is the role of negative affectivity? *Personality and Individual Differences, 35*(1), 5-17. doi:10.1016/S0191-8869%2802%2900135-6

Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*(6), 1007-1022. doi:10.1037/0022-3514.82.6.1007

Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. New York, NY: Guilford Press.

Kort, Y. A. W. S. D., Midden, C. J. H., Aarts, H., & Van Wagenberg, F. (2001). Determinants of adaptive behavior among older persons: Self-efficacy, importance, and personal dispositions as directive mechanisms. *The International Journal of Aging and Human Development, 53*(4), 253-274. doi:10.2190/v52n-q5vn-c3kw-0ly9

Krause, N. (2007). Age and decline in role-specific feelings of control. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 62B*(1), S28-S35. doi:10.1093/geronb/62.1.S28

Kunzmann, U., Little, T., & Smith, J. (2002). Perceiving control: A double-edged sword in old age. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 57B*(6), P484-P491. doi:10.1093/geronb/57.6.P484

Leung, B. W.-C., Moneta, G. B., & McBride-Chang, C. (2005). Think positively and feel positively: Optimism and life satisfaction in late life. *The International Journal of Aging and Human Development, 61*(4), 335-365. doi:10.2190/FQTB-EBAJ-H9WP-LMYA

Lightsey, O. R., Jr. (1996). What leads to wellness? The role of psychological resources in well-being. *The Counseling Psychologist, 24*(4), 589-759. doi:10.1177/0011000096244002

Lu, L., Shih, J., Lin, Y., & Ju, L. (1997). Personal and environmental correlates of happiness. *Personality and Individual Differences, 23*(3), 453-462. doi:10.1016/S0191-8869%2897%2900060-3

Maher, E., & Cummins, R. A. (2001). Subjective quality of life, perceived control and dispositional optimism among older people. *Australasian Journal on Ageing, 20*(3), 139-146. doi:10.1111/j.1741-6612.2001.tb01776.x

Marsh, H. W., Balla, J. R., & , & McDonald, R. P. (1988). Goodness of fit indices in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*(3), 391-410. doi:10.1037//0033-2909.103.3.391

Martire, L., Stephens, M. A. P., & Franks, M. (1997). Multiple roles of women caregivers: Feelings of mastery and self-esteem as predictors of psychosocial well-being. *Journal of Women & Aging, 9*(1-2), 117-131. doi:10.1300/J074v09n01_10

McAvay, G. J., Seeman, T. E., & Rodin, J. (1996). A longitudinal study of change in domain-specific self-efficacy among older adults. *Journals of Gerontology. Series B, Psychological and Social Sciences, 51*(5), P243. doi:10.1093/geronb/51b.5.p243

McConatha, J. T., & Huba, H. M. (1999). Primary, secondary, and emotional control across adulthood. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 18*(2), 164-170. doi:10.1007/s12144-999-1025-z

McConatha, J. T., McConatha, D., Jackson, J. A., & Bergen, A. (1998). The control factor: Life satisfaction in later adulthood. *Journal of Clinical Geropsychology, 4*(2), 159-168.

McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology, 74*(2), 494-512. doi:10.1037/0022-3514.74.2.494

Muthen, L. K., & Muthen, B.O. (1998-2007). *Mplus user's guide* (5th ed.). Los Angeles, CA: Muthen & Muthen.

Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science, 6*(1), 10-19. doi:10.1111/j.1467-9280.1995.tb00298.x

Newsom, J. T., & Schulz, R. (1996). Social support as a mediator in the relation between functional status and quality of life in older adults. *Psychology and Aging, 11*(1), 34-44. doi:10.1037/0882-7974.11.1.34

Pinquart, M. (2001). Age differences in perceived positive affect, negative affect, and affect balance in middle and old age. *Journal of Happiness Studies, 2*(4), 375-405. doi:10.1023/A:1013938001116

Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International, 27*(2), 90-114. doi:10.1007/s12126-002-1004-2

Ratelle, C. F., Vallerand, R. J., Chantal, Y., & Provencher, P. (2004). Cognitive adaptation and mental health: A motivational analysis. *European Journal of Social Psychology, 34*(4), 459-476. doi:10.1002/ejsp.208

Russell, D. W., & Cutrona, C. E. (1991). Social support, stress, and depressive symptoms among the elderly: Test of a process model. *Psychology and Aging, 6*(2), 190-201. doi:10.1037/0882-7974.6.2.190

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166. doi:10.1146/annurev.psych.52.1.141

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081. doi:10.1037/0022-3514.57.6.1069

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719-727. doi:10.1037/0022-3514.69.4.719

Ryff, C. D., Lee, Y. H., Essex, M. J., & Schmutte, P. S. (1994). My children and me: Midlife evaluations of grown children and of self. *Psychology and Aging, 9*(2), 195-205. doi:10.1037/0882-7974.9.2.195

Ryff, C. D., & Singer, B. H. (1998). The role of purpose in life and personal growth in positive human health. In P. T. P. Wong & P. S. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 213-235). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Ryff, C. D., & Singer, B. H. (2006). Best news yet on the six-factor model of well-being. *Social Science Research, 35*(4), 1103-1119. doi:10.1016/j.ssresearch.2006.01.002

Ryff, C. D., Singer, B. H., & Dienberg Love, G. (2004). Positive health: Connecting well-being with biology. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences, 359*(1449), 1383-1394. doi:10.1098/rstb.2004.1521

Salsman, J. M., Brown, T. L., Brechting, E. H., & Carlson, C. R. (2005). The link between religion and spirituality and psychological adjustment: The mediating role of optimism and social support. *Personality and Social Psychology Bulletin, 31*(4), 522-535. doi:10.1177/0146167204271563

Sarason, I. G., Sarason, B. R., Shearin, E. N., & Pierce, G. R. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships, 4*(4), 497-510. doi:10.1177/0265407587044007

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*(3), 219-247. doi:10.1037/0278-6133.4.3.219

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*(6), 1063-1078. doi:10.1037/0022-3514.67.6.1063

Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice.* (pp. 189-216). Washington, DC, US: American Psychological Association.

Sinha, S., Nayyar, P., & Sinha, S. (2002). Social support and self-control as variables in attitude toward life and perceived control among older people in India. *The Journal of Social Psychology, 142*(4), 527-540. doi:10.1080/00224540209603916

Skinner, E. A. (1996). A Guide to Constructs of Control. *Journal of Personality and Social Psychology, 71*(3), 549-570. doi:10.1037/0022-3514.71.3.549

Stephens, M. A. P., Druley, J. A., & Zautra, A. J. (2002). Older adults' recovery from surgery for osteoarthritis of the knee: Psychosocial resources and constraints as predictors of outcomes. *Health Psychology, 21*(4), 377-383. doi:10.1037/0278-6133.21.4.377

Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. (2000). Psychological resources, positive illusions, and health. *American Psychologist, 55*(1), 99-109. doi:10.1037/0003-066X.55.1.99

Thoits, P. A. (1995). Stress, coping, and social support processes: where are we? What next? *Journal of Health and Social Behavior, 35*(Extra Issue), 53-79. doi:10.2307/2626957

Thompson, M. P., Kaslow, N. J., Short, L. M., & Wyckoff, S. (2002). The mediating roles of perceived social support and resources in the self-efficacy-suicide attempts relation among African American abused women. *Journal of Consulting and Clinical Psychology, 70*(4), 942-949. doi:10.1037/0022-006X.70.4.942

Thompson, S. C., & Spacapan, S. (1991). Perceptions of control in vulnerable populations. *Journal of Social Issues, 47*(4), 1-21. doi:10.1111/j.1540-4560.1991.tb01831.x

Townsend, A., Noelker, L., Deimling, G., & Bass, D. (1989). Longitudinal impact of interhousehold caregiving on adult children's mental health. *Psychology and Aging, 4*(4), 393-401. doi:10.1037/0882-7974.4.4.393

Trunzo, J. J., & Pinto, B. M. (2003). Social support as a mediator of optimism and distress in breast cancer survivors. *Journal of Consulting and Clinical Psychology, 71*(4), 805-811. doi:10.1037/0022-006X.71.4.805

van Dierendonck, D. (2004). The construct validity of Ryff's Scales of Psychological Well-being and its extension with spiritual well-being. *Personality and Individual Differences, 36*(3), 629-643. doi:10.1016/S0191-8869%2803%2900122-3

Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology, 85*(1), 132-142. doi:10.1037/0021-9010.85.1.132

Waterman, A. S., Schwartz, S. J., & Conti, R. (2008). The implications of two conceptions of happiness (hedonic enjoyment and eudaimonia) for the understanding of intrinsic motivation. *Journal of Happiness Studies, 9*(1), 41-79. doi:10.1007/s10902-006-9020-7

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070. doi:10.1037/0022-3514.54.6.1063

Chapter 3b:
Recent Research Findings Related to Optimism

Since the publication of the paper focusing on optimism and wellbeing in older adults (Chapter 3a), other researchers have built on this and related work. The purpose of this chapter is to review relevant research subsequent to the publication of this paper in 2010. Subsequent research cites this paper, therefore placing this update here was considered more appropriate than rewriting the introduction to the paper itself. Keeping the paper in its published form is also consistent with the thesis-by-publication style chosen for this thesis. Overall subsequent work has confirmed various aspects of the original findings, albeit with some qualifications. Many of these issues will be revisited in the general discussion chapter, however, this chapter seeks to place the paper published six years ago in the context of subsequent research.

In the paper presented in chapter 3a of this thesis, findings indicated that optimism was associated with both positive affect and purpose in life in older adults. More specifically, the research tested several models that explored relationships between optimism and two potential mediators of wellbeing: perceived control, and social support, and tested these separately for outcome variables positive affect and purpose in life. Findings suggested that the effect of optimism on positive affect was mediated by social support; and the effect of optimism on purpose in life was mediated by perceived control. However, as the study was cross-sectional, any conclusions regarding mediation effects can only be tentative and alternative interpretations cannot be excluded.

Optimism and Wellbeing

Subsequent research has consistently confirmed that optimism is an important correlate of wellbeing. A meta-analysis (Alarcon, Bowling, & Khazon, 2013) found optimism was significantly positively related to happiness, and life satisfaction, and negatively with anxiety and depression. Tallman, Shaw, Schultz, and Altmaier (2010)

confirmed main effects for both optimism and social support on physical and emotional wellbeing, prospectively over 9 years (in transplant survivors), but not on other positive outcomes, such as post-traumatic growth (however they did not test for potential mediation). Two prospective studies specifically with older adults (Ju, Shin, Kim, Hyun, & Park, 2013; Olson, Fanning, Awick, Chung, & McAuley, 2014) both found optimism determined trajectories of wellbeing over time, with Ju et al. (2013) finding optimism was also associated with meaning in life. While Kotter-Gruhn and Smith (2011) also reported that optimism predicted subsequent wellbeing in older adults, interestingly the reverse was also true. There is thus longitudinal evidence to confirm our suggestion that prior optimism may predict subsequent wellbeing, but also some evidence suggesting feedback loops.

Intervention studies to promote optimism also suggest that optimism does indeed contribute to greater wellbeing. A variety of techniques have been used in intervention studies designed to increase optimism. These include the *Best Possible Self* exercise (Meevissen, Peters, & Alberts, 2011), the anticipating *Three Good Things* exercise (Littman-Ovadia & Nir, 2014), and gratitude and kindness interventions (Kerr, O'Donovan, & Pepping, 2015). The *Best Possible Self* exercise, in particular, has been identified in a meta-analysis as the most effective in increasing optimism, particularly when compared to an active control condition (Malouff & Schutte, 2016); and has been demonstrated to decrease depression (e.g. Liau, Neihart, Teo, & Lo, 2016) and increase positive affect (Layous, Nelson, & Lyubomirsky, 2013; Renner, Schwarz, Peters, & Huibers, 2014). While intervention studies and other prospective studies thus far do largely support the speculation made in our paper that optimism may have an impact on subsequent wellbeing, and that this may be causal in the case of positive affect, there is as yet little support for the proposed causal impact of optimism on purpose/ meaning in life.

Intervention studies have also yet to explore the role of the potential mediators identified in this thesis.

Social support as a mediator of the effects of optimism on wellbeing

There is empirical confirmation of the cross-sectional association between optimism and perceived social support, and the proposed direction of this association supporting the tentative conclusions in chapter 3a. Rius-Ottenheim et al. (2012) found in older men higher initial optimism led to less loneliness 10 years later (independent of depression), which is consistent with the finding of this thesis study that optimism was linked to increased social support in older adults. This thus supports the proposed direction of effects, rather than the reverse (optimism mediating social support) which had been suggested in several other cross-sectional studies (Ekas, Lickenbrock, & Whitman, 2010; He, Zhou, Zhao, Zhang, & Guan, 2016; Karademas, 2006). However, loneliness and social support are related, but not identical constructs, so longitudinal research with optimism and specific measures of social support is needed. It is possible that optimists are more attractive to potential social partners and hence optimists have larger social networks and thus more support. Vollmann, Antoniw, Hartung, and Renner (2011) investigated this issue and found optimists did have higher levels of support, both from the recipient's and the provider's perspective. However, the recipient's reports were higher and only their perceptions of support mediated the relationship of optimism with perceived stress three months later. These researchers concluded that the optimist's illusory perceptions of support could decrease stress. This may or may not be true for positive outcomes, and in older adults. Another possibility is that there is a third variable which increases both social support and positive affect, though this is speculative.

While there has been converging evidence that optimism can lead to higher social support, questions still remain regarding whether social support actually mediates the effects of optimism on wellbeing, particularly positive affect or other forms of subjective (hedonic) wellbeing. In agreement with the current thesis findings, social support, but not internal locus of control, also mediated the effect of optimism on positive affect in cancer survivors (Hodges & Winstanley, 2012), though this was also a cross-sectional study. Dumitrache, Windle, and Rubio Herrera (2015) also found that both optimism and social resources were important to the wellbeing of older adults. Additionally they found that both tangible support and satisfaction with family life partially mediated the effect of optimism on life satisfaction. Thus they extended this study's finding for positive affect to another aspect of subjective wellbeing, life satisfaction. Results from Avey, Wernsing, and Mhatre (2011) however suggest the relationships may be bi-directional. Not only did optimism increase wellbeing over time (including positive affect), positive affect also led to increased optimism and other resources (including hope and self-efficacy), as predicted by the Broaden and Build model (Fredrickson, 2001). These results suggest that bi-directional relationships may exist between these variables, a possibility that was not explored in the published empirical paper in this thesis.

In a review paper, Rius-Ottenheim, van der Mast, Zitman, and Giltay (2013) concluded that the evidence is strongest for coping strategies and social integration as mediators of the effects of optimism on both physical and mental health. However, they did not consider evidence for the role of perceived control (or related constructs such as mastery or self-efficacy) in mediating the effects of optimism.

Perceived control as a mediator of the effects of optimism on subjective wellbeing

A recent study of older adults also confirmed the tentative conclusions of this thesis that perceived control mediated the effects of optimism on wellbeing (Bretherton & McLean, 2015). The outcome measure used was a broader one of psychological health, calling into question the conclusion that the path from optimism through perceived control is specific to psychological (eudaimonic) wellbeing. This research added to findings in the current research by confirming the assumption that the effects of perceived control and optimism were through mediation and not moderation; and that the relationships found could not be explained by stress. Similarly, Sherman and Cotter (2013) also found that effects of optimism on life satisfaction were mediated by mastery (control beliefs) in older adults with osteoarthritis. It should be noted that both these studies, like the study in this thesis were cross-sectional. The direction of these effects needs to be examined further in longitudinal and experimental and/or intervention studies. This has begun to happen, with a rise in optimism intervention research, and will be considered further in the general discussion chapter.

Developments in Measuring Key Constructs

There were concerns with the Bradburn (1969) Affect Balance Scale used in the research reported in chapter 3a, and subsequent studies in this thesis therefore used the Positive and Negative Affect Scale (PANAS, Watson, Clark, & Tellegen, 1988) as the measure of subjective wellbeing, as it has better reliability and validity. The PANAS also provides separate scores for positive and negative affect which is important, given that there is evidence they may be distinct though overlapping constructs (Chen, Jing, Hayes, & Lee, 2013; Jovanovic, 2015; Leue & Beauducel, 2011), and may have a mix of common and unique predictors (e.g. Cho, Martin, & Poon, 2013; Kunzmann, 2008). While the

optimism paper in this thesis measured only positive affect, in subsequent papers both positive and negative affect were included. This also fits with arguments for the *second wave* of positive psychology (also called "*Positive Psychology 2.0*"), in which there is recognition of negative aspects of life (as predictors, as catalysts for change, and as wellbeing outcomes) and proposals that these need to be integrated with studies of positive variables (Ivtzan, Lomas, Hefferon, & Worth, 2016; P. T. Wong, 2011).

For several reasons, the decision was also made to move from using the Ryff (1989) Purpose in Life subscale to the Meaning in Life Questionnaire- Presence subscale (MLQ-P; Steger, Frazier, Oishi, & Kaler, 2006) as the psychological wellbeing outcome for subsequent studies. First, the Ryff subscale confounds the *presence* of purpose and meaning in life with the *process* of searching for it. Second, meaning in life (rather than purpose in life or other psychological wellbeing measures) has become more a focus of positive psychology (Heintzelman & King, 2014; Leontiev, 2013; Seligman, 2011) and geropsychology (Krause, 2009; P. T. P. Wong, 2000). Subsequent to this research, Battersby and Phillips (2016) also confirmed the value of the MLQ-P measure in predicting better mental health and wellbeing outcomes in both younger and older adults, including a subsample of those living in a retirement village. Older adults obtained higher scores on both positive affect and the presence of meaning in life than younger adults. These researchers also point out some differences between prior measures such as the Ryff Purpose in Life subscale and the MLQ-P scale, particularly that the MLQ-P allows respondents to determine for themselves what is meaningful rather than being focused on the achievement of future goals or developing a sense of coherence. Also supporting the decision to use the MLQ-P measure in the later studies in the thesis, Van der Heyden, Dezutter, and Beyers (2015) confirmed the value of MLQ-P in predicting depression in older adults, extending findings to those in residential care.

Developments in Statistical Analyses

Additionally, since publication of the first paper in this thesis, focused on optimism, the Baron and Kenny (1986) technique for testing mediation reported in that paper has been superseded. The use of AMOS for structural equation model testing and bootstrapping for testing mediation within the models used in the first paper of this thesis is actually consistent with current practice. Also since the time of publication of this paper, the use of cross-sectional data for testing mediation models has increasingly been questioned (Maxwell, Cole, & Mitchell, 2011); therefore subsequent papers in this thesis do not test mediation, but instead investigate direct effects of multiple independent variables on multiple measures of wellbeing. Note, however, that the data had already been collected for subsequent studies and all the data were cross-sectional. This limitation will be addressed in the final discussion chapter. With the use of more advanced statistical techniques, subsequent studies also all controlled for the influence of additional variables: age, education, income, and perceived health on wellbeing outcomes.

From Optimism to Self-Compassion

Given the research suggesting self-compassion interventions also increase optimism (Smeets, Neff, Alberts, & Peters, 2014), and that the *Best Possible Self* technique commonly (and somewhat successfully) used to increase optimism (e.g. Liau et al., 2016; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011; Meevissen et al., 2011) also involves a positive focus on the self, the next research paper in this thesis focused on self-compassion. In particular, as self-compassion had been associated with wellbeing in general adult samples (e.g. see Barnard & Curry, 2011; Neff & Dahm, 2015), but at the time of conducting the study had not yet been investigated in older adults, the decision was made to fill this gap by conducting a preliminary investigation of whether self-compassion is associated with wellbeing in older adults. This study is presented in the following chapter.

CHAPTER 4:
SELF-COMPASSION

Chapter 4a:
Self-Compassion: A Resource for Positive Aging

Wendy J. Phillips and Susan J. Ferguson

Published paper

Phillips, W. J., & Ferguson, S. J. (2013). Self-Compassion: A Resource for Positive Aging. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 68*(4), 529-539. doi:10.1093/geronb/gbs091 (see Appendix F for published format).

Author contributions. The authors contributed equally to this paper. The candidate designed the study, selected variables, organised ethics approval, organised data collection, and contributed to the writing of the article. The co-author, Dr Wendy Phillips, was involved in data analysis and writing.

Acknowledgements. We would like to thank Elizabeth Figliuzzi and Melinda McAlpine for their involvement in data collection.

Pages 111-142 of this thesis have been removed as they contain published material under copyright. Removed contents published as:

Wendy J. Phillips, Susan J. Ferguson (2013) Self-Compassion: A Resource for Positive Aging, *The Journals of Gerontology: Series B*, Volume 68, Issue 4, pp. 529–539.
https://doi.org/10.1093/geronb/gbs091

Chapter 4b:
Recent Research Findings Related to Self-Compassion

The previous chapter, focusing on the construct of self-compassion (Chapter 4a), presented a manuscript completed earlier during this candidature in 2012, and published in 2013. At the time of submission there were no other published papers on self-compassion in older adults, and relationships between self-compassion, meaning in life and ego integrity had not been examined. Findings indicated that self-compassion was associated with higher positive affect, meaning in life and ego integrity, and with lower negative affect in older adults. The paper also demonstrated that the Self-Compassion Scale in the study sample was composed of two factors: positive aspects of self-compassion and negative aspects of self-compassion (also referred to as self-coldness or self-criticism). The positive component of self-compassion was associated with positive affect, meaning in life and ego integrity. The negative component of self-compassion (self-coldness) was, on the other hand, associated with negative affect and meaning in life. This is a rapidly expanding field, and there have been substantial advances in the few years since the publication of this paper.

The purpose of this chapter is to provide a brief update of subsequent research on the relationship between self-compassion and wellbeing in older adults, particularly research focused on positive aspects of wellbeing rather than psychopathology. Measurement issues particularly the factor structure of the Self-Compassion Scale, will also be considered. Research evaluating interventions to increase self-compassion will also be reviewed briefly, but considered in more detail in the final discussion chapter of this thesis. Finally links will be made to material discussed in subsequent chapters.

Self-Compassion and Wellbeing

There is now longitudinal evidence supporting the direction of effects proposed in chapter 4a, with self-compassion contributing to wellbeing. Specifically, low self-

compassion predicted subsequent depression, whereas depression did not predict subsequent full-scale self-compassion, or either of its positive or negative components (Krieger, Berger, & Holtforth, 2016).

In addition, the research in this thesis reported that the self-compassion negative factor (self-coldness/self-criticism) was associated with negative affect. Further to this, the link between the self-coldness dimension and negative affect has been confirmed in a general community sample (López, Sanderman, & Schroevers, 2016). Lopez found this was also true for depressive symptoms. However it was the positive aspects of self-compassion which contributed to positive affect in the sample investigated in this thesis. Some of this effect may be due to the mindfulness component of positive self-compassion (López et al., 2016). Focusing on the present in a mindful, objective and clear way may help maintain positive affect. The effects of self-compassion on positive mood have since been confirmed experimentally in younger adults (Odou & Brinker, 2015). Thus, to increase overall wellbeing it may be important not just to target reducing self-coldness, but also to encourage individuals to be mindfully self-compassionate.

In a community sample with a large age range, López et al. (2015), also replicated the finding reported in chapter 4a that the negative factor of self-compassion (which they refer to as self-criticism) correlated most strongly with negative affect (and also with depressive symptoms, perceived stress, rumination and neuroticism); and that the positive factor of self-compassion correlated more strongly with positive affect. The association between self-compassion and ego integrity was a novel finding of this thesis and has yet to be replicated. This finding suggests however, that self-compassion influences not only affect, but also more eudaimonic aspects of wellbeing, in particular those theorized to be especially relevant to older adults (Erikson, Erikson, & Kivnick, 1989).

Similarly, the association found between self-compassion and greater meaning in life was unexplored prior to the publication of this paper, but was consistent with the established association of meaning and purpose in life with other predictors of positive wellbeing (O'Connor & Vallerand, 1998; Steger, 2012). This finding has also been recently corroborated in younger people. A recent dissertation by O'Donnell (2015) confirmed the relationship between self-compassion and meaning, but in a sample of adolescents, as did Marshall and Brockman (2016), in a sample of University students. In a recent meta-analysis, Zessin, Dickhäuser, and Garbade (2015) found that self-compassion was more strongly linked to psychological wellbeing compared to affective wellbeing, whereas the research in this thesis found the links to negative affect and meaning in life were of similar size, though larger than that for positive affect. There may thus be stronger links between self-compassion and other aspects of psychological well-being such as self-acceptance or personal growth rather than meaning or purpose (which was the only aspect of psychological wellbeing measured in this thesis).

Measurement of Self-Compassion

In the study reported in this thesis the Self-Compassion Scale did not display the factor structure established in prior samples of younger adults. Instead two components were identified: positive aspects and negative aspects of self-compassion. The tentative conclusion was that self-compassion may be conceptualized somewhat differently in older than in younger adults, however, subsequently other researchers using diverse samples have also failed to confirm the original six factor structure with a higher order single factor. For example, Williams (2014) also failed to replicate the original six factor structure, as did Brown, Bryant, Brown, Bei, and Judd (2015). Lopez et al. (2016; 2015) and Costa, Marôco, Pinto-Gouveia, Ferreira, and Castilho (2016) both found that the two

factor structure identified in this thesis best fit their data. Indeed Gilbert, McEwan, Matos, and Rivis (2011) had earlier argued that self-compassion (as measured by the positive factor) is distinctly different from self-coldness (the negative factor), and that these components seem to be linked to different physiological systems in fMRI studies (Longe et al., 2010).

López et al. (2015) concurred with this thesis in recommending that a total Self-Compassion score no longer be used, and instead that items from each of the two factors (positive and negative) be used to construct two separate subscale scores. In the study by Lopez and colleagues, the self-compassion positive and negative scales had high reliability with alpha coefficients very similar to those in the current research. Finally, Muris and Petrocchi (2016) conducted a meta-analysis and concluded that positive and negative components of self-compassion do indeed need to be separated, as it was self-coldness that was most strongly related to psychopathology. Hayes, Lockard, Janis, and Locke (2016) also confirmed the two factor structure using the short-form of the scale. Following these findings (from this thesis and research cited above), several other researchers have used only the composite total of the three positive subscales as their measure of self-compassion (e.g. Marta-Simões, Ferreira, & Mendes, 2016).

Muris and colleagues (Muris, Otgaar, & Petrocchi, 2016; Muris & Petrocchi, 2016), went further in arguing that the negative aspects of self-compassion overlap too much with wellbeing outcomes and should be dropped from the Self-Compassion Scale and from conceptions of self-compassion. It also needs to be acknowledged that while most studies have failed to establish a higher order factor for self-compassion (see above), some have found support for the six subscales and for treating them separately as predictors of wellbeing (e.g. Castilho, Pinto-Gouveia, & Duarte, 2015 with a Portuguese version;

Petrocchi, Ottaviani, & Couyoumdjian, 2014 with an Italian version of the SCS). Thus there is still disagreement in how best to approach measurement of self-compassion. Neff, in particular, has recently critiqued the position taken in this thesis and that of Muris and colleagues that the Self-Compassion Scale has two components and has insisted that self-compassion has 6 factors and that full SCS score should be used (Neff, 2016a, 2016b; Neff, Whitaker, & Karl, 2017). However, Neff et al. (2017) only tested a two factor model with no higher order factor; and did not test the two factor model in which we had also proposed a higher order factor.

Self-Compassion in Older Adults

In older adults, more specifically, this study's findings for self-compassion are consistent with those of Allen, Goldwasser, and Leary (2012) published soon after my paper was submitted. Allen et al. (2012) found that in older adults with poorer health, self-compassion was associated with higher subjective wellbeing. Smith (2015), found that older adults higher in self-compassion had higher subjective wellbeing (happiness) even if they had poor health or high stress. Self-compassion acted as a resilience factor buffering the effects of stress on both happiness and depression. Subsequently, Perez-Blasco, Sales, Meléndez, and Mayordomo (2016) found, relative to a no treatment control group, that a mindfulness and self-compassion treatment improved resilience and reduced stress and anxiety in older adults. Supporting self-compassion as a mechanism of change, they found the treatment group experienced a decrease in various coping dimensions including negative self-focused coping and problem-solving coping, and an increase in positive reappraisal.

Homan (2016b) recently expanded the proposition in this thesis that self-compassion predicts psychological (eudaimonic) wellbeing. She found that self-

compassion increased with age and that it was associated with all six of Ryff's (Ryff & Keyes, 1995) dimensions of psychological wellbeing. Thus, while adolescents and young-adults do not differ in self-compassion levels (Neff & McGehee, 2010) self-compassion seems to increase later in adulthood (Homan, 2016b; Neff, 2009; Petrocchi et al., 2014). The effect of self-compassion on psychological wellbeing has also been shown to be stronger with older the participants (Zessin et al., 2015). Further to this, the effect of self-compassion on subjective wellbeing has also been shown to be stronger with age (Hwang, Kim, Yang, & Yang, 2016), though the oldest participants in that study were in their fifties.

Brown, Bryant, Brown, Bei, and Judd (2016) found that self-compassion was associated with a mix of positive wellbeing outcomes and with physical health in women at midlife, and this was in part through self-compassion influencing attitudes to physical ageing. The negative component of self-compassion (e.g. self-criticism), was a strong predictor of attitudes to ageing. However, both aspects of self-compassion indirectly predicted physical health, depression and also positive aspects of wellbeing. Similarly Allen and Leary (2014) found in older adults that those who were self-compassionate expressed more positive thoughts about ageing; interestingly they were also less reluctant to ask for and use assistance (Allen et al., 2012). Allen and Leary (2014) also found that older adults high in self-compassion thought about age-related stressors in ways that helped them cope. In that study, self-compassion predicted positive self-compassionate cognitions, but not negative ones.

Potential Mechanisms Through which Self-Compassion Influences Wellbeing

Additionally, following publication of the paper included as chapter 4a in this thesis, various explanatory pathways have been explored. Recently self-compassion has

been shown to act as a resilience mechanism (or adaptive emotion regulation strategy); thus when experiencing stress, self-compassion protects against the activation of negative schemas associated with psychopathology (Trompetter, de Kleine, & Bohlmeijer, 2016). New research has also begun to explore potential physiological mechanisms through which self-compassion has its effects (Arch, Landy, & Brown, 2016; Breines et al., 2015; Svendsen et al., 2016).

There is now evidence supporting a variety of cognitive mediators including rumination (Krieger, Altenstein, Baettig, Doerig, & Holtforth, 2013), positive and negative automatic thoughts (Arimitsu & Hofmann, 2015), and negative attributional style (Zhou, Chen, Liu, Lu, & Su, 2013). Of relevance to older adults, acceptance and forgiveness (and/or self-forgiveness) may also mediate the effects of self-compassion. Zhang and Chen (2016), (in college student and community samples) found acceptance of, but not forgiveness for, regrets mediated the effects of self-compassion on self-improvement. However, these researchers did not consider wellbeing outcomes, or test older adults specifically, when the effects of acceptance should be higher due to the development of ego integrity (Erikson et al., 1989), and when forgiveness may be higher as it may be too late to undo many regrets. Zhang and Chen (2016) made the items specific to acceptance of the regretted experience using a modified version of the COPE acceptance subscale (Carver, Scheier, & Weintraub, 1989). The next chapter of this thesis more broadly explores the effects of acceptance on wellbeing in older adults.

Most of these suggested mediators have, however, been tested in relation to the effects of self-compassion on negative outcomes such as depression, and not on positive aspects of wellbeing. One exception, building on an earlier finding by Neff and Faso (2015), is the recent finding that hope mediated the impact of self-compassion on life

satisfaction (Yang, Zhang, & Kou, 2016). Umphrey and Sherblom (2014) also argued that hope led to increased self-compassion, and then to life satisfaction. Each of these studies, like the current research, was cross-sectional, so the direction of these effects cannot be established. More research is required measuring both hope and self-compassion and a range of positive wellbeing measures, particularly in older adults. Ideally this would be done either longitudinally or through experimental manipulation or well-controlled interventions. These future research directions are further considered in the final chapter of this thesis.

Potential Origins of Self-Compassion

Interestingly, researchers have also begun to explore potential precursors to self-compassion, including attachment security (Neff & McGehee, 2010; Pepping, Davis, O'Donovan, & Pal, 2015; Raque-Bogdan, Ericson, Jackson, Martin, & Bryan, 2011; Wei, Liao, Ku, & Shaffer, 2011). In the only study to date to explore this in older adults Homan (2016a) found that negative effects on eudaimonic wellbeing of attachment anxiety and avoidance were mediated by low self-compassion. Adding to this argument, a series of novel experiments have shown that giving support to others (thus activating caregiving schemas) was also found to increase self-compassion (Breines & Chen, 2013).

Interventions to Increase Self-Compassion

There is growing evidence from experimental and intervention studies to support the contention of the current thesis that the relationship between self-compassion and wellbeing may be causal. Intervention studies have examined affective wellbeing and other positive wellbeing outcomes. For example, Fredrickson, Cohn, Coffey, Pek, and Finkel (2008) demonstrated that *Loving-Kindness Meditation* increased daily positive emotions and purpose in life, but the research didn't test if self-compassion may be a mediator.

A meta-analysis of the effects of kindness interventions by Galante, Galante, Bekkers, and Gallacher (2014) concluded that these interventions led to increases in both self-compassion and positive emotions, and decreases in depressive symptoms. However they did not test for mediation effects either. A systematic review by Leaviss and Uttley (2015) showed that compassion-focused therapies such as *Compassion-Based Meditation*, *Compassion Cultivation Training*, and *Loving-Kindness Meditation* show promise in treating mood disorders and, in particular, seemed to decrease self-criticism. Only three of the studies reviewed were randomized controlled trials and none of the studies reviewed in either of these two papers was conducted with older adults.

More recently, a brief self-compassionate writing exercise was found to be more effective than a control (unstructured writing) condition in decreasing negative affect in Australian breast cancer survivors (Przezdziecki & Sherman, 2016). In addition, a recent Japanese study (Arimitsu, 2016) found an *Enhanced Self-Compassion Program* produced increases in all aspects of self-compassion (except mindfulness) compared to a wait-list control condition; negative thoughts and emotions also decreased. Results were maintained at follow-up. Thus there is preliminary evidence that self-compassion interventions seem to be effective in Eastern as well as Western cultures, though not yet with older adults as the mean age of participants in this Japanese study was only 23 years. The effectiveness of interventions to increase self-compassion (in addition to longitudinal evidence cited above) adds further support to the contention of this thesis that self-compassion leads to wellbeing, rather than the reverse.

The mindfulness and self-compassion intervention in older adults (Perez-Blasco et al., 2016), mentioned previously, attributed improvements at least in part to decreases in self-criticism (part of the negative side of self-compassion), but also speculated it was due

to a focus on improving cognitive, emotional and behavioural flexibility through mindfulness (Perez-Blasco et al., 2016). Trait mindfulness has also been shown to buffer the effects of stress on mental health in middle-aged and older adults (de Frias & Whyne, 2015). Relatedly, Krieger et al. (2013) found (in depressed and never-depressed adult samples) that cognitive-behavioural avoidance mediated the relationship between self-compassion and depressive symptoms, as did symptom-focused rumination. Following Ottenbreit and Dobson (2008), they argued both these are facets of experiential avoidance.

From Self-Compassion to Acceptance

An interesting related question then, is whether low mindful acceptance/ high experiential avoidance (the usual target of ACT therapy), would also be associated with poor wellbeing in older adults. This thus became part of the focus for the final empirical paper in this thesis (Chapter 6). As mentioned, another potential cognitive mediator of self-compassion is hope (Yang et al., 2016), which is also examined in the final empirical study.

First, however, consistent with the finding of Zhang and Chen (2016) that acceptance mediated the effects of self-compassion, the next empirical paper (Chapter 5) will focus on the under-researched concept of acceptance in older adults. Developmental theories suggest that acceptance, both of present stressors and circumstances (Brandtstädter & Rothermund, 2002; Heckhausen, Wrosch, & Schulz, 2010) and of the past (Erikson et al., 1989) are important to wellbeing in older adults in particular. Yet little research has so far been done to explore whether each of these forms of acceptance is associated with positive aspects of wellbeing in older adults. The following study will attempt to fill this gap.

CHAPTER 5:
ACCEPTING THE PAST AND PRESENT

Accepting the Past and Present Situations: The Association of Acceptance with Well-being in Older Adults

Susan J Ferguson (Sue), Catherine McMahon, & Alan J. Taylor

Paper prepared for submission

It is written for submission to The *Journal of Positive Psychology*

Author contributions. The candidate conceptualized the study, selected measures for the questionnaire, applied for the ethics approval (in conjunction with the second author), trained and supervised the students undertaking the data collection; and also conducted the literature search. The candidate also conducted statistical analysis with the help of Dr. Alan Taylor. The coauthors were the candidates' supervisors, and the candidate wrote the initial drafts of the paper in full, with the Principle Supervisor (Associate Professor Cathy McMahon) contributing to the preparation of the manuscripts for submission (editing and some reorganizing and/or rewriting in parts). The remaining co-author (Dr. Taylor) also helped with the wording of some parts of the results section.

Acknowledgements. We would like to thank Florence Choi, Tamara Brkic, & Richard Wilkinson for their involvement in data collection.

Abstract

This study investigated the relationships of accepting the past (from Erikson's concept of ego integrity) and accepting the present (as a strategy for coping with current situations) with well-being (Positive and Negative Affect Scales, and Meaning in Life Questionnaire- Presence subscale) in older adults. Respondents were 169 older adults (65 to 97 years). The Accepting the Past Scale was found to have two components: positive view of the past, and failing to accept the past. Having a positive view of the past was associated with both higher positive affect and higher meaning in life. Failing to accept the past was associated with higher negative affect. While the direction of effects could not be determined from this cross-sectional dataset, the effects were stronger from acceptance to well-being than the reverse. Unexpectedly, accepting the present (Cognitive Emotion Regulation Questionnaire- Acceptance subscale) was not associated with well-being. Implications of these findings are discussed.

Keywords: acceptance, accepting the past, older adults, well-being, meaning in life, positive affect, negative affect, ego integrity

Introduction

Understanding what factors contribute to the well-being of older adults is crucial as they are a fast growing segment of the population of most developed countries, including Australia (Australian Bureau of Statistics, 2013). Positive psychology theorists draw on Erikson's (1964) early work regarding individual strengths as important contributors to well-being (Seligman, Park, & Peterson, 2004). Yet Erikson had a developmental emphasis, not just in the particular strengths considered important at various ages, but also in the processes through which these strengths are built at a particular stage (Erikson, Erikson, & Kivnick, 1989). These more process oriented and developmental aspects of ego strength seem to have been relatively neglected in positive psychology. According to Erikson and colleagues (1989), it is through a process of life review and wrestling with our past triumphs and regrets that we come to develop acceptance of our past and hence attain strengths of acceptance, integrity and wisdom in older adulthood. While there is a growing body of research on reminiscence, including its possible functions (e.g. Webster, Bohlmeijer, & Westerhof, 2010) and related therapies (e.g. Meléndez Moral, Fortuna Terrero, Sales Galán, & Mayordomo Rodríguez, 2015; Pinquart & Forstmeier, 2012), there is little work specifically testing Erikson's proposition that it is through *accepting* the past that well-being is achieved in older adulthood.

Acceptance involves coming to terms with situations, particularly those that are not changeable. Some research with older adults has begun to emphasize the role of acceptance in positive adjustment, given the inevitable losses that accompany aging (Chang et al., 2008; Ranzijn & Luszcz, 1999; Ryff, 1989). The current study will focus on acceptance in older adults, and in a novel contribution will consider acceptance of present situations as well as accepting the past.

Acceptance of Present Situations and Events

Both theoretical and empirical approaches suggest that acceptance can be a helpful strategy for coping with the stress of present situations and events (Carver, Scheier, & Weintraub, 1989) and regulating emotions across the lifespan (Garnefski, Kraaij, & Spinhoven, 2001), particularly events which appear uncontrollable.

Theoretically, acceptance is a key component of secondary control and the related construct of accommodative strategies (Brandtstadter & Renner, 1990; Morling & Evered, 2006). Uncontrollable stressors, including illnesses, disabilities, losses, and blocked goals are likely to be more common in older adulthood. For this reason, the processes of accommodation and secondary control are believed to be more commonly used by older adults, and to also be more effective in this age group than in younger adults (Brandtstädter & Rothermund, 2002; Heckhausen, Wrosch, & Schulz, 2010). Supporting this, acceptance was one of the most frequently cited responses from older adults when asked how they adjust to age related losses (Knight & Ricciardelli, 2003), and a twenty year prospective study found that acceptance was the only coping strategy to increase with age (Brennan, Holland, Schutte, & Moos, 2012). Acceptance may reduce negative affect through providing some relief from the sense of helplessness associated with things that cannot be changed (S. C. Thompson, Nanni, & Levine, 1994) and also by reducing maladaptive beliefs about rumination (Keng, Smoski, & Robins, 2016). There is however mixed empirical evidence regarding the role acceptance plays in well-being in adulthood.

Most studies to date have studied psychopathology, and only a few have considered broader views of well-being. In younger or general adult samples, for example, many studies have found reduced depression and/or anxiety is associated with accepting present stressors (e.g. Bei et al., 2013; Bergeron & Wanet-Defalque, 2013; Pang, Strodl, & Oei,

2013). However, in older adults, as in other age groups, results linking acceptance to negative aspects of well-being have been mixed, with some reporting associations with lower depression in older adults (Bei et al., 2013), others with higher depression (Kraaij, Pruymboom, & Garnefski, 2002). Further to this, and contrary to expectations, Balzarotti, Biassoni, Villani, Prunas, and Velotti (2016) found acceptance was not associated with general negative affect (including fear, anger, and disgust) in an adult sample.

Nolen-Hoeksema and Aldao (2011) have argued that adaptive strategies (such as acceptance) may predict positive affect and other aspects of well-being rather than psychopathology, but they did not test this empirically. Indeed very little research has examined if acceptance also predicts positive affect (including, for example, happiness, interest, and enthusiasm) or meaning in life. Yet accommodative strategies, including acceptance, are argued to specifically target positive aspects of well-being by saving energy and efforts, resulting in alternative rewards in the long-term (Ben-Zur, 2002). Balzarotti et al. (2016) found no association of acceptance with positive affect. However, in the only other study to test this, acceptance predicted positive affect on the same day (Massey, Garnefski, Gebhardt, & van der Leeden, 2011). This finding needs to be replicated and extended beyond a single day, as these researchers used a single item measure to capture acceptance and the sample was restricted to adolescent headache sufferers, and thus has limited generalizability.

So acceptance may reduce negative affect and possibly also contribute to positive affect, but what about other positive aspects of well-being, such as meaning in life? There is evidence that acceptance in response to job failures predicts subsequent meaning in life and happiness (North, Holahan, Carlson, & Pahl, 2014). There is also some mixed evidence that acceptance of stressors such as chronic illness can lead to a greater sense of

meaning (Dezutter et al., 2013; Haase, Britt, Coward, Leidy, & et al., 1992; Jim, Richardson, Golden-Kreutz, & Andersen, 2006; Park, Malone, Suresh, Bliss, & Rosen, 2008). However, Balzarotti et al. (2016) found acceptance was not associated with purpose in life (a construct closely related to meaning in life) in a general adult sample.

Garnefski and Kraaij (2009) have suggested that mixed empirical results for adaptive strategies, such as acceptance, may be attributable to differences in samples studied and types of negative events considered. Looking at different demographics, such as specific age groups, may be a useful way of clarifying this issue. Given the theoretical arguments above, acceptance should be of particular interest in older adults. The current study seeks to address a gap in the research literature on the impact of acceptance of present stressors in older adults and how it relates to both positive and negative affect and meaning in life.

Accepting the Past versus Unresolved Regret

Developmental theories by Erikson et al. (1989) and Butler (1963) both suggest current interpretations of the past (based on reviewing the past) are likely to influence development and well-being in older adults. Erikson et al. (1989), for example, state that in older adulthood the key developmental process is reviewing life and thereby attaining integrity and wisdom, and "an important component of this process is the acknowledging and accepting of past choices…and accepting…the inalterability of the past." (pp. 70-71). Accepting the past therefore involves formulating a positive representation of one's past, yet acknowledging that one could have done things differently, made better choices, or worked harder (Boyacioglu & Sumer, 2011).

Santor and Zuroff (1994) found accepting the past was useful in predicting lower depression in older adults, as did Rylands and Rickwood (2001). This was confirmed

prospectively, but in a younger student sample (Graham et al., 2010). There are also comparable findings from studies measuring ego integrity (rather than accepting the past specifically). James and Zarrett (2006), for example, found that higher ego integrity predicted lower depression, but not purpose in life; and Westerhof, Bohlmeijer, and McAdams (2015) found a sense of ego integrity predicted positive aspects of well-being, whereas despair predicted depression. Afonso, Bueno, Loureiro, and Pereira (2011) reported that both aspects of ego integrity, satisfaction with the past and acceptance of the past, could be improved with reminiscence therapy focused on recall and resolution of unresolved issues. This therapy also reduced depression and increased well-being, including a sense of purpose in life.

A number of other areas of research converge to suggest that ways of viewing the past are relevant to well-being. For example, it can also be argued that unresolved regret is an indicator of lack of acceptance of the past and may contribute to reduced well-being. Torges, Stewart, and Duncan (2008), for example, found that women who had resolved regrets in their early 50s had higher levels of ego integrity in their 60s; and those who had not come to terms with regrets had lower current positive mood. Other studies of older adults have also supported the proposed connection between evaluations of regrets and well-being (Farquhar, Wrosch, Pushkar, & Li, 2013; Wrosch, Bauer, & Scheier, 2005). There is also evidence that accepting the past contributes to the growth of wisdom. For example, Etezadi and Pushkar (2013) found greater wisdom was related to more engagement in meaningful activities, which in turn contributed to greater positive affect; but the effect of engagement in meaningful activities was not significant for negative affect. Thus, consistent with arguments by Zacher, McKenna, and Rooney (2013), if a successful life review process in older adults produces acceptance of past events and

choices (and/or wisdom), it should also lead to greater meaning in life and greater positive affect, as well as less negative affect.

The Current Study

Developmental theories suggest acceptance of the present will be particularly important in older adults, as part of processes of accommodative coping/ secondary control (Brandtstädter & Rothermund, 2002; Heckhausen et al., 2010). No study to date has explored if this form of acceptance is linked specifically to negative affect in older adults, nor whether accepting the present is associated with positive affect and meaning in life. Moreover, a large body of research from an Eriksonian framework (Erikson et al., 1989) converges to suggest that accepting the past reduces depression, and may potentially contribute to positive well-being as well. Studies have not yet explored if accepting the past is associated with negative affect more broadly, or with positive well-being outcomes. Additionally most studies have not controlled for other relevant predictors such as age, perceived health, education and income (Steger, Oishi, & Kashdan, 2009; Steverink, Westerhof, Bode, & Dittmann-Kohli, 2001). Finally, no studies have to date have looked at both accepting the past and accepting the present. The present study will thus attempt to address these gaps.

Research Aims and Hypotheses

The current study has two primary aims, to explore the effects of: i) accepting the present and ii) accepting the past on well-being in older adults. Effects of acceptance of both the present and the past on negative affect and also on two aspects of positive well-being, positive affect and meaning in life will be considered. It is hypothesized (Model 1) that both accepting the past and accepting the present will lead to higher positive affect and meaning in life and lower negative affect, over and above the effects of age, education, income and perceived health. However it is also possible higher concurrent negative affect

and/or lower positive affect may make one feel less accepting. An alternate model (Model 2) will thus also be tested in which current affect and sense of meaning in life may contribute to acceptance of the past and present. This second model would be consistent with the "Broaden and Build" model of positive emotions (Fredrickson, 2001), in which positive emotions lead to greater resources (in this case the emotion-regulation skill of acceptance).

Method

Participants

The 169 participants (41 men, 127 women, 1 who didn't specify) ranged in age from 65 to 97 years (M = 77.9, SD = 8.0). Most were born in Australia (71.6%), or Europe (21.9%). High proportions were either widowed (40.2%) or married or cohabiting (40.8%). Most participants were retired (88.8%). The mean level of education was 13.0 years (SD = 3.83). Income was generally perceived to be adequate (59.2%) or better (quite good 18.9%, very good 12.4%). Most perceived their health to be either very good (24.3%) or good, (40.2%); a further 9.5% reported excellent health. Most required no assistance with activities of daily living (78.7%).

Measures

Demographic variables. Perceived health (PH) was measured with the following sentence: "In general, you would say your health is…", participants selected from options on a scale 1) poor to 5) excellent. The adequacy of their income (IA) was measured with the item: "In general, you feel your income is…", options ranged from 1) insufficient to meet your needs to 4) very good. Education (ED) was assessed by asking participants how many "years of formal education" they had completed.

Meaning in life. The Meaning in Life Questionnaire, Presence subscale (MIL-P; Steger, Frazier, Oishi, & Kaler, 2006) has 5 items and respondents rated themselves on items including "I understand my life's meaning" on a scale from 1) absolutely untrue to 7) absolutely true. MIL-P scores were derived by averaging items. This subscale has shown sound internal consistency in previous studies, including an alpha of .89 in an older adult sample (Phillips & Ferguson, 2013) and adequate one year test-retest stability (Steger & Kashdan, 2007). In the current study, the MLQ-P demonstrated high internal consistency ($\alpha = .84$).

Positive and negative affect. The Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988) required participants to rate how much they had felt each of 10 positive (e.g. "enthusiastic") and 10 negative (e.g. "scared") feelings "during the past year" on a scale ranging from 1) very slightly to 7) extremely. Positive affect (PA) and negative affect (NA) scale scores were created by averaging positive and negative items, respectively. Previous research has supported the reliability and validity of the PANAS, including in older populations (Phillips & Ferguson, 2013). In this study, high internal consistency was observed for both the NA ($\alpha = .85$) and PA ($\alpha = .84$) variables.

Acceptance. The acceptance subscale (4 items) of the Cognitive Emotion Regulation Questionnaire (CERQ-A) (Garnefski & Kraaij, 2007; Garnefski et al., 2001) required participants to indicate "what you generally think, when you experience negative or unpleasant events" e.g. "I think that I have to accept the situation". Items are rated from 1) almost never to 5) almost always. Acceptance in an adult population had a scale alpha of .76, and test-retest reliability of .51 (Garnefski & Kraaij, 2007). The Acceptance subscale is based on rewording of the items in the acceptance subscale of the COPE (Carver et al., 1989). In the current study the scale alpha was .78.

Accepting the past. The 16 item Accepting the Past scale (ACPAST) (Santor & Zuroff, 1994) measures the aspect of acceptance most closely associated with Erikson's ego integrity construct. Example items include: "All in all, I am comfortable with the choices I have made in the past", and "There are some disappointments in life that I will never be able to accept". Items are rated from 1) strongly agree to 5) strongly disagree. ACPAST had an alpha reliability of >.70 in the original study and .86 in Rylands and Rickwood (2001). In the current study the alpha reliability for the full ACPAST scale was only .50, hence several items were dropped from the scale and two subscales used instead of the scale total (following factor analyses, see below).

Procedure

The participants (aged 65 years and over) were recruited from community groups and retirement villages (including self-care units and low care hostels) in Sydney, Australia. They completed the questionnaires in group settings and placed them in a sealed box, or completed them individually and posted them back to the researchers. Participants were given the opportunity to enter a draw for three $50 prizes at the end of the study.

Results

Data Analysis Strategy and Descriptive Statistics

Only 5% of cases had missing data on the main study variables, and all missing values were imputed using the stochastic regression function in AMOS. There was some additional missing data among the covariates, particularly women choosing not to report their age. For this reason all SEM analyses were conducted (and reported) on imputed data, but repeated on the smaller set of data with no missing values. Each of these re-analyses led to results that were entirely compatible with the original analyses. SPSS 22 (IBM, 2012) was used to calculate descriptive statistics and correlations, and conduct Exploratory

Factor Analyses (EFAs). Confirmatory Factor Analyses (CFA) and Structural Equation Modelling (SEM) analyses were then carried out with Amos 21 (Arbuckle, 2012) using Maximum Likelihood Estimation. To allow for deviations from normality, bootstrapping with 1000 resamples was performed on both Models 1 and 2. As suggested by Kline (2005), the model $\chi 2$ was used as a "badness-of-fit" index, as the higher its value, the worse the model's fit. Following Kline's recommendations, both Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) greater than .90, and a Root Mean Square Error of Approximation (RMSEA) less than .08 were used as indicators of good model fit.

Descriptive statistics and correlations are shown in Table 5.1. There was a significant association of higher acceptance of the past with lower negative affect, higher positive affect, and higher meaning in life; and a marginally significant negative correlation between acceptance of the present (CERQ-A) and positive affect. Positive affect scores were negatively correlated with age, with a small effect size. The two acceptance measures were not significantly correlated with each other.

Table 5.1 Descriptive statistics, scale reliabilities and correlations between variables

Variables	Scale Alpha	CERQ-A	ACPAST	NA	PA	MIL-P	AGE
CERQ-A	.78						
ACPAST	.84	.01					
NA	.85	.15	- .33**				
PA	.84	-.16*	.27**	-.05			
MIL-P	.84	-.07	.33**	-.135			
AGE		-.15	-.06	-.15	-.16*		
M		3.28	3.79	1.83	3.61	5.16	77.92
SD		1.04	0.65	0.67	0.62	1.20	8.02

Notes: N=259. *p< .05; **p< .01.

Structure of the Scales

As the CERQ-Acceptance subscale has been demonstrated to be a single factor in prior studies (Garnefski & Kraaij, 2007), a CFA was performed to confirm this structure within an older aged sample. The single factor model for CERQ-A fitted well ($\chi 2$=1.64, df=2, p=.44; TLI=1.00; CFI=1.00; RMSEA=.00). All items loaded above .40 on the latent factor.

An EFA on the ACPAST scale items was then conducted and revealed 4 factors with eigenvalues greater than one. The 2 factor solution produced the clearest interpretable factors and explained 37.14% of the variance in total, 8.82% more than a single factor solution. A CFA of the ACPAST scale was then conducted on items that loaded above .4 on both the original EFA by the scale authors (Santor & Zuroff, 1994) and the EFA above (thus dropping items 2, 10, 12, and 15). Overall the two factor model fit the data quite well, ($\chi 2$=89.35, df=52, p=.001; TLI=.90; CFI=.94; RMSEA=.07). The Positive and Negative factors were mildly correlated (r = -.23, p=.001). These analyses thus led to a shortened version of the ACPAST (12 items), with two subscales: Positive view of the past (ACPAST-Positive, (5 items, α = .81) and Failing to accept the past (ACPAST-Negative, 7 items, α = .81). This is comparable to the Turkish version of these subscales with alphas of .79 and .82 respectively (Boyacioglu & Saymaz, 2012); and a substantial improvement on the alphas obtained (above) for the full scale in its original form.

Separate scores on each subscale of the revised ACPAST were then calculated and correlations with each well-being measure were obtained. Positive view of the past was correlated significantly with all well-being measures (-.18 with NA, .40 with PA, .40 with MIL-P), though the correlation with negative affect is small and of borderline significance

($p < .05$). Failing to accept the past correlated significantly with negative affect (.34), and with meaning in life (-.24), but not with positive affect (-.12).

To check that the acceptance scales were independent of the well-being measures an exploratory factor analysis was conducted with all variables (except covariates). This produced 11 factors with eigenvalues greater than one (cumulative variance of 57.72%). The most clearly interpretable solution was 6 factors (those with eigenvalues greater than 1.6) and this explained 47.2%. In this model each of the variables emerged clearly as separate factors: MIL-P (4.97%), NA (9.50%), PA (5.46%), CERQ-A (4.73%), ACPAST-Positive (3.24%), ACPAST-Negative (17.86%). This confirms that the acceptance measures are distinct from each other and do not merely measure well-being.

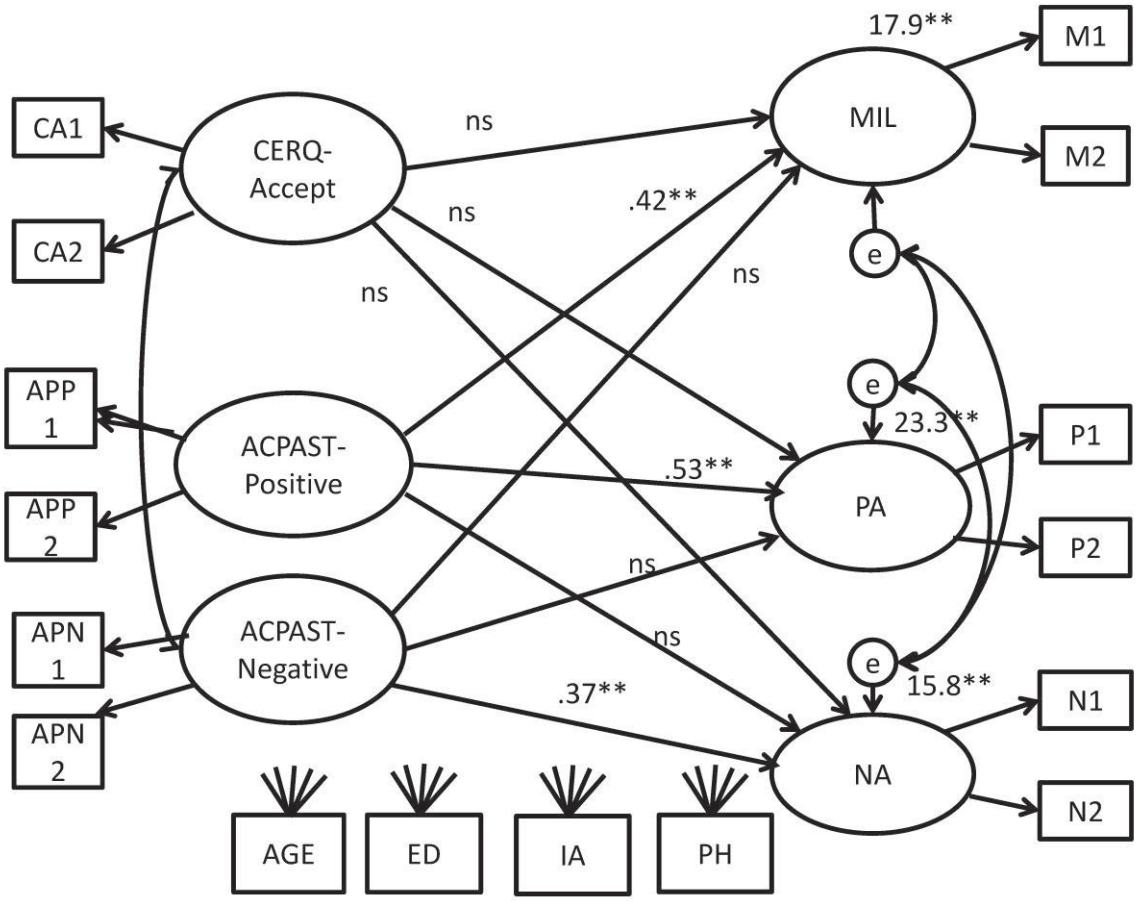
A full measurement model (with ACPAST, CERQ-A, MIL, NA, PA, and age, income, education, perceived health) was then conducted. This model had excellent fit ($\chi2=56.45$, df=64, p=.738; TLI=1.01; CFI=1.00; RMSEA=.00).

Acceptance and Well-being

SEM analysis was performed to test Model 1 (both with and without the covariates). The model without covariates had excellent fit ($\chi2=36.95$, df=40, p=.608; TLI=1.01; CFI=1.00; RMSEA=.00), see Figure 5.1. The only significant paths (all significant at $p< .001$) were from positive view of the past to meaning in life (.42) and positive affect (.53); and from failing to accept the past to negative affect (.37). Note here and subsequently (unless otherwise stated), values in brackets are standardized estimates. This model had 38 free parameters to be estimated. The model explained 15.8% of the variance in negative affect, 23.3% in positive affect, and 17.9% in meaning in life.

The SEM model was then tested with covariates included and also had good model fit ($\chi2=59.35$, df=67, p=.736; TLI=1.01; CFI=1.00; RMSEA=.00). The same paths were

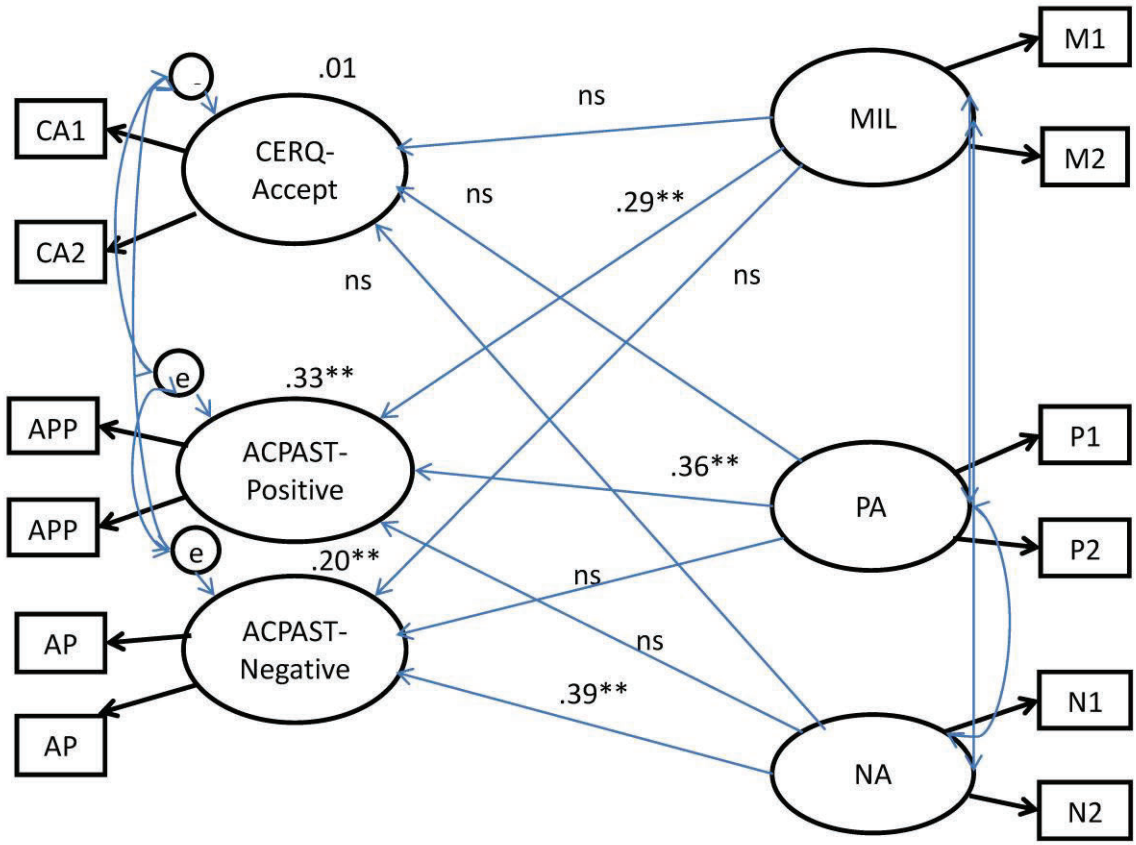
significant in this model. In this model there were 69 free parameters to be estimated, thus the prior model with fewer parameters for the sample is probably more valid.



Notes: N=169. CERQ-Accept= Accepting the present; ACPAST-Positive= Positive view of the past; ACPAST-Negative= Failing to accept the past; NA= Negative Affect; PA= Positive Affect; MIL= Meaning in Life- Presence. Each latent variable has two item sets with associated error terms (not shown). *p< .05; **p< .01; ns= not significant.

Figure 5.1 Accepting the past and present predicting three facets of well-being (with standardized loadings) (Model 1)

SEM analysis was then run to test Model 2 (with reverse causality, i.e. paths from well-being measures to acceptance measures), both with and without covariates. This model without covariates (see Figure 5.2) also had good model fit ($\chi 2$=38.66, df=42, p=.619; TLI=1.01; CFI=1.00; RMSEA=.00), with fit indices virtually identical to those for model 1.



Notes: N=169. CERQ-Accept= Accepting the present; ACPAST-Positive= Positive view of the past; ACPAST-Negative= Failing to accept the past; NA= Negative Affect; PA= Positive Affect; MIL= Meaning in Life- Presence. Each latent variable has two item sets with associated error terms (not shown). *p< .05; **p< .01; ns= not significant.

Figure 5.2 Three facets of well-being predicting accepting the past and present (with standardized loadings) (Model 2)

The same paths were significant in this model, despite their direction being reversed. However some of the effect sizes were smaller in this direction than from acceptance to well-being (in Model 1), particularly the paths between positive view of the past and meaning in life, and between positive view of the past and positive affect. However, the path between failing to accept the past and negative affect were very similar in each direction. The SEM for Model 2 was then rerun with the inclusion of covariates. Again, the addition of covariates makes little difference to the model fit ($\chi 2$=51.14, df=64, p=.878; TLI=1.02; CFI=1.00; RMSEA=.00) or the conclusions reached.

Discussion

This study aimed to explore whether accepting the past and accepting the present were associated with well-being (high positive affect and sense of meaning in life, low negative affect) in older adults. This hypothesis received partial support as well-being was associated with acceptance of the past, but not acceptance of the present. Interestingly, two distinct factors emerged in relation to accepting the past: a positive view and failing to accept the past, and each was differentially related to well-being. A positive view of the past was associated with both meaning in life and positive affect (with the path to positive affect being particularly strong), but was not associated with negative affect. Failing to accept the past was related only to higher negative affect. It was not possible, however, to clearly ascertain the direction of the effects in this cross-sectional study as both models tested had good fit, suggesting an alternate interpretation that current affect and sense of meaning could influence feelings about the past was also plausible.

Acceptance of the Past

The results for accepting the past were similar to previous findings by Boyacioglu and Saymaz (2012) in that an ongoing positive representation of the past was associated with positive affect and failing to accept the past was associated with negative affect. In contrast to our study's findings, however, these researchers found that having a positive representation of the past was also associated with reduced negative affect (bivariate association). While our initial correlational findings were consistent, the bivariate effect disappeared when we entered other variables simultaneously, suggesting that the strong association of failing to accept the past with negative affect may have displaced the effect of a positive view of the past. It is also possible that differences in findings may be due to differences in culture and language, as theirs was a Turkish sample.

Given the strong conceptual overlap between accepting the past and ego integrity, our results are also consistent with Westerhof et al. (2015) who found ego integrity predicted positive aspects of well-being, whereas despair predicted depression. Our results are also partially consistent with Afonso et al. (2011) who argued ego integrity had two parts: satisfaction with the past (similar to our positive view of the past factor) and acceptance of the past (the inverse of our failing to accept past factor). These researchers found that both these aspects improved with reminiscence therapy, as did well-being, including a sense of purpose in life (similar to our meaning in life measure); depression also decreased. Current findings linking acceptance of the past with meaning in life are, however, not consistent with James and Zarrett (2006) who found ego integrity was associated with most aspects of eudemonic well-being, but not purpose in life. Perhaps this is due to their failure to distinguish the two aspects of ego integrity (the inclusion of acceptance of the past may have obscured the impact on purpose and meaning in life of viewing the past positively).

Our finding that failing to accept the past was associated with higher negative affect is consistent with prior work using the same measure which found accepting the past was associated with depression in older adults (Boyacioglu & Saymaz, 2012; Rylands & Rickwood, 2001; Santor & Zuroff, 1994). However each of these prior studies failed to differentiate between discrete aspects of accepting the past, and two of the three studies measured depression rather than negative affect more broadly, the exception being Boyacioglu and Saymaz (2012) already discussed. Our findings are also consistent with past studies showing that failing to deal with regrets (and hence still holding a negative and non-accepting view of the past) is associated with poor outcomes (e.g. Wrosch et al., 2005).

Given the link Erikson and colleagues (1989) proposed between accepting the past and the development of wisdom, our results are also consistent with arguments by Zacher et al. (2013) that acceptance of past events and choices (and/or wisdom), should lead to greater meaning in life and greater positive affect, as well as less negative affect. Etezadi and Pushkar (2013) also suggested that greater wisdom is associated with greater engagement in meaningful activities and higher positive affect, and, like the current study, the authors reported that effects were not as strong for negative affect.

Exploring how and why some people are able to accept their past and present while others are plagued by regrets is important for future research. For example, some individuals prone to negative, non-accepting views of the past (such as regret) may be inflexible in their coping style and persist with trying to change things that can no longer be changed (e.g. Randenborgh, Huffmeier, LeMoult, & Joormann, 2010). E. H. Thompson, Woodward, and Stanton (2011), suggest that emotional acceptance may be one mechanism through which goal disengagement works; and disengagement and reengagement are important in overcoming regrets (Farquhar et al., 2013; Wrosch et al., 2005). Future research could determine if these goal-related and coping strategies perhaps have their effects through increasing acceptance of positive aspects and reducing focus on negative aspects of the past.

Future research could also explore forgiveness of self and others, which may be another potential pathway to accepting the past. For example, forgiveness of others has been shown to be related to higher ego-integrity and lower depression (Dezutter, Toussaint, & Leijssen, 2016); and self-forgiveness also appears to be important in older adults (Ingersoll-Dayton, Torges, & Krause, 2010). Relatedly, self-compassion has been shown to be related to ego-integrity (Phillips & Ferguson, 2013), and perhaps it may have its effects

through helping older adults accept their past. Another possible mechanism is that those more prone to rumination may react differently to regrets (e.g. see Eryilmaz, Van De Ville, Schwartz, & Vuilleumier, 2014). These interpretations are all speculative, however, as these constructs were not measured. Also, it may be best in future studies to consider more than one strategy at a time as Swift and Chipperfield (2013), for example, found a combination of secondary control strategies (including acceptance) best predicted well-being.

Acceptance of the Present

The current study sought to address a gap in the literature by including acceptance of the present as well as the past. The lack of association of accepting the present with concurrent measures of positive affect in older adults was unexpected and is inconsistent with the findings of Massey et al. (2011), but consistent with their finding of no association of acceptance with negative affect. Sample differences (their sample was of adolescent headache sufferers) may explain our divergent findings. Current findings are consistent, however, with the view from a meta-analysis that adaptive strategies have lower effect sizes than maladaptive strategies in predicting psychopathology, and that context matters (Aldao, Nolen-Hoeksema, & Schweizer, 2010). The value of flexibly matching positive strategy use to the requirements of a given situation may also be true for predicting positive aspects of well-being. Future research needs to look at the flexibility of implementing coping strategies across situations, particularly positive strategies, such as acceptance, in more detail.

Our findings contrast with results from qualitative studies suggesting that acceptance of present events and age related losses in older adults may contribute to positive aspects of well-being, particularly successful aging (Knight & Ricciardelli, 2003),

meaning in life (Dezutter et al., 2013), positive affect (Massey et al., 2011); and depression and anxiety (e.g. Bei et al., 2013; Bergeron & Wanet-Defalque, 2013; Pang et al., 2013). Measurement differences may account for these findings. Studies employing the same acceptance of the present measure, derived from the COPE measure by Carver et al (1989), have also found no relationship between accepting the present and well-being (Massey et al., 2011); some even found a positive relationship between acceptance and psychopathology (Balzarotti et al., 2016), including in older adults (Kraaij et al., 2002). Our bivariate correlation showed higher acceptance was associated with slightly lower positive affect, which while counterintuitive, is somewhat consistent with these last two prior findings. This relationship was no longer significant in the model testing.

Measuring Acceptance

A key factor contributing to divergent findings seems to be whether acceptance is conceptualized as an active cognitive coping strategy or as a sense of resignation when all else fails, as was the case in the measure used in the current study. Supporting this latter interpretation, Wolgast, Lundh, and Viborg (2013) found COPE- acceptance subscale (CERQ-A) loaded separately from other measures of acceptance in a factor analysis and labelled it a resignation factor. Further, Balzarotti et al. (2016) argued acceptance (on the CERQ) may reflect hopelessness and resignation and may be a form of mental disengagement which may be functional in the short-term, but maladaptive in the long-run. However, in its adaptive form, acceptance "is an active process of self-affirmation rather than passive resignation to an unhappy fate" (Wilson, 1996, p. 417); and should be particularly adaptive in older adulthood according to several developmental models (Brandtstadter & Renner, 1990; Heckhausen, 1997). Replication of the current study findings with a measure of accepting the present that does not emphasize resignation is therefore warranted.

The current study explored the structure and reliability of the acceptance measures in older adults. The single factor structure and high reliability of the CERQ-Acceptance subscale was confirmed in our older adult sample. However, the Accepting the Past scale was found to have two factors consistent with Boyacioglu and Sumer (2011) who also identified two discrete factors. There are also similarities to Zimbardo (1999) who found that in their measure of time perspective, views of the past split into two factors: Past-Negative and Past-Positive. Further the subscales in the current study had much higher reliability than the original full scale. This two factor structure needs to be confirmed in an independent sample.

Implications

The results for accepting the present, as they stand, do not support predictions based on developmental models which suggest that accommodation (Brandtstadter & Renner, 1990) and secondary control (Heckhausen & Schulz, 1995) are increasingly important for well-being in older adults. One implication of our study is that a passive form of acceptance of the present, based on resignation, is ineffective in contributing to well-being. Thus it appears that, as suggested by de Quadros-Wander, McGillivray, and Broadbent (2014), older adults may instead benefit from the development of more active forms of acceptance of both unchangeable circumstances associated with aging and their concomitant emotions. This would also be more consistent with the above developmental models. These authors suggested this may be achieved via cognitive therapy or mindfulness. Acceptance and Commitment Therapy (ACT) is another possibility, once further research is done to establish the role of active acceptance of present emotions (versus avoidance of them) in well-being in older adults specifically.

A further implication of our study is that Erikson's arguments that reviewing and accepting the past are important contributors to adjusting well to older adulthood have been supported, though with some qualifications. It seems that coming to a positive view of the past is indeed important for positive outcomes such as positive affect and developing a sense of one's life as meaningful. Also as Erikson and colleagues proposed, when the outcome is a negative and non-accepting view of the past, then despair is the likely to develop. Therefore, consistent with our findings, what seems to matter most in contributing to negative affect (similar to what Erikson termed despair) is failing to come to terms with (therefore not accepting) negative aspects/events from the past. However, it is also possible that these relationships are not causal, or that they may be in the reverse direction or bi-directional. For example, higher current negative affect may contribute to a negative and non-accepting view of the past, which would then not be consistent with Erikson's model. Based on the results of this study, it is also not possible to draw conclusions regarding Erikson's theoretical propositions that accepting the past is achieved following a life-review process, and when earlier stages of development have been resolved in a positive way, as neither of these concepts were measured in the current study.

Interventions such as the Integrative Reminiscence Therapies of Afonso et al. (2011) and Meléndez Moral et al. (2015) have been shown to increase ego integrity, and hence acceptance of the past, and to increase positive aspects of well-being as well as reducing depression. Further research should specifically test whether the improvements in acceptance of the past shown in reminiscence treatment groups mediate the well-being outcomes and if such effects are maintained in the long-term. Such research would thus test the causality implied in our original model.

Strengths and Limitations

A clear strength of the current study is the comparison of acceptance of two time periods (the present and the past), as prior research has tended to focus on just one of these. The inclusion of meaning in life, rather than just affective outcomes, is a further strength of this study; as is looking at the normal range of positive and negative affect rather than psychopathology. Other strengths include checking each of the measures for structure, scale reliability, and conceptual overlap within an older adult sample. The study also controlled for several other variables that have been shown to influence well-being.

The most significant limitation of the current study is the cross-sectional design meaning causal inferences cannot be drawn. As evidenced by the good fit for each alternative model tested, there is a possibility that high meaning in life and/or positive affect (or lower negative affect) may lead to higher acceptance of the past, rather than the reverse. The fact that paths were stronger from acceptance to well-being than the reverse suggests either there are feedback loops between well-being and accepting the past, as suggested by the "Broaden and Build" model of positive emotions (Fredrickson, 2001), or that the originally hypothesized direction of effects was correct. Longitudinal studies or further interventions are needed to confirm that accepting the past does contribute to the development and maintenance of well-being in older adults. Additionally, the two factor structure of our measure of acceptance of the past should be considered preliminary as the structure requires confirmation in an independent sample.

The exclusive reliance on self-report measures is a further limitation, as they are vulnerable to recall and social desirability biases. Future research could get family or close friends to report the older adult's level of acceptance of the past and/or present circumstances. More objective measures of income and health could also be included in

future studies. As the sample was quite well educated and financially secure, a larger and more representative sample is needed in future research before findings can be generalized. In particular our results cannot be generalized to institutionalized or homeless older adults. Also our sample was very homogeneous racially and ethnically, so results may not generalize beyond Caucasian samples. Potential cultural differences thus also need to be explored in future research. Results may also be specific to this cohort, and may not apply to future generations of older adults. Cross-sequential designs would be needed to disentangle age, cohort and historical explanations for the effects of accepting the past on well-being in older adults.

Conclusion

Accepting the past was associated with well-being in this sample of older adults, but accepting the present was not. Results provide empirical partial support for Erikson's final stage of ego integrity; but raise questions about the most appropriate ways to measure acceptance (particularly active acceptance vs resignation) in relation to developmental models of secondary control or accommodation. Our results also suggest that therapies targeting older adults (such as Integrative Reminiscence Therapy) should focus on reducing non-accepting views of the past, as that may reduce negative affect. Therapies should also actively focus on developing positive views of the past in order to promote more positive aspects of well-being such as positive affect and meaning in life.

References

Afonso, R. M., Bueno, B., Loureiro, M. J., & Pereira, H. (2011). Reminiscence, psychological well-being, and ego integrity in Portuguese elderly people. *Educational Gerontology, 37*(12), 1063-1080. doi:10.1080/03601277.2010.500585

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217-237. doi:10.1016/j.cpr.2009.11.004

Arbuckle, J. L. (2012). *IBM SPSS AMOS 21 User's guide*. Armonk, NY: IBM.

Australian Bureau of Statistics. (2013). *Feature Article 1: Population by Age and Sex, Australia, States and Territories*. Canberra, ACT, Australia: ABS Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/featurearticlesbytitle/1CD2B1952AFC5E7ACA257298000F2E76?OpenDocument.

Balzarotti, S., Biassoni, F., Villani, D., Prunas, A., & Velotti, P. (2016). Individual differences in cognitive emotion regulation: Implications for subjective and psychological well-being. *Journal of Happiness Studies, 17*(1), 125-143. doi:10.1007/s10902-014-9587-3

Bei, B., Bryant, C., Gilson, K.-M., Koh, J., Gibson, P., Komiti, A., … Judd, F. (2013). A prospective study of the impact of floods on the mental and physical health of older adults. *Aging & Mental Health, 17*(8), 992-1002. doi:10.1080/13607863.2013.799119

Ben-Zur, H. (2002). Coping, affect and aging: The roles of mastery and self-esteem. *Personality and Individual Differences, 32*(2), 357-372. doi:10.1016/S0191-8869%2801%2900031-9

Bergeron, C. M., & Wanet-Defalque, M.-C. (2013). Psychological adaptation to visual impairment: The traditional grief process revised. *British Journal of Visual Impairment, 31*(1), 20-31. doi:10.1177/0264619612469371

Boyacioglu, I., & Saymaz, E. B. (2012). Accepting the past and depression. *Electronic Journal of Social Sciences, 40*, 220-228. Retrieved from http://dergipark.ulakbim.gov.tr/esosder/article/view/5000068500

Boyacioglu, I., & Sumer, N. (2011). Attachment factors, autobiographical memory and accepting the past. *Turk Psikoloji Dergisi, 26*(67), 105-118. Retrieved from http://search.proquest.com/openview/6efee1c53a3300b8651e2fbf5ce7ded9/1?pq-origsite=gscholar&cbl=28562

Brandtstadter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging, 5*(1), 58-67. doi:10.1037/0882-7974.5.1.58

Brandtstädter, J., & Rothermund, K. (2002). The life-course dynamics of goal pursuit and goal adjustment: A two-process framework. *Developmental Review, 22*(1), 117-150. doi:10.1006/drev.2001.0539

Brennan, P. L., Holland, J. M., Schutte, K. K., & Moos, R. H. (2012). Coping trajectories in later life: A 20-year predictive study. *Aging & Mental Health, 16*(3), 305-316. doi:10.1080/13607863.2011.628975

Butler, R. N. (1963). The life review: an interpretation of reminiscence in the aged. *Psychiatry, 26*, 65-76. doi:10.1007/978-3-662-38534-0_20

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267-283. doi:10.1037/0022-3514.56.2.267

Chang, S. O., Kim, J. H., Kong, E. S., Kim, C. G., Ahn, S. Y., & Cho, N. O. (2008). Exploring ego-integrity in old adults: A Q-methodology study. *International Journal of Nursing Studies, 45*(2), 246-256. doi:10.1016/j.ijnurstu.2006.07.020

de Quadros-Wander, S., McGillivray, J., & Broadbent, J. (2014). The influence of perceived control on subjective wellbeing in later life. *Social Indicators Research, 115*(3), 999-1010. doi:10.1007/s11205-013-0243-9

Dezutter, J., Casalin, S., Wachholtz, A., Luyckx, K., Hekking, J., & Vandewiele, W. (2013). Meaning in life: An important factor for the psychological well-being of chronically ill patients? *Rehabilitation Psychology, 58*(4), 334-341. doi:10.1037/a0034393

Dezutter, J., Toussaint, L., & Leijssen, M. (2016). Forgiveness, ego-integrity, and depressive symptoms in community-dwelling and residential elderly adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 71*(5), 786-797. doi:10.1093/geronb/gbu146

Erikson, E. H. (1964). *Childhood and society. (2nd Ed.)*. Oxford, England: W W Norton.

Erikson, E. H., Erikson, J. M., & Kivnick, H. Q. (1989). *Vital involvement in old age*. New York, NY: W W Norton & Co.

Eryilmaz, H., Van De Ville, D., Schwartz, S., & Vuilleumier, P. (2014). Lasting impact of regret and gratification on resting brain activity and its relation to depressive traits. *The Journal of Neuroscience, 34*(23), 7825-7835. doi:10.1523/JNEUROSCI.0065-14.2014

Etezadi, S., & Pushkar, D. (2013). Why are wise people happier? An explanatory model of wisdom and emotional well-being in older adults. *Journal of Happiness Studies, 14*(3), 929-950. doi:10.1007/s10902-012-9362-2

Farquhar, J. C., Wrosch, C., Pushkar, D., & Li, K. Z. (2013). The value of adaptive regret management in retirement. *The International Journal of Aging and Human Development, 76*(2), 99-121. doi:10.2190/ag.76.2.a

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218-226. doi:10.1037/0003-066X.56.3.218

Garnefski, N., & Kraaij, V. (2007). The Cognitive Emotion Regulation Questionnaire: Psychometric features and prospective relationships with depression and anxiety in adults. *European Journal of Psychological Assessment, 23*(3), 141-149. doi:10.1027/1015-5759.23.3.141

Garnefski, N., & Kraaij, V. (2009). Cognitive coping and psychological adjustment in different types of stressful life events. *Individual Differences Research, 7*(3), 168-181. Retrieved from http://web.b.ebscohost.com.simsrad.net.ocs.mq.edu.au/ehost/detail/detail?vid=2&sid=19e12943-798f-4ef7-84802c19ceee4373%40sessionmgr102&hid=124&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=44921465&db=pbh

Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences, 30*(8), 1311-1327. doi:10.1016/S0191-8869%2800%2900113-6

Graham, A. R., Sherry, S. B., Stewart, S. H., Sherry, D. L., McGrath, D. S., Fossum, K. M., & Allen, S. L. (2010). The existential model of perfectionism and depressive symptoms: A short-term, four-wave longitudinal study. *Journal of Counseling Psychology, 57*(4), 423-438. doi:10.1037/a0020667

Haase, J. E., Britt, T., Coward, D. D., Leidy, N. K., & et al. (1992). Simultaneous concept analysis of spiritual perspective, hope, acceptance and self-transcendence. *IMAGE: Journal of Nursing Scholarship, 24*(2), 141-147. doi:10.1111/j.1547-5069.1992.tb00239.x

Heckhausen, J. (1997). Developmental regulation across adulthood: Primary and secondary control of age-related challenges. *Developmental Psychology, 33*(1), 176-187. doi:10.1037/0012-1649.33.1.176

Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review, 102*(2), 284-304. doi:10.1037//0033-295x.102.2.284

Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review, 117*(1), 32-60. doi:10.1037/a0017668

IBM. (2012). *IBM SPSS Statistics 21 core system user's guide*. Armonk, NY: IBM.

Ingersoll-Dayton, B., Torges, C., & Krause, N. (2010). Unforgiveness, rumination, and depressive symptoms among older adults. *Aging & Mental Health, 14*(4), 439-449. doi:10.1080/13607860903483136

James, J. B., & Zarrett, N. (2006). Ego integrity in the lives of older women. *Journal of Adult Development, 13*(2), 61-75. doi:10.1007/s10804-006-9003-2

Jim, H. S., Richardson, S. A., Golden-Kreutz, D. M., & Andersen, B. L. (2006). Strategies used in coping with a cancer diagnosis predict meaning in life for survivors. *Health Psychology, 25*(6), 753-761. doi:10.1037/0278-6133.25.6.753

Keng, S.-L., Smoski, M. J., & Robins, C. J. (2016). Effects of mindful acceptance and reappraisal training on maladaptive beliefs about rumination. *Mindfulness, 7*(2), 493-503. doi:10.1007/s12671-015-0480-x

Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. New York, NY: Guilford Press.

Knight, T., & Ricciardelli, L. A. (2003). Successful aging: Perceptions of adults aged between 70 and 101 years. *The International Journal of Aging and Human Development, 56*(3), 223-245. doi:10.2190/cg1a-4y73-wew8-44qy

Kraaij, V., Pruymboom, E., & Garnefski, N. (2002). Cognitive coping and depressive symptoms in the elderly: A longitudinal study. *Aging & Mental Health, 6*(3), 275-281. doi:10.1080/13607860220142387

Massey, E., Garnefski, N., Gebhardt, W., & van der Leeden, R. (2011). A daily diary study on the independent and interactive effects of headache and self-regulatory factors on daily affect among adolescents. *British Journal of Health Psychology, 16*(2), 288-299. doi:10.1348/135910710X500828

Meléndez Moral, J. C., Fortuna Terrero, F. B., Sales Galán, A., & Mayordomo Rodríguez, T. (2015). Effect of integrative reminiscence therapy on depression, well-being, integrity, self-esteem, and life satisfaction in older adults. *The Journal of Positive Psychology, 10*(3), 240-247. doi:10.1080/17439760.2014.936968

Morling, B., & Evered, S. (2006). Secondary control reviewed and defined. *Psychological Bulletin, 132*(2), 269-296. doi:10.1037/0033-2909.132.2.269

Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences, 51*(6), 704-708. doi:10.1016/j.paid.2011.06.012

North, R., Holahan, C., Carlson, C., & Pahl, S. (2014). From failure to flourishing: The roles of acceptance and goal reengagement. *Journal of Adult Development, 21*(4), 239-250. doi:10.1007/s10804-014-9195-9

Pang, J., Strodl, E., & Oei, T.-P. S. (2013). The factor structure of the COPE Questionnaire in a sample of clinically depressed and anxious adults. *Journal of Psychopathology and Behavioral Assessment, 35*(2), 264-272. doi:10.1007/s10862-012-9328-z

Park, C. L., Malone, M. R., Suresh, D., Bliss, D., & Rosen, R. I. (2008). Coping, meaning in life, and quality of life in congestive heart failure patients. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation, 17*(1), 21-26. doi:10.1007/s11136-007-9279-0

Phillips, W. J., & Ferguson, S. J. (2013). Self-compassion: A resource for positive aging. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 68*(4), 529-539. doi:10.1093/geronb/gbs091

Pinquart, M., & Forstmeier, S. (2012). Effects of reminiscence interventions on psychosocial outcomes: A meta-analysis. *Aging & Mental Health, 16*(5), 541-558. doi:10.1080/13607863.2011.651434

Randenborgh, A., Huffmeier, J., LeMoult, J., & Joormann, J. (2010). Letting go of unmet goals: Does self-focused rumination impair goal disengagement? *Motivation and Emotion, 34*(4), 325. doi:10.1007/s11031-010-9190-9

Ranzijn, R., & Luszcz, M. (1999). Acceptance: A key to wellbeing in older adults? *Australian Psychologist, 34*(2), 94-98. doi:10.1080/00050069908257435

Ryff, C. D. (1989). In the eye of the beholder: Views of psychological well-being among middle-aged and older adults. *Psychology and Aging, 4*(2), 195-210. doi:10.1037/0882-7974.4.2.195

Rylands, K., & Rickwood, D. J. (2001). Ego-integrity versus ego-despair: The effect of "accepting the past" on depression in older women. *The International Journal of Aging and Human Development, 53*(1), 75-89. doi:10.2190/1LN2-J92C-2168-THPH

Santor, D. A., & Zuroff, D. C. (1994). Depressive symptoms: Effects of negative affectivity and failing to accept the past. *Journal of Personality Assessment, 63*(2), 294-312. doi:10.1207/s15327752jpa6302_9

Seligman, M. E., Park, N., & Peterson, C. (2004). The Values In Action (VIA) classification of character strengths. *Ricerche di Psicologia, 27*(1), 63-78. Retrieved from http://www.theallianceofswmo.org/wp-content/uploads/2014/09/VIA_Signature_Strengths_Original1.pdf

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93. doi:10.1037/0022-0167.53.1.80

Steger, M. F., & Kashdan, T. B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies, 8*(2), 161-179. doi:10.1007/s10902-006-9011-8

Steger, M. F., Oishi, S., & Kashdan, T. B. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology, 4*(1), 43-52. doi:10.1080/17439760802303127

Steverink, N., Westerhof, G. J., Bode, C., & Dittmann-Kohli, F. (2001). The personal experience of aging, individual resources, and subjective well-being. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 56B*(6), 364–373. doi:10.1093/geronb/56.6.p364

Swift, A. U., & Chipperfield, J. G. (2013). Secondary control belief combinations (adjustment and acceptance) and well-being in older adults. *Canadian Journal on Aging / La Revue canadienne du vieillissement, 32*(4), 349-359. doi:10.1017/s0714980813000391

Thompson, E. H., Woodward, J. T., & Stanton, A. L. (2011). Moving forward during major goal blockage: Situational goal adjustment in women facing infertility. *Journal of Behavioral Medicine, 34*(4), 275-287. doi:10.1007/s10865-010-9309-1

Thompson, S. C., Nanni, C., & Levine, A. (1994). Primary versus secondary and central versus consequence-related control in HIV-positive men. *Journal of Personality & Social Psychology, 67*(3), 540-547. doi:10.1037/0022-3514.67.3.540

Torges, C. M., Stewart, A. J., & Duncan, L. E. (2008). Achieving ego integrity: Personality development in late midlife. *Journal of Research in Personality, 42*(4), 1004-1019. doi:10.1016/j.jrp.2008.02.006

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070. doi:10.1037/0022-3514.54.6.1063

Webster, J. D., Bohlmeijer, E. T., & Westerhof, G. J. (2010). Mapping the future of reminiscence: A conceptual guide for research and practice. *Research on Aging, 32*(4), 527-564. doi:10.1177/0164027510364122

Westerhof, G. J., Bohlmeijer, E. T., & McAdams, D. P. (2015). The relation of ego integrity and despair to personality traits and mental health. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbv062

Wilson, G. T. (1996). Acceptance and change in the treatment of eating disorders and obesity. *Behavior Therapy, 27*(3), 417-439. doi:10.1016/S0005-7894(96)80025-6

Wolgast, M., Lundh, L.-G., & Viborg, G. (2013). Cognitive restructuring and acceptance: An empirically grounded conceptual analysis. *Cognitive Therapy and Research, 37*(2), 340-351. doi:10.1007/s10608-012-9477-0

Wrosch, C., Bauer, I., & Scheier, M. F. (2005). Regret and quality of life across the adult life span: The influence of disengagement and available future goals. *Psychology and Aging, 20*(4), 657-670. doi:10.1037/0882-7974.20.4.657

Zacher, H., McKenna, B., & Rooney, D. (2013). Effects of self-reported wisdom on happiness : not much more than emotional intelligence? *Journal of Happiness Studies, 14*(6), 1697-1716. doi:10.1007/s10902-012-9404-9

Zimbardo, P. G. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology, 77*(6), 1271-1288. doi:10.1037/0022-3514.77.6.1271

CHAPTER 6:
HOPE AND EXPERIENTIAL AVOIDANCE

Hope for the Future and Avoidance of the Present: Associations with Well-being in Older Adults

Susan J. Ferguson (Sue) & Alan J. Taylor & Catherine McMahon

Published paper

Ferguson, S. J., Taylor, A. J., & McMahon, C. (2016). Hope for the Future and Avoidance of the Present: Associations with Well-being in Older Adults. *Journal of Happiness Studies*. Advance online publication. doi:10.1007/s10902-016-9787-0 (see Appendix H for published format)

Author contributions. The candidate conceptualized the study, selected measures for the questionnaire, applied for the ethics approval in conjunction with the third author (Associate Prof Cathy McMahon, her supervisor), trained and supervised the students undertaking the data collection; and also conducted the literature search. The candidate also conducted statistical analysis with the help of Dr. Alan Taylor. The coauthors were the candidates' supervisors, and the candidate wrote the initial drafts of the paper in full, with the Principle Supervisor (Associate Professor Cathy McMahon) contributing to the preparation of the manuscripts for submission (editing and some reorganizing and/or rewriting in parts). The remaining co-author (Dr. Taylor) also helped with the wording of some parts of the results section and in some cases checking the interpretation of findings in the discussion.

Acknowledgements. We would like to thank Wendy J. Phillips for her assistance with data cleaning and analysis strategy; and Naomi Miller-Powell, Lareena Brown, Amanda Davis, and Monica Liston for their involvement in data collection.

Pages 196-234 of this thesis have been removed as they contain published material under copyright. Removed contents published as:

Ferguson, S.J., Taylor, A.J. & McMahon, C. (2017) Hope for the Future and Avoidance of the Present: Associations with Well-being in Older Adults. *Journal of Happiness Studies*. Vol. 18, pp. 1485–1506. https://doi.org/10.1007/s10902-016-9787-0

CHAPTER 7:
DISCUSSION

The key focus of this PhD research has been the application of positive psychology principles to ageing in order to explain the paradox of wellbeing remaining high in older adults despite increased losses (e.g. Mroczek & Kolarz, 1998; Windsor & Anstey, 2010). The overarching aim was to apply positive psychology principles relating to the past, present, future, and the self to the prediction of wellbeing in older adults; and to integrate these with developmental psychology and the *ACT model* (Hayes, 2004; Hayes, Luoma, Bond, Masuda, & Lillis, 2006) principles, particularly those relating to *time* and *acceptance*. The thesis thus sought to address a gap in the literature whereby most existing theories of ageing (e.g. Baltes & Carstensen, 2003; Heckhausen, Wrosch, & Schulz, 2010; Rothermund & Brandstadter, 2003) discuss processes of dealing with losses and preventing negative outcomes, but not the resources needed for creating positive outcomes.

More specific aims were: to explore social support and perceptions of control as potential mediators of beneficial effects of optimism on well-being (positive affect and purpose in life) in older adults; and whether hope was also associated with wellbeing in older adults, even when other potential predictors were taken into account. This thesis also sought to explore whether self-compassion may be associated with four aspects of well-being (positive and negative affect, ego integrity and meaning in life) in older adults. The final aim was to explore the effects of acceptance (versus avoidance) of both the present and the past on negative affect and also on two aspects of positive well-being, positive affect and meaning in life, in older adults.

Overview of Findings

The overall conclusion from this PhD research is that, in keeping with recent propositions regarding the importance of mindfulness, mindfully focusing on the present with acceptance (rather than experiential avoidance) is important for psychological

adaptation in older adults. Truly positive ageing, however, is characterized not just by lower negative affect, but also higher positive affect and a sense of meaning in life. The thesis findings suggest that older adults need to focus positively and constructively on the future (through optimism and hope); reflect on their current circumstances and capacities with compassionate acceptance, and review and accept their past. This research has thus drawn together concepts from *ACT* (experiential avoidance versus acceptance), positive psychology (the strengths of optimism and hope) and the related area of self-compassion, and finally integrated these with both acceptance of present events/stressors (from the coping strategies/emotion regulation literature) and Erikson and colleagues' (1989) concept of the development of ego-integrity in older adulthood through reviewing and accepting the past.

As noted throughout, *time* is a key construct. The thesis itself unfolded over eight years, and prior chapters (3b and 4b) have briefly considered subsequent work that followed the early published manuscripts. This chapter now considers the key study findings, implications for theory and for clinical interventions. Findings are organized according to the time period examined. Study limitations are acknowledged and directions for future research identified. The discussion begins with an integration of findings related to older adults' views of the future.

Views of the Future

While *Erikson's theory* of ageing (Erikson, 1964; Erikson et al., 1989) emphasized the importance of an adaptive attitude to what had gone before, positive psychology approaches also involve a perspective on the future. Accordingly, two of the research papers focused on views of the future. Chapter 3a focused on optimism, consistent with Seligman's work on optimism which contributed to the foundation of positive psychology.

Chapter 6 focused on hope, because hope is both a key strength identified in the positive psychology conceptualization of character strengths or virtues (Peterson & Park, 2009; Peterson & Seligman, 2004), and also an ego strength emphasized in *Erikson's lifespan developmental model* (Erikson, 1964).

As expected, attitudes to the future (both optimism and hope) were shown to be associated with wellbeing, particularly positive aspects of wellbeing such as positive affect and purpose/ meaning in life. Both hope and optimism are general beliefs (expectancies) that positive outcomes will occur relating to future goals (Rand, 2009). Optimism involves the belief in a positive future that may come about for a variety of reasons (both internal and external to the individual), whereas hope is the more specific belief that the individual themselves can contribute to positive change in the future and that they have both the will and the ways to do this (Alarcon, Bowling, & Khazon, 2013).

The paper exploring optimism (chapter 3a) is important to the positive psychology of ageing as it illustrated not only that dispositional optimism is important to wellbeing in older adults, but also that the process through which it has its effects may differ depending on the outcome being measured. The optimism study thus supported the hypothesized path from optimism to wellbeing, and more specifically provided partial support for hypothesized paths from optimism to wellbeing through perceived control and social support. As some models with paths from positive affect to social support, and from purpose in life to perceived control also showed low but acceptable fit (paths back from wellbeing to optimism were not modelled) directions of effects are still uncertain. The findings broadly support the *Optimism theory* proposed by Carver and Scheier (2001), which allows for feedback loops between wellbeing and optimism, but also suggests modifications to the model. In particular, the thesis results suggest that the model's

explanatory power and utility may be improved by adding distinct processes (including social support and perceived control) by which optimism may contribute to different aspects of wellbeing.

Whilst acknowledging the limitations of cross-sectional designs, results suggested that perceived social support may mediate the effect of optimism on hedonic (subjective) wellbeing, with higher optimism contributing to higher social support, which may in turn contribute to more positive affect. The results suggested different pathways for eudaimonic wellbeing. In this case, perceived control appeared to mediate the effect of optimism, with higher optimism leading to higher perceptions of control which in turn were associated with higher perceived purpose in life. This confirmed a key proposition of this thesis, namely that different resources and/or different processes may be important for hedonic (subjective) versus eudaimonic (psychological) wellbeing. While prior studies had shown that optimism contributed to wellbeing in older adults (e.g. Isaacowitz, 2005), this was one of the first studies to demonstrate potential processes through which these effects may be achieved.

Longitudinal research subsequent to the publication of this manuscript (see chapter 3b), converges to support the contention that optimism contributes to higher social support prospectively (Rius-Ottenheim et al., 2012), and that the recipient's perceptions of social support mediate the effects of optimism on wellbeing (Vollmann, Antoniw, Hartung, & Renner, 2011). However, the paper by Vollmann and colleagues (2011) measured only perceived stress as a wellbeing outcome. Therefore, future research needs to investigate whether, as proposed in this thesis, social support not only mediates the effects of optimism on positive affect but also mediates its effects on other forms of hedonic (subjective) wellbeing.

Two subsequent cross-sectional studies have also confirmed results in the current thesis that perceived control mediates the effects of optimism on wellbeing (Bretherton & McLean, 2015; Sherman & Cotter, 2013). However, as the wellbeing measures in these studies were psychological health and life satisfaction, respectively, this calls into question our conclusion that the pathway from optimism to perceived control to wellbeing was specific to eudaimonic wellbeing (or purpose in life specifically). The specificity and direction of these effects needs to be examined further using longitudinal and experimental and/or intervention studies.

Turning now to the other future oriented concept, trait hope, covered in chapter 6. While the hypothesis that higher trait hope would lead to higher positive affect and meaning in life and lower negative affect was broadly supported, the testing of alternative models (with opposite directions of effects) showed that many of the relationships may be bidirectional. Once experiential avoidance was added to the models, however, results did not support the aspect of the hypothesis relating hope to negative affect and are thus inconsistent with some aspects of Snyder and colleagues' (2005) *Hope theory*, which proposes that hope and both positive and negative emotions are reciprocally related. Specifically, Synder and colleagues' argument that negative emotions arise when hope is low or progress toward goals is interrupted and negative emotions then in turn reduce hope was not supported when a trait measure of hope was used. Our findings do, however, support Snyder's theoretical argument that hope leads to better goal progress which enhances positive emotions; and are also consistent with the suggested feedback loop in which positive affect in turn promotes hope (though we did not test the goal progress component of these arguments). Further to this, through the application of non-recursive modelling, the path from hope to positive affect was demonstrated to be stronger than that from positive affect to hope in the thesis data. Hope then, as hypothesized, does seem to

contribute to positive affect in older adults, though probably with a degree of feedback, suggesting that higher positive affect may also improve levels of hope to some degree, consistent with Fredrickson's (2006) *Broaden and Build model* of positive emotions.

The results in relation to future oriented constructs (optimism, hope) were consistent in demonstrating that both are associated with high positive affect and meaning in life. With regard to negative affect, however, attitudes to present circumstances also play a part. The study reported in chapter 6 found that while hope about the future predicted positive indicators of hedonic and eudaimonic wellbeing, when an aspect of attitudes toward the present was added to the model, in this case experiential avoidance, hope no longer predicted negative affect. Importantly, findings for this latter study indicated that the effects of hope were significant after taking account of effects for age, education, income, and perceived health. The present studies add to prior research by demonstrating links between views of the future and purpose and meaning in life; and also by demonstrating that attitudes to the present (rather than the future) appear to be more important for predicting negative affect.

Findings in this thesis suggesting that social support and perceived control may mediate the pathways from optimism to positive affect and purpose in life, respectively, raising questions regarding whether either of these, or some other personal resources, may similarly mediate the effects of hope on aspects of positive wellbeing. It is possible that being optimistic and/or hopeful may make contact with the individual more attractive to others and thus increase the size of their social network and/or its supportiveness, which in turn increases their positive affect. The current findings suggest that being optimistic may also lead to increased confidence that the older individual can control important outcomes thus improving their sense of purpose in life. Similarly, it is possible that hope, with its

motivational and efficacy component (agency), may increase either the older adult's actual goal attainment or the perception that important goals can be achieved and that they have the plans/means (through the pathways component of hope) to achieve things that are meaningful or important to them. It seems likely that hope may increase perceived control (or self-efficacy) in particular (Bailey, Eng, Frisch, & Snyder, 2007). Future research could explore the mechanisms through which hope influences wellbeing. For example, perhaps hope works through positive reappraisal in assisting individuals to find meaning and purpose. Or, perhaps, as Duggleby and colleagues (2012) suggest, "finding meaning and positive reappraisal are important strategies to help older adults with chronic illness maintain their hope" (p. 1211). These researchers used an intervention promoting hope and reported improved quality of life (for caregivers of those with advanced cancer) by decreasing loss and grief and increasing self-efficacy. Thus perceived control or efficacy may be a mechanism through which both optimism and hope have their impact on wellbeing.

It may also be that low hope leads to self-critical thoughts and/or rumination, which could make it harder to successfully attain goals (Snyder, 2002), thus reducing the sense of meaning and purpose in life. If this were the case, therapy focused on self-compassion, as well as hope may be useful to counter this self-criticism. Much more work is needed to investigate potential mechanism through which views of the future impact wellbeing.

This thesis did not investigate optimism and hope in the same study. A meta-analysis by Alarcon et al. (2013) confirmed that optimism and hope were each were associated with different outcome measures and had unique predictors. Consistent with Alarcon et al. (2013), but not Gallagher and Lopez (2009), hope was the strongest predictor of positive affect in the current studies. However, both optimism and hope were

associated with positive affect, and both were also associated with purpose in life in the older adults in the current thesis. As Chang, Yu, and Hirsch (2013) found, the interaction of optimism and hope added further to the prediction of depression (with the impact of hope greatest in those low in optimism), future research could investigate whether the combination of both optimism and hope can also add further to the prediction of positive wellbeing outcomes. A possibly not explored in the current research is that excessively high levels of optimism or hope (false hope) may actually hinder wellbeing, for example by encouraging older adults with these beliefs to cling to goals which are now unattainable, rather than being selective and focussing on fewer attainable goals (which is considered adaptive in the SOC model). This needs to be explored in future research using nonlinear modelling.

In the samples used in this thesis both optimism and hope were associated with positive affect and meaning/purpose in life, but optimism and not hope was associated with negative affect. Overall, views of the future, particularly optimism and hope, were thus each found to be associated with several aspects wellbeing in older adults. Views of the present have also been argued to be important for wellbeing throughout this thesis and these findings will now be discussed.

Views of the Present

Accepting the present was measured in two studies in this thesis (chapters 5 and 6) and argued to be associated with wellbeing. In chapter 5, *acceptance* was conceptualized as a coping strategy and measured with the Cognitive Emotion Regulation Questionnaire Acceptance subscale (CERQ-A). Unexpectedly, and contrary to the hypothesis, the acceptance score derived from this measure was not associated with wellbeing in the older adult sample (however see discussion of conceptual and measurement issues with this scale

below). While (in chapter five) it was argued that the failure of acceptance as a coping strategy to be associated with wellbeing (as had been predicted) was probably due to the measure used actually measuring resignation rather than acceptance, it is also important to acknowledge that until a further measure of acceptance is developed and used in this context we cannot be sure that in fact acceptance as a coping strategy is not simply ineffective in contributing to wellbeing and in some circumstances may in fact be counterproductive.

Given the lack of significance of acceptance in the study in chapter 5, *acceptance* was reconceptualised for the last empirical paper, and measured with the Acceptance and Action Questionnaire revised version (AAQii). This measured the theoretical opposite of acceptance, *experiential avoidance* in accordance with the *ACT model* (Bond et al., 2011). Thus high scores for avoidance indicated a non-accepting stance.

As mentioned above, in the paper exploring relations between hope and experiential avoidance in older adults (chapter 6), it was experiential avoidance that had the strongest association with levels of negative affect in older adults. Those who were high in experiential avoidance (for example, who tended to avoid thinking about their current emotional states) were also higher in negative affect (that is, more likely to report feeling distressed, irritable or guilty) and also reported lower levels of meaning in life. Results, however, did not show a significant relationship between experiential avoidance and positive affect. Results of this thesis study thus show only partial support for the study's hypothesis that lower experiential avoidance would lead to higher positive affect and higher meaning in life, and lower negative affect. The results are consistent with the *ACT model* (Hayes et al., 2006) of psychological ill-health which proposed that avoiding or trying to alter the form of private events such as emotions, cognitions, sensations and

memories would have the paradoxical effect of increasing their frequency and hence lead to negative emotional consequences. But it is also possible, given results of this study, that it is heightened negative affect that contributes to the tendency to avoid distressing thoughts; a possibility not acknowledged in the *ACT model*. However, this interpretation is constrained by the cross-sectional design of the current study. More recently, intervention studies reporting evidence that depression and anxiety decrease when the tendency to engage in experiential avoidance is discouraged (Davison, Eppingstall, Runci, & O'Connor, 2016; Losada et al., 2015), support the direction of effect proposed in the *ACT model*.

Higher experiential avoidance was also significantly associated with lower meaning in life, even when hope was taken into account along with sociodemographic and health variables. This is consistent with the Machell, Goodman, and Kashdan (2015) finding of an association between experiential avoidance and meaning in life despite the studies differing in samples (college students versus older adults) and measurement techniques (daily diary versus a trait measure of avoidance). Findings are also consistent with arguments by Steger and colleagues (Steger, Sheline, Merriman, & Kashdan, 2013) that the avoidance of reflection on experiences in the present renders comprehension systems (which form part of meaning in life) "inaccurate, fragile and constantly in need of protection" (2013, p. 245). Both the *ACT model* and the literature on meaning in life emphasize the importance of attending to and working toward valued outcomes, which in turn confer meaning.

From the perspective of the *ACT model* (Hayes et al., 2006), individuals who are more psychologically flexible (and hence lower in experiential avoidance and cognitive fusion) are able to focus on values based action and hence can reduce their risk of

psychopathology and develop greater wellbeing including a sense of purpose and meaning in life. The finding that higher experiential avoidance was associated with lower well-being in the older adult sample in this thesis is also consistent with developmental explanations such as the argument that suppression (which is conceptually very similar to experiential avoidance) interrupts the focus on meaningful goals and accepting the past, both of which, according to developmental theory would undermine well-being particularly in older adults (Erikson et al., 1989; Krause, 2007). Another important aspect of examining views the present involved investigating how the self is evaluated and accepted.

Views of the Self

Accepting the self was explored from the perspective of positive psychology and more specifically (using the construct from earlier Buddhist teachings), *self-compassion*, which is theorized to be a healthy way of relating to oneself (Neff, 2003b). Evidence had accumulated that self-compassion was associated with wellbeing in other age groups (e.g. MacBeth & Gumley, 2012; Neff & McGehee, 2010), but had not yet been explored in older adults. In this thesis, the study exploring self-compassion in older adults (chapter 4a) concluded that having a self-compassionate attitude toward oneself was associated with wellbeing; and that self-compassion may indeed be a resource for positive ageing. As hypothesized, self-compassion was associated with higher positive affect, higher ego integrity and lower levels of negative affect. Also, as had been speculated, self-compassion was associated with higher meaning in life. This study also demonstrated that self-compassion was made up of two components: positive and negative (self-coldness) aspects of self-compassion. Details and implications of this latter finding are discussed later in this chapter when measurement issues are considered in more detail. The positive component

of self-compassion was associated with positive affect, meaning in life and ego integrity. Self-coldness, on the other hand, was associated with negative affect and meaning in life.

As discussed in chapters 4a and 4b, these findings for self-compassion and affect were in line with those for younger age groups (e.g. Krieger, Hermann, Zimmermann, & Grosse Holtforth, 2015; Neff, Rude, & Kirkpatrick, 2007). The more specific finding that the self-compassion negative factor (self-coldness/ self-criticism) was associated with negative affect was later confirmed in a general community sample by López, Sanderman, and Schroevers (2016), who also found self-coldness was associated with depressive symptoms. So it seems that being self-cold (or self-critical), rather than not being (positively) self-compassionate, is associated with negative affect. Together these findings suggest that helping to stimulate mindful awareness, self-kindness and common humanity (to counteract harsh self-critical ruminations) should thus help reduce negative affect and perhaps help prevent and treat depression in older adults. Note, however, that it was the positive aspects of self-compassion that contributed to positive affect in the current study. Focusing on the present in a mindful, objective and clear way may help maintain positive affect, which is also consistent with the *ACT model* (Hayes et al., 2006). A recent experimental study has confirmed the potentially causal effects of self-compassion on positive mood in younger adults (Odou & Brinker, 2015).

As discussed in chapter 4b, self-compassion also seems to increase later in adulthood (Homan, 2016; Neff, 2009; Petrocchi, Ottaviani, & Couyoumdjian, 2014), particularly after young-adulthood. Further to this the effect of self-compassion on hedonic wellbeing has also been shown to be stronger with advancing age (Hwang, Kim, Yang, & Yang, 2016). For self-compassion in older adults, specifically, the results of this thesis are supported by recent findings that among those with poorer health, self-compassion was

associated with higher hedonic wellbeing (Allen, Goldwasser, & Leary, 2012; Smith, 2015). Both midlife (Brown, Bryant, Brown, Bei, & Judd, 2015) and older adults (Allen et al., 2012) who are self-compassionate have also been shown to express more positive thoughts about ageing; with negative aspects of self-compassion (e.g. self-criticism), in particular, being a strong predictor of attitudes to ageing. Following on from this work, Perez-Blasco, Sales, Meléndez, and Mayordomo (2016) found a mindfulness and self-compassion treatment improved resilience and reduced stress and anxiety in older adults (compared to a no treatment control group) by decreasing negative self-focused coping, and increasing positive reappraisal. This then supports the tentative conclusion of this thesis that self-compassion may be a contributor to affective wellbeing in older adults, and that decreasing self-criticism may be important for reducing negative affect in particular. Interestingly self-compassionate older adults were also less reluctant to ask for and use assistance (Allen et al., 2012), so there are multiple ways in which increased self-compassion may be important for the wellbeing of older adults. Findings suggest interventions should specifically target reducing self-coldness as well as seeking to increase the positive aspects of affective wellbeing through mindful self-focus and self-compassion.

The association found in this thesis between self-compassion and ego integrity was a novel finding, but consistent with Erikson's (Erikson et al., 1989) theoretical conceptions of the final stage of the life-cycle and with the prior finding that self-compassion was associated with greater wisdom (Neff et al., 2007). This finding has yet to be replicated, but suggests that self-compassion influences not only affect but also more eudaimonic aspects of wellbeing, in particular those theorized to be especially relevant to older adults.

Similarly, the association found between self-compassion and greater meaning in life was also previously unexplored, but in the expected direction based on the established association of meaning and purpose in life with other predictors of positive wellbeing (O'Connor & Vallerand, 1998; Steger, 2012). Recent research (reported in chapter 4b) has confirmed this association in a sample of adolescents (O'Donnell, 2015); and university students (Marshall & Brockman, 2016). Meaning in life can also be regarded as an aspect of eudaimonic or psychological wellbeing. Indeed Ryff's scale of psychological wellbeing (Ryff, 1989) includes a purpose in life subscale, which is essentially a measure of meaning in life and contains items referring specifically to both meaning and purpose. Zessin, Dickhäuser, and Garbade (2015), in a meta-analysis, found that self-compassion was more strongly linked to psychological (eudaimonic) wellbeing compared to affective wellbeing. Subsequent research has shown that self-compassion was also associated with all six of Ryff's dimensions of psychological wellbeing (including purpose in life) in older adults (Homan, 2016). Relatedly, this thesis found the associations between self-compassion and negative affect and meaning in life were of similar effect size, though larger than that for positive affect, and that self-coldness was primarily associated with negative affect, whereas positive self-compassion was associated with positive affect. Findings may then depend on which aspects of affect are measured and whether the components of self-compassion are separated.

The studies in this thesis did not investigate potential cognitive mediators of the self-compassion effects on wellbeing. As reported in chapter 4b, research in other age groups has since investigated mediators of negative outcomes related to depression, such as rumination (Krieger, Altenstein, Baettig, Doerig, & Holtforth, 2013), positive and negative automatic thoughts (Arimitsu & Hofmann, 2015), negative attributional style (Zhou, Chen, Liu, Lu, & Su, 2013); and acceptance (Zhang & Chen, 2016). Also, in an

interesting recent study, hope mediated the impact of self-compassion on life satisfaction (Yang, Zhang, & Kou, 2016). Future research could investigate whether these same mediators are relevant in older adults, and also if different processes explain the effects of the positive and negative aspects of self-compassion on different aspects of wellbeing. For example, does rumination play a greater role in explaining the effects of self-coldness on negative affect than on positive affect? Or a stronger mediating effect than acceptance? What mediates the effects of the positive aspects of self-compassion? Mediation effects also need to be confirmed in longitudinal and experimental or intervention studies.

The *self-compassion model* (Neff, 2003b), while broadly supported by the current findings, needs to be modified to account for different effects of self-coldness and positive aspects of self-compassion, to incorporate the association between self-compassion and meaning in life and ego integrity, to incorporate recent (and future) findings of mediators of the relationships between different aspects of self-compassion and different aspects of wellbeing, and to further acknowledge developmental changes.

Overall, views of the present, particularly experiential avoidance (lack of acceptance) and self-compassion (including positive accepting views of oneself versus being self-critical), were each found to be associated with some aspects of wellbeing in older adults. Views of the past will be discussed next, to see if having accepting views of prior aspects of our lives is also associated with wellbeing in older adults.

Views of the Past

It was hypothesized that *accepting the past* would be associated with higher wellbeing. In the study reported in chapter 5, accepting the past was found to have two components: *failing to accept the past* and having a *positive view of the past*. Both were associated with meaning in life, with higher positive views of the past and lower levels of

failing to accept the past both being associated with greater sense of meaning and purpose in life. Positive views of the past were also associated with higher positive affect, but not associated with negative affect. Failing to accept the past, on the other hand, was associated with higher negative affect, but not associated with positive affect. A positive view of the past could be seen as a psychological resource or strength, a potential resiliency factor, whereas failing to accept the past may be seen as a source of vulnerability to negative outcomes. These thesis results are therefore consistent with the view that strengths and vulnerabilities may independently predict wellbeing (Huta & Hawley, 2010).

This current study found that being able to hold a positive view of the past was associated with positive emotions in the present. These findings are consistent with *Erikson's model* (1989), which suggested that reviewing the past and coming to accept it contributes to positive outcomes in older adulthood, such as ego integrity and wisdom. These results are also consistent with findings that being able to reflect upon past pleasant events and achievements in a positive way is an effective mechanism for enhancing affective wellbeing as demonstrated in research on positive reminiscence and/or savoring the past (e.g. Bryant, Smart, & King, 2005). In addition, Westerhof and Bohlmeijer (2014) argued that reminiscing about the past in a positive way contributes to the development of resources such as social support, mastery and self-esteem. Further to this they argue that it may be through these resources that reminiscence contributes to wellbeing, including positive affect, though this remains largely unexplored. Several studies have, however, explored possible mechanisms, Korte, Cappeliez, Bohlmeijer, and Westerhof (2012) for example, found mastery and meaning in life mediated the effects of reminiscence on reduced psychological distress. Future research could explore mediators for the relationship between views of the past and positive wellbeing outcomes and also whether

there are any feedback loops from affect (positive or negative) to mediators or to views of the past more directly.

The relationship between failing to accept the past and negative affect is best explained by *Erikson's model* (Erikson et al., 1989). Erikson argued that in late adulthood reviewing one's life can lead to positive outcomes such as acceptance, ego integrity and wisdom (consistent with the above thesis findings for positive affect), but also, if unsuccessful, can lead to negative outcomes such as despair. According to Erikson, failing to accept the past, and the accompanying despair, is often the result of unresolved issues from earlier phases of the lifespan. When looking back on one's life there are, therefore, regrets, and guilt or shame, for things done or not done. The results of the current research are broadly consistent with this theoretical proposition, if negative affect can be broadly equated with despair.

Previous research has also shown that reflecting on the past in a negative way can have consequences for wellbeing. In particular, some types of reflecting on the past, such as rumination, bitterness revival and boredom reduction have each been shown to relate to negative mental health outcomes (Webster, Bohlmeijer, & Westerhof, 2010). Yet other types of reminiscence such as instrumental and integrative reminiscence have been linked to positive outcomes, including reduced depression (Cuijpers, van Straten, & Smit, 2006; Pinquart & Forstmeier, 2012) and anxiety (Korte, Westerhof, & Bohlmeijer, 2012); and also to increased mastery (Pearson, 2006), meaning in life (Bohlmeijer & Bohlmeijer, 2008; Westerhof, Bohlmeijer, van Beljouw, & Pot, 2010) and other aspects of eudaimonic wellbeing (Afonso, Bueno, Loureiro, & Pereira, 2011; Meléndez Moral, Fortuna Terrero, Sales Galán, & Mayordomo Rodríguez, 2015); and happiness (Chin, 2007). Our results

demonstrating differing outcomes for different ways of viewing the past are thus broadly consistent with these findings.

Further to this, research has suggested that those with non-accepting views of the past (such as regrets) persist with trying to change things that can no longer be changed (e.g. Randenborgh, Huffmeier, LeMoult, & Joormann, 2010), and 254. "this lack of emotional *acceptance* may be one mechanism through which goal disengagement is unable to proceed" (Thompson, Woodward, & Stanton, 2011). This is important because disengagement and reengagement are crucial ways of resolving regrets (Farquhar, Wrosch, Pushkar, & Li, 2013; Wrosch, Bauer, & Scheier, 2005), and form part of the *Developmental Regulation across the Lifespan,* a recent model integrating other theories of developmental regulation for successful ageing (Haase, Heckhausen, & Wrosch, 2013).

There are a variety of other ways through which views of the past may be linked to wellbeing. Those prone to rumination may deal with regrets differently (e.g. see Eryilmaz, Van De Ville, Schwartz, & Vuilleumier, 2014), and thus fail to accept the past, leading to poor wellbeing outcomes. Future research could also further explore forgiveness of self (Ingersoll-Dayton, Torges, & Krause, 2010) and others (Dezutter, Toussaint, & Leijssen, 2016), which may be other potential pathways to accepting the past. Relatedly, this thesis has also shown that self-compassion is related to ego-integrity, and perhaps self-compassion may have its effects through helping older adults accept their past. Research also needs to test the direction(s) or these effects, including the possibility of feedback loops by which negative affect may contribute to negative (non-accepting) views of the past, and/ or positive affect may contribute to the development and maintenance of positive views of the past. Also, as mentioned in chapter 5, it may be best in future studies to consider more than one strategy at a time as Swift and Chipperfield (2013), for example,

found a combination of secondary control strategies (including acceptance) best predicted well-being.

This current study's finding that both positive and negative (non-accepting) views of the past were associated with meaning in life is consistent with the model of reminiscence developed by Westerhof and Bohlmeijer (2014) who argue that reminiscence serves to help create meaning in life. Failing to accept the past could be seen as related to bitterness revival, a form of negative reminiscence, viewed as counterproductive as it prevents individuals from making meaningful commitments in life (Westerhof & Bohlmeijer, 2014). They also argue that reminiscence can function in more positive ways to increase identity construction, and to integrate aspects from one's past, and in an instrumental way to increase a sense of purpose. Reker, Birren, and Svensson (2012) similarly argue that, in general, reminiscence reminds us that we have pursued and attained personally meaningful goals and gives an accompanying sense of fulfilment, and a sense of our existence as having order, coherence and purpose. Reker et al. (2012) also make a powerful argument that autobiographical methods can help restore, maintain and enhance meaning in life in older adults. Therefore attaining a positive view of the past, perhaps through positive reminiscence techniques, thus could also be expected to increase meaning in life, as was found in the current research. More research is required to specifically check if the link between positive reminiscence and wellbeing established in reminiscence interventions (e.g. see reviews by Pinquart & Forstmeier, 2012; and Westerhof, Bohlmeijer, & Webster, 2010) is mediated by positive views of the past; and whether these effects are specific to meaning in life and positive affect or influence wellbeing more broadly. Again, however, it is important for future research to explore potential feedback loops to check if a higher sense of meaning in life also leads one to see the past in a more positive and accepting way.

Overall then this thesis found that views of the future, present (including self), and the past are all related to some aspects of wellbeing in older adults, but the specific aspects of wellbeing associated with each measure varied. These differences will now be explored.

Overall Findings for Hedonic Versus Eudaimonic Wellbeing and Positive Versus Negative Affect

Sometimes differences emerged in predictors of *hedonic* (subjective) *versus eudaimonic* (psychological) wellbeing, but in other studies, the differences were predominantly between predictors of *positive versus negative affect*. Pathways via which optimism appeared to influence wellbeing were different for hedonic wellbeing (positive affect), than for eudaimonic wellbeing (purpose in life). However, results for hope, experiential avoidance, and accepting the past (as discussed above) differed instead according to whether positive versus negative affect was being considered. Results are therefore more consistent with findings by Huppert and Whittington (2003) and Karademas (2007), who each found evidence that there were common but also distinct predictors of positive and negative aspects of wellbeing. Results of this thesis also suggest that there may also be specific aspects of wellbeing with a greater proportion of common predictors. An example is meaning in life, a positive, but eudaimonic aspect of wellbeing, which was associated with nearly all study variables, the exception being failure to accept the past. This also suggests that a variety of different therapies may increase meaning in life.

Results also fit with the distinction between the concepts of *strengths* and *vulnerabilities* (e.g. see Huta & Hawley, 2010) and their divergent impacts on wellbeing. *Strengths* such as optimism, hope, positive aspects of self-compassion and positive views of the past contributed most strongly to positive aspects of wellbeing (both positive affect

and meaning in life). *Vulnerabilities* such as self-coldness, experiential avoidance and failing to accept the past were most strongly associated with negative affect. This suggests that therapy should not just target vulnerabilities and hence reduce negative affect (and psychopathology), but also focus on building a client's strengths to foster their longer-term positive wellbeing and reduce relapse. This notion is supported by recent studies. For example, increasing positive aspects of wellbeing, particularly eudaimonic wellbeing, has been shown to protect against relapse of psychopathology (e.g. see Ruini & Ryff, 2016); and interestingly, Huta and Hawley (2010) noted that psychological strengths weakened the association between vulnerabilities and wellbeing. In future research this possibility could be explored further with strengths and vulnerabilities including those covered in this thesis.

This thesis has suggested a range of strengths which could potentially be built to improve the wellbeing of older adults including some, such as self-compassion, which had not previously been explored in older adults. The findings of this thesis do however need to be interpreted in the context of the studies various limitations. These limitations will now be outlined.

Study Limitations and Directions for Future Research

Cross-sectional design. The main limitation of this thesis is the exclusive use of cross-sectional data. Attempts were made to overcome some aspects of this limitation with the use of structural equation modelling, and in all but the self-compassion paper, with the testing of alternate models/directions of effect. However, the directions of the effects reported in this thesis are not definitive and relationships cannot be considered causal. Apparent relationships may also be influenced by an unidentified third variable that may influence both the hypothesized predictors and the wellbeing measures. Replication with

longitudinal data and/or with experimental studies or interventions is therefore necessary to determine whether the attitudes to time periods and the self which were measured really do contribute to positive ageing.

Samples. Convenience volunteer samples were used, so they may not be representative. In particular the samples did not include older adults living in care, or the homeless, or those with cognitive impairments. Study samples were also racially and culturally homogeneous (with the majority Caucasian and from an Anglo-Celtic culture), and there were no indigenous participants and very few from Asian backgrounds. Other cultural groups may differ in a variety of ways from the current samples. The paradox of wellbeing is only found in wealthier countries (H. J. Swift et al., 2014), and nationality, ethnicity, and the immigration experience can have an impact on wellbeing (Diener, 2013; Hajdu & Hajdu, 2015). Religious beliefs and practices and broader aspects of spirituality may also influence resources, processes and wellbeing outcomes such as meaning in life (e.g. see Krause, 2012b) and positive emotions (Vaillant, 2013). In addition, differences may also occur in resources and their impact on wellbeing between cultural groups. For example, optimism may be influenced by the socio-cultural context, with pessimism being lower in those with Western (independent) versus Eastern (interdependent) cultural backgrounds (Chang, 1996). Also, Gould (1999) argues that conceptions of control differ between Asia and the West, and that the proposed primacy of primary control in the *Lifespan Theory of Control* is better viewed as a Western cultural focus. Similarly, the Snyder et al. (2005) view of hope can be argued to have a Western individualistic bias. Generalizability of results of this thesis is therefore limited by the Western sample and the predominantly Western theoretical models and measures chosen. While the proportions of the samples who were migrants did generally match the current Australian older adult

cohort, replication of these results on larger more diverse and representative samples is required, particularly as the sample sizes were only just large enough for the analyses done.

Any effects found may also be specific to the current cohort of older adults. Future cohorts, including the very large Baby Boomer cohort that is currently moving into retirement, and cohorts that follow, may experience ageing differently. The effects of views of the past, present, future and self on wellbeing may also differ between cohorts. Cross-sequential designs over long time periods would be needed to differentiate effects of age, cohort and historical periods and events. These have not yet been done with the variables studied in this thesis.

Study measures. All variables are self-report, thus shared method variance may contribute to some of the results. Future research should attempt to confirm these findings using other methods. Using reports from peers or family, for example, would be a useful extension of these studies. Interviews would also be useful to provide more rich data about a range of issues raised in this research, for example about how individuals are reviewing their past and achieving acceptance. Where possible, mixed methods designs should be used in future research to clarify findings and overcome issues with shared method variance. Another key limitation is that the first study did not include control variables. The subsequent three studies however remedied this with the inclusion of age, perceived health, income adequacy, and education. Additionally more objective measures of income and health could also be included in future studies and additional covariates introduced, such as social support.

A number of measures have been superseded over the course of this research. The measure of positive affect in the study examining optimism, the Affect Balance Scale (Bradburn, 1969), has been criticized; though often the criticism is for the use of a single

score of affect balance (Helmes, Goffin, & Chrisjohn, 2010), rather than for using a separate sub-scale (of positive affect only) as was the case in the first study in this thesis. In subsequent studies, the Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988) were instead used to measure affect. However, the PANAS measures only high activation emotions (Windsor & Anstey, 2010), the very emotions that become less frequent with age (Windsor & Anstey, 2010). Therefore, future research should perhaps include measures that capture a more diverse range of emotions.

The Purpose in Life subscale from the Ryff Psychological wellbeing scale (Ryff, 1989; Ryff & Keyes, 1995) used in the first (optimism) study confounds searching for purpose and meaning with the wellbeing outcome of feeling one has a purpose and that one's life means something. It is also possible that meaning and purpose may be distinct constructs (George & Park, 2013), but neither of the measures used in this thesis allow for this possibility to be examined. There may also be differences in the way older adults conceptualize meaning in life compared to younger adults (Krause, 2012a), but again measures used in this thesis do not allow for this discrimination. However, the Meaning in Life Questionnaire- Presence subscale (MLQ-P, Steger, Frazier, Oishi, & Kaler, 2006) did have acceptable factor structure and reliability in older adult samples, and produced findings in the expected direction, both in the work in this thesis and that of Hallford, Mellor, Cummins, and McCabe (2016), so this does not appear to be a major problem.

The measure of experiential avoidance, the Acceptance and Action Questionnaire (AAQ-ii; Bond et al., 2011) has been criticized and suggestions made that it may overlap with distress (Wolgast, 2014). However, in this thesis, it was found to be a separate factor from each of the wellbeing measures, so overlap may be less of an issue for wellbeing than for psychopathology. Nevertheless, another measure of experiential avoidance could

perhaps be used in future research. The daily diary measure of experiential avoidance used by Machell et al. (2015), for example, may be appropriate and was a stronger predictor of wellbeing, including meaning in life, than the AAQii in that study.

The ego integrity measure used, the Inventory of Psychosocial Development (IPD-EI; Whitbourne & Waterman, 1979), had marginal reliability, therefore an alternate measure should perhaps be considered in future research. Modifications to measures (including dropping of some items for older adults) and or changes to their subscale structure suggested by results of this thesis all need to be replicated in additional samples of older adults with further confirmatory factor analyses.

Statistical limitations. The Baron and Kenny technique for testing mediation (Baron & Kenny, 1986) used in the first study in this research (chapter 3a) has been largely superseded. In addition, the self-compassion paper did not test a model with reverse causality (i.e. from wellbeing to self-compassion), limiting interpretation of findings. Another limitation is that non-recursive modelling was not run on the first three papers and full non-recursive modelling could not be conducted on the data related to hope due to lack of appropriate instrumental variables (that is, additional variables necessary to allow the model to run), despite some which theoretically should have filled this role being included in the study.

General limitations. Another limitation of this thesis is that optimism and hope were not included in the same study, so we cannot conclude which aspects of views of the future are most predictive of wellbeing. Therefore while knowing that intervening to enhance views of the future is important, we do not know whether to focus on optimism or hope specifically in interventions with older adults.

Also, only two of the four studies in this thesis compared different time periods: the accepting the past versus the present study (chapter 5), and the hope versus experiential avoidance (of the present) study (chapter 6). Of these, in the accepting the past paper, one of the variables (acceptance as a coping strategy for present events) was measured inappropriately so we were not able to fairly compare results. It is therefore difficult to reach conclusions as to which time period has the most impact on wellbeing in older adults.

Additionally, meaning or purpose in life was the only measure of eudaimonic (psychological) wellbeing used in this thesis and the results may therefore not generalize to other aspects of eudaimonic wellbeing, such as personal growth or positive relations with others. However, since the study was completed, Homan (2016) has used Ryff's broader psychological wellbeing scales (Ryff & Keyes, 1995) in older adults and demonstrated that indeed self-compassion is associated with all six psychological wellbeing dimensions. Some variables like experiential avoidance have, however, never been examined to see if they predict broader eudaimonic (psychological) wellbeing. This is thus a further avenue for future research.

This thesis focuses on wellbeing outcomes, but it is acknowledged that the range of potential predictors had to be narrowed to fit the scope of this thesis. Thus, for example, other potential predictors of meaning in life such as religion and spirituality, which show promising findings (e.g. Krause, 2012b) were omitted and should be explored in future research. Similarly other potential mechanisms through which wellbeing outcomes can be reached need to be explored. For example, since this thesis began several additional mechanisms for attaining ego integrity have begun to be explored, one is a sense of coherence (Dezutter, Wiesmann, Apers, & Luyckx, 2013; Wiesmann & Hannich, 2011)

and another is forgiveness (Dezutter et al., 2016). Therefore, in addition to the use of self-compassion and accepting the past (identified in the current research) these mechanisms also need further research.

A further limitation is the different measures of social support used in the analysis of two of the studies and the absence of social support measures in analysis of the other two studies. Social support was measured as satisfaction with social support in Study 1 (Ch 3a), in recognition of the evidence that qualitative measures of social support are generally better predictors of wellbeing than quantitative measures such as the number of relationships (Pinquart & Sorensen, 2000; Siedlecki, Salthouse, Oishi & Jeswani, 2014). However, in Study 4 (Ch 6 on hope), the measure of support satisfaction could not be used to test the non-recursive model due to its correlations with both wellbeing and hope, and thus the number of supportive ties (a quantitative measure) had to be used instead in the final model. The use of different measures of support in the two models is unfortunate and where possible future research should measure support satisfaction.

A final limitation is that both positive and negative views were not measured for all variables. Only positive views of the future were measured (that is, hope and optimism), rather than also including negative views of the future such as worry or negative expectancies for future events (see recent suggestions by Miloyan, Pachana, & Suddendorf, 2016). Additionally, only a negative view of the present (experiential avoidance) was measured and not more positive ways of viewing the present such as mindfulness and acceptance. For both self-compassion and views of the past we did, however, have both positive and negative aspects measured and these demonstrated some distinct correlates. Further research could thus include both positive and negative views of each time period and of the self.

Overall Strengths and Novel Contributions of the Studies

This thesis also has a number of strengths which will now be outlined. A key strength of this thesis is the integration of multiple developmental theories and positive psychology, which is seldom done with older adults. Positive psychology has explored some developmental concepts such as wisdom and reminiscence, but neglected many others. In this thesis a wider variety of constructs from developmental psychology, and *Erikson's model* in particular, have been examined and integrated with the positive psychology emphasis on wellbeing. For example, the use of modern concepts and measures of strengths first identified by Erikson to test predictions from Erikson's developmental model (including equating Erikson's strength of hope with positive psychology concepts of hope and optimism; and Erikson's strength of purpose with Ryff's concept of purpose in life as part of her model of psychological wellbeing) is a novel contribution of this thesis.

Comparing a positive psychology construct with one from the *Acceptance and Commitment Therapy* literature has seldom been done and is also a step forward. Including the *ACT* concept of experiential avoidance in the same study with the positive psychology concept of hope allowed the limits of each in determining different aspects of wellbeing to be identified. Perhaps not surprisingly, the positive psychology construct of hope was more strongly associated with positive affect and the *ACT* concept of experiential avoidance was more strongly associated with negative affect. However, both concepts contributed to meaning in life.

The inclusion of both positive and negative affect, in all but the first paper, is a further strength of this thesis as much positive psychology work only focusses on positive outcomes. Positive psychology has, since its inception, focused on positive affect, both

empirically and theoretically, such as in the influential work of Barbara Fredrickson (e.g. Fredrickson, 2001). However, negative affect is also an important component of hedonic wellbeing, and has also been shown to be adaptive to a degree at mild levels (e.g. Forgas, 2017), and developmentally beneficial in some contexts, such as in stimulating post-traumatic growth (following more severe stressors). This fits with arguments for the *second wave* of positive psychology, where recognition of negative predictors and wellbeing outcomes, and integrating them with studies of positive variables is now encouraged (Ivtzan, Lomas, Hefferon, & Worth, 2016; Wong, 2011). In addition, the inclusion of the *ACT* construct of experiential avoidance versus acceptance in this thesis incorporates the idea that avoidance of negative affect itself can be problematic.

The inclusion of measures of purpose or meaning in life in all studies is a further strength of this thesis, as many of the concepts studied had not previously been examined in relation to this aspect of wellbeing in older adults. For example, self-compassion and experiential avoidance had not previously been explored with meaning in life as an outcome (in any sample), and optimism and hope had been previously associated with meaning in life, but not in older adults. A further strength of this thesis is the examination of self-compassion in older adults, which had not been done at the time of submission of this paper for publication. Also, outside the area of Time Perspective research (e.g. Boniwell, 2009; Desmyter & De Raedt, 2012), this research is one of the only research projects to compare views of two different time periods in the same study. This is important because there is clearly more to perceiving different time periods than simply which one the individual focusses on the most (as measured in the time perspective literature). Two of the papers in this thesis compared views of the present with other time frames: views of the future (hope), and views of the past (accepting the past).

Implications

Implications for Theory Development

In addition to implications for specific *positive psychology models of optimism, hope and self-compassion* already discussed, the thesis findings also have implications for a range of other psychological theories.

Erikson's psychosocial theory

Results are broadly consistent with propositions from *Erikson's theory* (Erikson et al., 1989) that ego strengths developed at earlier stages, or reworked successfully later in life (including, for example, hope and purpose), are important for positive psychological adjustment in later life (Erikson et al., 1989). However, due to the cross-sectional nature of the data, we are not able to say whether these ego strengths are developed earlier in life or reworked later in life. The importance of the Eriksonian ego-strength of purpose was broadly supported, as purpose in life (and the related construct of meaning in life) was associated with the other measures of wellbeing in each of the studies in this thesis. Future research could further explore the validity of conceptual links drawn in this thesis between various Eriksonian concepts and similar positive psychology constructs, for example by using measures of hope and purpose specifically designed to measure Erikson's versions of these constructs, in addition to measures of these constructs based on positive psychology theories which were used in the present thesis.

Furthermore, Erikson's (1964) earlier ego-strength of hope was indeed associated with positive aspects of wellbeing, as his model predicted. Results of this thesis suggest, however, that these positive effects of hope extend to other positive views of the future such as optimism (which is not specified in *Erikson's model*).

Accepting the past was also associated with wellbeing in older adults, consistent with Erikson's (Erikson et al., 1989) conceptualization of the ego integrity phase. Results indicated that positive views of the past were associated with a sense of meaning, which Erikson specifically mentions as an important aspect of ego integrity. Erikson also argued that avoiding reviewing and coming to terms with the past can lead to despair. The results of this thesis support the proposed link between failing to accept the past and negative affect (similar to Erikson's concept of despair). However, the present results also suggest that avoiding thoughts and emotions occurring in the present, not just in the past, may also be associated with negative affective outcomes.

It could also be argued that the findings regarding the impact of positive aspects of self-compassion on wellbeing (including ego integrity) are also broadly consistent with Erikson's emphasis on maintaining the ego-strength of fidelity (from resolution of the task of identity versus role confusion) and ego integrity.

ACT model

The results in this thesis suggest that experiential avoidance (and perhaps the broader construct of psychological inflexibility) may be associated not just with psychopathology and negative affect, but also with eudaimonic wellbeing, or at least its meaning in life component. This is consistent with later versions of the *ACT theoretical model* (e.g. Feeney & Hayes, 2016) which argue that while the excessive use of experiential avoidance and cognitive fusion and related processes predicts psychopathology, the development of acceptance and other aspects of psychological flexibility (including a mindful and accepting nonjudgmental focus on the present, the clarification of values and the development of values based action) are important in

building resilience and thus contributing to broader wellbeing, including its positive aspects.

The finding that experiential avoidance appeared to be associated with wellbeing in both directions in our model testing suggests it would be important in subsequent studies to test whether there may be feedback loops in the process (such that negative affect or psychopathology may also be contributing to further increases in experiential avoidance) and hence whether the *ACT model* of psychopathology (Hayes, 2004) may need to be modified. The latest, more positively focused, version of the model (Feeney & Hayes, 2016) does acknowledge some types of feedback, for example, that negative/ painful experiences can be used to "connect with values, meaning and purpose, and to increase the capacity to feel without needless avoidance" (p. 453). However, this does not specifically recognize the potential reverse pathways suggested in our alternate models, and in particular is inconsistent with the finding that higher negative affect potentially led to higher experiential avoidance.

There may be even more complex pathways between experiential avoidance and wellbeing that are not explicitly included in the *ACT model* (Feeney & Hayes, 2016; Hayes, 2004). Shallcross and colleagues (2013), for example, suggest acceptance may increase self-compassion and reduce rumination and negative cognitions, and future research could explore these potential pathways to wellbeing. Experiential avoidance may also discourage older adults from acknowledging and seeking help for problem emotions (Andrew & Dulin, 2007); and/or strengthen other avoidant behaviors (Silberstein, Tirch, Leahy, & McGinn, 2012). Each of these processes could potentially increase psychopathology and/ or decrease positive aspects of wellbeing and if research supports

their role, then they could be added explicitly to the *ACT model* and incorporated in therapeutic interventions.

Implications for other theories

This research also loosely fits with Zimbardo's idea that a *balanced/ flexible time perspective* is important (Boniwell, Osin, Linley, & Ivanchenko, 2010; Zimbardo, 1999), with excess focus on or avoidance of any aspect of time (past, present or future) being potentially problematic, while a balancing of all three is optimal for wellbeing. However, this conceptualization was not directly tested. Some work is beginning in this area, for example, the recent paper by Simons, Peeters, Janssens, Lataster, and Jacobs (2016) suggested that the negative association between the past-negative time perspective and happiness, commonly found in younger age groups, weakens with age. This is consistent with the failure in this research to find a link between a negative non-accepting view of the past and positive affect. Further research is needed, exploring other aspects of time perspective, for example those in the Zimbardo scale (Zimbardo, 1999) and recent additions such as the Present-Eudaimonic Time Perspective Scale (Vowinckel, Westerhof, Bohlmeijer, & Webster, 2015) and comparing them to the specific views of different time periods measured in this thesis, and also explicitly focusing on the effects of a balanced time perspective in older adulthood.

Other work with the related construct of future time perspective from *Socioemotional Selectivity Theory* (SST, Carstensen, Isaacowitz, & Charles, 1999), demonstrates that older adults' acknowledgement of their decreased future time alters their motivation (Lang & Carstensen, 2002) and their emotion regulation (Charles, 2011). Boniwell et al. (2010) found future time orientation was slightly less common in older adults. Yet the present research demonstrated that the role of optimism and hope (which

both involve a focus on the future) in wellbeing does not appear to have diminished in older age. *Socioemotional Selectivity Theory* needs to be modified to recognize and incorporate these findings. First, however, future research should measure future time perspective, optimism and hope in the same study to explore this possibility further. It is also possible that the *age-related positivity effect*, arising from the process of increased focus on socio-emotional goals with age described in SST, could enhance the process of broadening awareness and building resources proposed by the *Broaden and Build model* (in response to positive affect) when applied to older adults, as well as enhancing positive affect itself. This too could be explored in future research.

Results of the paper on optimism (chapter3a) are also consistent with *Bandura's theoretical model* (Bandura, 2008). Perceptions of control (closely related to Bandura's concept of self-efficacy) were indeed associated with wellbeing, particularly with purpose in life. Adding to this model, it was the stable trait of optimism that contributed to increased perceptions of control/ efficacy. Within this model it could be argued that optimistic individuals are more able to build resources, such as efficacy and social support, which contribute to wellbeing, particularly purpose and positive affect. Interpreting these results within *Bandura's model* would also suggest a range of processes by which efficacy and wellbeing can be enhanced.

Results from several studies in this thesis could also be regarded as supporting Fredrickson's *Broaden-and-Build model* of positive affect (Fredrickson, 2001), and in particular that positive emotions may lead to increased resources such as social support and hope. In the paper focused on optimism (chapter 3a), however, while positive affect was associated with higher social support, it was not associated with higher perceived control (instead higher purpose in life was associated with higher perceived control). In the self-

compassion study (chapter 4a), a model with positive affect leading to self-compassion was not tested, but would be consistent with this theoretical model, and cannot be ruled out from the cross-sectional findings. Considering accepting the past as a cognitive resource, the results in chapter 5 also provide some support for the *Broaden-and-Build model* with positive affect associated with positive views of the past, and negative affect associated with negative nonaccepting views of the past. In the paper examining hope (chapter 6), there was also evidence consistent with the feedback loops suggested by Fredrickson's model, with positive affect being associated with greater hope. Notably, in each of these studies, positive affect was not the only wellbeing measure to be associated with resources. Purpose or meaning in life could also be interpreted as contributing to hope, self-compassion, and the ability to form a positive accepting view of the past. While recent theoretical developments by Fredrickson link positive emotions to the development of eudaimonic wellbeing (Fredrickson, 2016), and these latter findings of meaning in life are somewhat consistent with part of this revised model, future research will need to test the more specific pathways suggested by this newly revised model.

Also, as mentioned in the chapter focused on hope (chapter 6), the role of goal setting needs to be further explored in older adults. In particular, the model of *Developmental Regulation across the Lifespan* model (Haase et al., 2013) recently combined earlier models including the model of *Selective Optimization with Compensation* (Baltes & Carstensen, 2003), *Dual Process Theory* (Brandtstadter & Renner, 1990), and the *Motivational Theory of Lifespan Development* (Heckhausen et al., 2010); and emphasized processes of disengagement and reengagement with goals as particularly important in older adults (Haase et al., 2013). Therefore, exploring whether this goal based approach can be integrated with a focus on strengths such as hope and optimism as examined in this thesis (from the positive psychology and developmental psychology

literatures) could be an important next step for theory and research in ageing. Heckhausen and Wrosch (2016) have made a step in this direction by proposing that some individual differences do matter to developmental regulation (particularly when major changes are happening for the individual) and explicitly including optimism as one of these. They argue that optimism could contribute to effective goal engagement strategies when difficulties in the pursuit of personally important goals occur.

So, to sum up, in this thesis I have argued that as well as accepting the past (from Erikson's model), the positive psychology constructs (hope, optimism, self-compassion) may be the resources and processes through which Erikson's outcomes of Purpose/ meaning in life and Ego Integrity are achieved. However, the thesis results suggest that some modifications are needed to the conceptualization of some of the variables (e.g. self-compassion) and to the associated models (e.g., hope model, self-compassion model), and to the overall model presented in Figure 2.1 (in chapter 2). In particular, results suggest the importance of distinguishing between strengths and vulnerabilities, by separately considering the different predictive outcomes for positive (e.g., positive self-compassion positive aspects, accepting the past) versus negative aspects (e.g., self-coldness, failing to accept the past) of constructs such as self-compassion and accepting the past. In addition, the results suggest that resources/ strengths not only themselves contribute to greater wellbeing, but may also be developed through experiences of positive affect, as suggested in the Broaden and Build theory. Note this may be more pronounced at older ages due to the positivity effect from STT (though this was not tested in the current thesis). Limits to applicability of the Broaden and Build theory were also identified, however, in that positive affect did not significantly contribute to hope. If subsequent prospective research demonstrates feedback from positive affect to strengths such as optimism and hope, then consideration will also need to be given to whether they are truly traits or if they are more

state-like. Whether aspects of positive eudaimonic wellbeing, such as purpose/ meaning in life and other aspects of hedonic wellbeing (i.e., Life Satisfaction) also feed-back to increase resources/ strengths (or indeed to decrease vulnerabilities) also needs to be tested in future longitudinal research and considered in modifying existing or building new theoretical models.

Measurement Findings and Implications

In the research reported here, various measurement issues emerged (some discussed already in the limitations section) that suggest some possible directions for future researchers examining wellbeing in older adults.

Measurement of wellbeing in older adults

Results of the studies in this thesis suggest that it is important to measure multiple aspects of wellbeing in order to fully understand which factors may contribute to positive ageing. The first paper examining optimism (chapter 3a) underscored the need to distinguish between eudaimonic (psychological) and hedonic (subjective) wellbeing in order to understand the process through which optimism may have its effects. In contrast, the study on hope and experiential avoidance (chapter 6) demonstrated that positive and negative aspects of wellbeing may have different predictors, so measuring both of these is also advised.

The Meaning in Life Questionnaire- Presence (MLQ-P; Steger et al., 2006) subscale had a consistent one factor structure and uniformly high reliability and this suggests it is an appropriate measure of meaning and purpose in older adults. The PANAS (Watson et al., 1988) also performed uniformly well, with positive and negative affect consistently established as separate factors, and reliabilities of both subscales being consistently high in all of the older adult samples used for this thesis project. For future research, these

measures may be preferable to the measures used in the first (optimism) empirical study (chapter 3a); that is, the Bradburn Affect Balance Scale (Bradburn, 1969), and Ryff's Purpose in Life Subscale (Ryff & Keyes, 1995) which confounded the search for and presence of purpose and meaning. Further work needs to be done to find a measure of ego integrity that performs consistently well, as even a more recent scale (the Northwestern Ego Integrity Scale; Janis, Canak, Machado, Green, & McAdams, 2014) has modest reliability (Westerhof, Bohlmeijer, & McAdams, 2015).

Measurement of self-compassion

In chapter 4a the Self-Compassion Scale's original six factor structure (Neff, 2003a) could not be replicated. Instead, in line with earlier arguments by Gilbert (Gilbert, McEwan, Matos, & Rivis, 2011), in our sample of older adults a two factor structure was a much better fit. Thus we recommend the use of subscale scores for positive and negative aspects of self-compassion (which others have referred to as self-coldness or self-criticism). Since the publication of this paper, a vigorous and sometimes heated debate has ensued regarding the structure and appropriate scoring of the Self-Compassion Scale, with both data and theoretical positions seeming to support each side. In particular there have been exchanges between the scale's developer Kristen Neff (Neff, 2016a, 2016b; Neff, Whitaker, & Karl, in press) and Peter Muris (Muris, 2016; Muris, Otgaar, & Petrocchi, 2016; Muris & Petrocchi, 2016) and others (Costa, Marôco, Pinto-Gouveia, Ferreira, & Castilho, 2016; López et al., 2015). Most research groups, other than Neff, support the two factor structure that emerged in the current research and recommend scoring them separately. These subsequent studies were not with older adults, so clearly problems with the scale were not due to the sample. It is recommended that either the two subscales established in this research be used, or the full scale total, as a higher order factor of

overall self-compassion emerged in this thesis. The results of this thesis suggest the originally hypothesized six subscales should not be used.

Measurement of hope

The current research suggests that Snyder's Trait Hope Scale (Snyder et al., 1991) may need some minor changes for use in older adult samples. In particular, the item mentioning success in life and the item about multiple ways around a problem may need to be removed and the subscales abandoned in favor of a single scale total. This new (6- item) shorter single score version of the scale needs to have confirmatory factor analysis replicated in an additional sample before it is adopted as standard for older adults.

Measurement of accepting the present

Given the Cognitive Emotion Regulation Questionnaire- Acceptance subscale (CERQ-A; Garnefski & Kraaij, 2007) did not produce the expected relationships with wellbeing, an examination of the items composing the scale in relation to other work in this area, such as that of Wolgast, Lundh, and Viborg (2013), suggests that it really measures resignation. Thus it is recommended that this not be used as a measure of acceptance in future work. The AAQ-ii (Bond et al., 2011), used in a subsequent study is more accurately a measure of experiential avoidance; the opposite of acceptance.

As with the hope scale, the experiential avoidance measure, the AAQ-ii, needed to be slightly modified for the older adult sample. Once again it was an item using the word 'success', in this case "worries get in the way of my success" which had poor reliability. It seems that unlike midlife or younger adults, older adults do not think about success, or if they do it is not in the same way that younger adults view it, as items using this word did not load on the experiential avoidance factor or on the hope factor in the current research. Perhaps success is usually thought of, at least in part, in the work context and our older

adults are predominantly retired. It is also possible that other aspects of one's life have assumed greater importance with increased age and experience and the growth of wisdom, leaving success as largely irrelevant in later life. As with the Trait Hope Scale (discussed above), this new (6- item) slightly shorter single score version of the AAQ-ii also needs to have confirmatory factor analysis repeated in an additional sample before it is adopted as standard for older adults.

Measurement of accepting the past

With the Accepting the Past (ACPAST; Santor & Zuroff, 1994) scale, a two factor structure consistent with a recent Turkish version of the scale (Boyacioglu & Saymaz, 2012) emerged, which is inconsistent with the reports from scale developers (Santor & Zuroff, 1994). Given that ego integrity, a similar concept, has also recently been found to have two similar factors (Afonso et al., 2011), it is recommended that the Accepting the Past Scale be scored as two separate subscales: Positive views of the past, and failing to accept the past. In the current research 4 items did not load clearly on either of the two factors (see chapter 5), suggesting that the scale could be shortened, however this would need to be verified in other samples.

Clinical Implications

Findings of this thesis suggest that interventions to increase optimism should be mindful of the broader social context and be implemented in a way that also increases the likelihood of formation and maintenance of social relationships in order to foster social support, which in turn should contribute to wellbeing, particularly positive affect. One obvious strategy is to conduct the intervention in a group setting, but other modifications may also be necessary. Interventions focusing on optimism (e.g. see those reviewed in Malouff & Schutte, 2016) could also be modified in ways that incorporate opportunities for

participants to make choices and experience a degree of control (with related benefits for self-efficacy), as this should contribute to a sense of meaning and purpose in life.

Ideally, given the conceptual overlap between optimism and hope and their mutual relationships with wellbeing, these interventions could be implemented in a way that fosters not only optimism, but also hope by building the "will and the ways" (agency and pathways) to achieve personally relevant goals. One such intervention study with early retirees focused on setting, planning and achieving personal goals and did find increases in hope and in some positive outcomes such as serenity, flexibility and positive attitudes to retirement, as well as decreased levels of depression, compared to a control group (Lapierre, Dube, Bouffard, & Alain, 2007). Goal setting is part of this, and working toward small achievable goals is important as the achievement of small goals would also build perceived control and related self-efficacy (Bandura, 2008). Variations of the *Best Possible Self* intervention (King, 2001) may be a starting point, as this has been shown to have the largest effect size in a meta-analysis of optimism interventions, and involves imagining a future where your goals have been achieved (Malouff & Schutte, 2016).

Given the findings of this thesis that both hope and self-compassion were related to positive aspects of wellbeing in older adults, and the demonstrated relationships between these constructs (Umphrey & Sherblom, 2014; Yang et al., 2016), interventions which target both should also be seriously considered. Thus including the Shapira and Mongrain (2010) modification to this *Best Possible Self* exercise, in which participants are asked to *give themselves sage and compassionate advice* (as part of a letter from their future self), would be consistent with the findings of this thesis. Supporting this, completing brief *self-compassionate writing tasks*, such as *self-compassionate letter writing* has been shown to be effective as part of other self-compassion interventions (Arimitsu, 2016; Gilbert &

Procter, 2006; Neff, 2013). Further, Smeets, Neff, Alberts, and Peters (2014) found their *self-compassion intervention* significantly increased optimism and self-efficacy, while increasing social connectedness (although theirs was a student sample), adding weight to this suggested approach.

It may also be worthwhile adding components of related, self-compassion interventions as well, such as introducing a *loving-kindness meditation* (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008; Shonin, Van Gordon, Compare, Zangeneh, & Griffiths, 2015) and *mindfulness* exercises. Supporting this, Perez-Blasco et al. (2016) found a *mindfulness and self-compassion treatment* improved resilience and reduced stress and anxiety in older adults, and that the treatment group also decreased in negative self-focused coping, which is similar to the negative self-compassion component identified in this thesis. Krieger et al. (2013) found that cognitive-behavioural avoidance mediated the relationship between self-compassion and depressive symptoms, as did symptom-focused rumination and they argued that both of these are facets of experiential avoidance. Thus adding a *mindful self-compassion* task (e.g. see Perez-Blasco et al., 2016) and a focus on *acceptance*, rather than avoidance, as is done in *Compassionate Mind Training* (Gilbert & Procter, 2006), may improve the efficacy of interventions for older adults. Each of these potential additions to the treatment protocol would need to be tested systematically to see if they add significantly to the effectiveness of the *Best Possible Self* intervention (King, 2001).

The suggestion that the *Best Possible Self* (King, 2001) exercise be expanded to have elements of *mindful self-compassion* and *acceptance* incorporated is thus consistent with the finding of this thesis that high experiential avoidance was associated with lower wellbeing suggesting that a mindful and accepting, thus non-avoidant, focus on the present could be fostered in order to increase wellbeing. Indeed *Mindfulness-based cognitive*

therapy and *Mindfulness-based stress reduction* have shown promise in older adults (Foulk, Ingersoll-Dayton, Kavanagh, Robinson, & Kales, 2014; Gallegos, Hoerger, Talbot, Moynihan, & Duberstein, 2013) and warrant further trials.

Also following from the experiential avoidance findings, *Acceptance and Commitment therapy* (ACT; Hayes et al., 2006) may be helpful. *ACT* has been shown to be potentially effective in in older adults (Davison et al., 2016; Scott, Daly, Yu, & McCracken, 2016; Wetherell et al., 2016) and modifying this intervention slightly to include, for example, *self-compassion* could be easily done (e.g. see Luoma & Platt, 2015). Indeed the present findings suggest such modifications may enhance its effectiveness.

The finding of this thesis that positive views of the past were associated with higher wellbeing suggests that other interventions may also be effective. Interventions based on *life review* (e.g. see Westerhof & Bohlmeijer, 2014), and in particular remembering specific positive events have shown promise (Latorre et al., 2015). Savouring positive experiences should increase positive affect (Bryant & Smith, 2015; Garland, Farb, & Fredrickson, 2015) and according to the *Broaden and Build model* (Fredrickson, 2006) this should also then contribute to higher levels of *resources* such as social support, optimism and perceived control. Consistent with this, related *autobiographical memory interventions* may also have their effects at least in part through increasing optimism and other resources (Hallford & Mellor, 2016). Similarly, a brief *reminiscence intervention* was found to increase mastery (perceived control) and reduce pessimism (James & Bhar, 2016). *Reminiscence interventions*, and related *life review therapy* have been shown to increase positive aspects of wellbeing (including ego integrity) as well as reducing depressive symptoms (e.g. Afonso et al., 2011; Korte, Bohlmeijer, Cappeliez, Smit, & Westerhof, 2012; Meléndez Moral et al., 2015). Even more closely tied to the findings of this thesis, a

related intervention, *integrative reminiscence therapy* (e.g. see Meléndez Moral et al., 2015), that assists older adults to integrate memories, led to increased acceptance of the past and decreased depression (Pearson, 2006). This is important as accepting the past has been shown to be more closely associated with depression than ego integrity was (Santor & Zuroff, 1994) and is also consistent with the finding of this thesis that failing to accept the past was associated with negative affect. Therefore researchers could go beyond measuring ego integrity to processes (such as accepting the past) by which integrity is reached. Thus introducing a *group-based integrative reminiscence intervention* should increase acceptance of the past, and including components to increase resources such as optimism, perceived control, and social support, would be consistent with the findings of this thesis, and might further improve the effectiveness of *reminiscence interventions* in promoting wellbeing. Modifications to incorporate elements of *savouring* positive experiences from the *past*, combined with an element of *mindfully accepting the present and the self* could also be incorporated, consistent with current findings.

Each of these suggested interventions could undergo initial *pilot testing*, then if effective, a *randomized control trial* could be conducted. Finally, if results are promising, trials to establish which components of each therapy are effective and what works best for whom could be conducted. This would help determine whether all elements are actually required for the intervention to be maximally effective for a reasonable cost, for a particular population. An alternative strategy would be to first conduct careful *individualized assessments* and determine what each individual's most problematic views are in relation to the past or the present or the future or the self, and tailor the intervention accordingly. Additionally it would be important to also assess for each individual whether the main concern is psychopathology (and if so, which type), or negative affect more broadly, or if it is predominantly low positive wellbeing (be it positive affect, or

eudaimonic wellbeing dimensions such as meaning in life). Following these assessments careful *treatment matching* could then be applied.

There are several further approaches to therapy and preventative interventions that are broadly consistent with the central arguments of this thesis and with its focus on wellbeing in older adults. One clear example is Knight's *Contextual Cohort-based Maturity/Specific Challenge Model* (CCMSC) (Knight, 1996; Knight & Poon, 2008; Pachana, Mitchell, & Knight, 2015). A modification of this, the *Wisdom-based Model for Psychological Interventions to Enhance Well-being in Later Life* (Knight & Laidlaw, 2009), in which predominantly cognitive-behavioural treatment is modified to include positive psychology, gerontology, and life span developmental psychology concepts and research is also promising. Another potentially useful approach is Ruini's *Wellbeing Therapy* (Fava & Ruini, 2003; Ruini, Albieri, & Vescovelli, 2015; Ruini & Ryff, 2016) and a version of this specifically designed for older adults called *Lighten Up* (Friedman et al., 2017), which incorporates identifying and savouring positive experiences relevant to each aspect of eudaimonic wellbeing. In addition, other positive psychology approaches are also being trialed with older adults, including preventative interventions such as *Strengths Based Interventions* (Proyer, Ruch, & Buschor, 2013), and other broader *positive psychology exercises* such as those trialed in older adults by Ho, Yeung, and Kwok (2014) and Proyer, Gander, Wellenzohn, and Ruch (2014). Each of these approaches shows promise and could be modified to incorporate findings from this thesis. Further development and randomized control trials with long-term follow-up are needed to achieve optimal outcomes.

Conclusion

In this thesis I have loosely taken *Beck's* (1976) *cognitive triad* of vulnerability to depression (negative views of the self, the world and the future), and turned it on its head to look instead at resilience resources or strengths (in the self, the world and the future) for enhancing wellbeing. The focus is thus on *strength* rather than *vulnerability*, and on adaptive rather than maladaptive aspects of wellbeing. Further, this thesis expanded Beck's triad to also consider views of the present more explicitly (rather than "the world"), incorporating components from literature on coping strategies and emotion regulation (acceptance), and from the *ACT* literature (experiential avoidance). To examine views of the self, the thesis took a recent positive psychology concept (taken from Buddhism), self-compassion, and applied it for the first time to older adults. Additionally, incorporating a developmental focus on older adults, this research took account of views of the past, taken from *Erikson's theory (Erikson et al., 1989)*, specifically accepting the past as part of ego integrity in the final stage), which was missing from *Beck's model*. Any future model of resources or strengths associated with wellbeing in later life should thus include views of the self, the present (or "*the world*" in Beck's terms), and the future, but also the past.

The first key finding of this thesis was that having a positive view of the self (as measured by self-compassion) was associated with positive affect and meaning in life, as well as greater ego integrity. Self-coldness, on the other hand, was associated with negative affect and with lower meaning in life. Second, the way we conceptualise and measure the present is important. When measured as a vulnerability factor (experiential avoidance) views of the present were associated with negative affect; whereas there were no significant associations with wellbeing when views of the present were conceptualised as a coping strategy focussed on acceptance (but actually measured as resignation). Third,

views of the future, whether measured as hope or optimism, were associated with positive aspects of hedonic wellbeing (positive affect) and with eudaimonic wellbeing (purpose or meaning in life). More specifically, optimism seems to have its effects on wellbeing at least in part through increasing social support and perceived control. Finally, having a positive view of the past was also associated with positive outcomes (positive affect and meaning in life); whereas being non-accepting of the past was associated with negative affect.

Further research that considers multiple interacting positive psychological influences on various wellbeing outcomes is warranted and findings should enable the development of programs to improve psychosocial resources with a view to enhancing wellbeing for older adults. The cross-sectional design is acknowledged as a major limitation of the studies in this thesis. In particular, future research should employ longitudinal or intervention designs in order to confirm proposed pathways between the resources identified in this thesis and aspects of wellbeing. Measures of wellbeing used in future research should also be expanded to include a greater variety of eudaimonic dimensions, as well as satisfaction with life (the remaining hedonic component) and also to compare findings with psychopathology outcomes such as depression and anxiety. Measures of views of each time period (past, present and future) and of the self could be expanded to include both positive and negative aspects of each. Efforts should also be made to recruit more representative samples of older adults to see if findings extend to other cultural groups and specific subgroups of older adults such as Indigenous aged, those with dementia and those in care facilities.

Findings of the current research suggest that focusing interventions with older adults on issues in more than one time period may be beneficial. In doing this future

intervention studies should be carefully designed and evaluated and incorporate aspects focused on mindful acceptance (versus experiential avoidance) of thoughts, emotions and the self (self-compassion), on memories of the past (e.g. through reminiscence), and on views of the future by incorporating strategies to build optimism and hope.

Thus having resources or strengths to deal with day-to-day life (and its attendant emotions and cognitions), to come to terms with ourselves and our past, and to anticipate a positive future all appear to be associated with wellbeing in older adulthood. Applying positive psychology constructs and integrating them with those from developmental psychology and from "*third wave*" cognitive behavioural therapies has provided useful insights into positive ageing, ideas for innovative modifications to existing preventative and therapeutic interventions, and some exciting directions for future research.

REFERENCES

Afonso, R. M., Bueno, B., Loureiro, M. J., & Pereira, H. (2011). Reminiscence, psychological well-being, and ego integrity in Portuguese elderly people. *Educational Gerontology, 37*(12), 1063-1080. doi:10.1080/03601277.2010.500585

Ahrens, C., & Ryff, C. D. (2006). Multiple roles and well-being: Sociodemographic and psychological moderators. *Sex Roles, 55*(11), 801-815. doi:10.1007/s11199-006-9134-8

AIHW. (2016). *Australia's Health 2016*. (Cat. no. AUS 199). Canberra, ACT: Australian Institute of Health and Welfare.

Alarcon, G. M., Bowling, N. A., & Khazon, S. (2013). Great expectations: A meta-analytic examination of optimism and hope. *Personality and Individual Differences, 54*(7), 821-827. doi:10.1016/j.paid.2012.12.004

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*(2), 217-237. doi:10.1016/j.cpr.2009.11.004

Aldwin, C., & Igarashi, H. (2012). An ecological model of resilience in late life. In B. Hayslip & G. C. Smith (Eds.), *Annual review of gerontology and geriatrics, Vol 32: Emerging perspectives on resilience in adulthood and later life* (Vol. 32, pp. 115-130). New York, NY: Springer Publishing Co; US.

Allen, A. B., Goldwasser, E. R., & Leary, M. R. (2012). Self-compassion and well-being among older adults. *Self and Identity, 11*(4), 428-453. doi:10.1080/15298868.2011.595082

Allen, A. B., & Leary, M. R. (2014). Self-compassionate responses to aging. *The Gerontologist, 54*(2), 190-200. doi:10.1093/geront/gns204

Andrew, D., & Dulin, P. (2007). The relationship between self-reported health and mental health problems among older adults in New Zealand: Experiential avoidance as a moderator. *Aging & Mental Health, 11*(5), 596-603. doi:10.1080/13607860601086587

Arbuckle, J. L. (2006). *AMOS 7.0 User's guide*. Chicago, Ill: SPSS Inc.

Arbuckle, J. L. (2011). *AMOS 20.0.0*. Crawfordville, FL.: Amos Development Corporation.

Arbuckle, J. L. (2012). *IBM SPSS AMOS 21 User's guide*. Armonk, NY: IBM.

Arch, J. J., Landy, L. N., & Brown, K. W. (2016). Predictors and moderators of biopsychological social stress responses following brief self-compassion meditation training. *Psychoneuroendocrinology, 69*, 35-40. doi:10.1016/j.psyneuen.2016.03.009

Ardelt, M. (2016). Disentangling the relations between wisdom and different types of well-being in old age: Findings from a short-term longitudinal study. *Journal of Happiness Studies, 17*(5), 1963-1984. doi:10.1007/s10902-015-9680-2

Ardelt, M., Landes, S. D., Gerlach, K. R., & Fox, L. P. (2013). Rediscovering internal strengths of the aged: The beneficial impact of wisdom, mastery, purpose in life, and spirituality on aging well. In J. D. Sinnott (Ed.), *Positive psychology: Advances in understanding adult motivation* (pp. 97-119). New York, NY: Springer Science and Business Media.

Arimitsu, K. (2016). The effects of a program to enhance self-compassion in Japanese individuals: A randomized controlled pilot study. *The Journal of Positive Psychology, 11*(6), 559-571. doi:10.1080/17439760.2016.1152593

Arimitsu, K., & Hofmann, S. G. (2015). Cognitions as mediators in the relationship between self-compassion and affect. *Personality and Individual Differences, 74*, 41-48. doi:10.1016/j.paid.2014.10.008

Australian Bureau of Statistics. (2008). *Yearbook Australia*. Canberra, ACT, Australia: Bureau of Statistics.

Australian Bureau of Statistics. (2013a). *Australian Social Trends, April 2013*. (4102.0). Canberra, ACT, Australia: Australian Government Retrieved from http://abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.0Main+Features30April+2013#back3

Australian Bureau of Statistics. (2013b). *Feature Article 1: Population by Age and Sex, Australia, States and Territories*. Canberra, ACT, Australia: ABS Retrieved from http://www.abs.gov.au/ausstats/abs@.nsf/featurearticlesbytitle/1CD2B1952AFC5E7ACA257298000F2E76?OpenDocument.

Australian Psychological Society. (2012). Ageing Positively. Retrieved from http://www.psychology.org.au/publications/tip_sheets/ageing/

Avey, J. B., Wernsing, T. S., & Mhatre, K. H. (2011). A longitudinal analysis of positive psychological constructs and emotions on stress, anxiety, and well-being. *Journal of Leadership & Organizational Studies, 18*(2), 216-228. doi:10.1177/1548051810397368

Babyak, M. A., Snyder, C. R., & Yoshinobu, L. (1993). Psychometric properties of the Hope Scale: A confirmatory factor analysis. *Journal of Research in Personality, 27*(2), 154-169. doi:10.1006/jrpe.1993.1011

Bailey, T. C., Eng, W., Frisch, M. B., & Snyder, C. R. (2007). Hope and optimism as related to life satisfaction. *The Journal of Positive Psychology, 2*(3), 168-175. doi:10.1080/17439760701409546

Bailly, N., Joulain, M., Hervé, C., & Alaphilippe, D. (2012). Coping with negative life events in old age: The role of tenacious goal pursuit and flexible goal adjustment. *Aging & Mental Health, 16*(4), 431-437. doi:10.1080/13607863.2011.630374

Bailly, N., Martinent, G., Ferrand, C., Kamel, G., Joulain, M., & Maintier, C. (2016). Tenacious goal pursuit and flexible goal adjustment in older people over 5 years: a

latent profile transition analysis. *Age and Ageing, 45*(2), 287-292. doi:10.1093/ageing/afv203

Baltes, M. M., & Carstensen, L. L. (2003). The process of successful aging: Selection, optimization and compensation. In U. M. Staudinger & U. Lindenberger (Eds.), *Understanding human development: Dialogues with lifespan psychology* (pp. 81-104). Dordrecht, Netherlands: Kluwer Academic Publishers.

Baltes, P. B. (1997). On the incomplete architecture of human ontogeny: Selection, optimization, and compensation as foundation of developmental theory. *American Psychologist, 52*(4), 366-380. doi:10.1037/0003-066X.52.4.366

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1-34). New York, NY: Cambridge University Press.

Balzarotti, S., Biassoni, F., Villani, D., Prunas, A., & Velotti, P. (2016). Individual differences in cognitive emotion regulation: Implications for subjective and psychological well-being. *Journal of Happiness Studies, 17*(1), 125-143. doi:10.1007/s10902-014-9587-3

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W H Freeman/Times Books/Henry Holt & Co.

Bandura, A. (2008). An agentic perspective on positive psychology. In S. J. Lopez (Ed.), *Positive psychology: Exploring the best in people, Vol 1: Discovering human strengths* (pp. 167-196). Westport, CT, USA: Praeger Publishers/Greenwood Publishing Group.

Barnard, L. K., & Curry, J. F. (2011). Self-compassion: Conceptualizations, correlates, & interventions. *Review of General Psychology, 15*(4), 289-303. doi:10.1037/a0025754

Barnett, M. D. (2014). Future orientation and health among older adults: The importance of hope. *Educational Gerontology, 40*(10), 745-755. doi:10.1080/03601277.2014.898496

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182. doi:10.1037/0022-3514.51.6.1173

Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology, 14*(4), 413-445. doi:10.1007/BF00922627

Bar-Tur, L., & Malkinson, R. (2014). Positive ageing: New horizons for older adults. In N. A. Pachana & K. Laidlaw (Eds.), *The Oxford handbook of clinical geropsychology* (pp. 927-948). New York, NY: Oxford University Press.

Battersby, A., & Phillips, L. (2016). In the end it all makes sense: Meaning in life at either end of the adult lifespan. *The International Journal of Aging and Human Development, 83*(2), 184-204. doi:10.1177/0091415016647731

Baumeister, R. F., Vohs, K. D., Aaker, J. L., & Garbinsky, E. N. (2013). Some key differences between a happy life and a meaningful life. *The Journal of Positive Psychology, 8*(6), 505-516. doi:10.1080/17439760.2013.830764

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. Oxford, England: International Universities Press.

Bei, B., Bryant, C., Gilson, K.-M., Koh, J., Gibson, P., Komiti, A., . . . Judd, F. (2013). A prospective study of the impact of floods on the mental and physical health of older adults. *Aging & Mental Health, 17*(8), 992-1002. doi:10.1080/13607863.2013.799119

Bentler, P. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. doi:10.1037/0033-2909.107.2.238

Ben-Zur, H. (2002). Coping, affect and aging: The roles of mastery and self-esteem. *Personality and Individual Differences, 32*(2), 357-372. doi:10.1016/S0191-8869%2801%2900031-9

Bergeron, C. M., & Wanet-Defalque, M.-C. (2013). Psychological adaptation to visual impairment: The traditional grief process revised. *British Journal of Visual Impairment, 31*(1), 20-31. doi:10.1177/0264619612469371

Berry, W. D. (1984). Modifying nonidentified models. In W. D. Berry (Ed.), *Nonrecursive causal models* (pp. 57-61). Thousand Oaks: Sage.

Birnie, K., Speca, M., & Carlson, L. E. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health: Journal of the International Society for the Investigation of Stress, 26*(5), 359-371. doi:10.1002/smi.1305

Boerner, K., & Jopp, D. S. (2007). Improvement/maintenance and reorientation as central features of coping with major life change and loss: Contributions of three life-span theories. *Human Development, 50*(4), 171-195. doi:10.1159/000103358

Bohlmeijer, E. T., & Bohlmeijer, E. t. (2008). The effects of integrative reminiscence on meaning in life: Results of a quasi- experimental study. *Aging & Mental Health, 12*(5), 639-646. doi:10.1080/13607860802343209

Bohlmeijer, E. T., Lamers, S. M., & Fledderus, M. (2015). Flourishing in people with depressive symptomatology increases with Acceptance and Commitment Therapy. Post-hoc analyses of a randomized controlled trial. *Behaviour Research and Therapy, 65*, 101-106. doi:10.1016/j.brat.2014.12.014

Bonanno, G. A. (2004). Prospective patterns of resilience and maladjustment during widowhood. *Psychology and Aging, 19*(2), 260-271. doi:10.1037/0882-7974.19.2.260

Bond, F. W., & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology, 88*(6), 1057-1067. doi:10.1037/0021-9010.88.6.1057

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., … Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological inflexibility and experiential avoidance. *Behavior Therapy, 42*(4), 676-688. doi:10.1016/j.beth.2011.03.007

Boniwell, I. (2009). Perspectives on time. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 295-302). New York, NY: Oxford University Press.

Boniwell, I., Osin, E., Linley, P., & Ivanchenko, G. V. (2010). A question of balance: Time perspective and well-being in British and Russian samples. *The Journal of Positive Psychology, 5*(1), 24-40. doi:10.1080/17439760903271181

Boyacioglu, I., & Saymaz, E. B. (2012). Accepting the past and depression. *Electronic Journal of Social Sciences, 40*, 220-228. Retrieved from http://dergipark.ulakbim.gov.tr/esosder/article/view/5000068500

Boyacioglu, I., & Sumer, N. (2011). Attachment factors, autobiographical memory and accepting the past. *Turk Psikoloji Dergisi, 26*(67), 105-118. Retrieved from http://search.proquest.com/openview/6efee1c53a3300b8651e2fbf5ce7ded9/1?pq-origsite=gscholar&cbl=28562

Boylin, W., Gordon, S. K., & Nehrke, M. F. (1976). Reminiscing and ego integrity in institutionalized elderly males. *The Gerontologist, 16*(2), 118-124. doi:10.1093/geront/16.2.118

Bradburn, N. M. (1969). *The structure of psychological well-being*. Oxford, England: Aldine.

Brandstadter, J. (2002). Protective processes in later life: Maintaining and revising personal goals. In C. von Hofsten & L. Backman (Eds.), *Psychology at the turn of the millennium, vol. 2: Social, developmental, and clinical perspectives* (pp. 133-152). Florence, KY: Taylor & Frances/Routledge.

Brandtstadter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging, 5*(1), 58-67. doi:10.1037/0882-7974.5.1.58

Brandtstädter, J., & Rothermund, K. (2002). The life-course dynamics of goal pursuit and goal adjustment: A two-process framework. *Developmental Review, 22*(1), 117-150. doi:10.1006/drev.2001.0539

Breines, J. G., & Chen, S. (2013). Activating the inner caregiver: The role of support-giving schemas in increasing state self-compassion. *Journal of Experimental Social Psychology, 49*(1), 58-64. doi:10.1016/j.jesp.2012.07.015

Breines, J. G., McInnis, C. M., Kuras, Y. I., Thoma, M. V., Gianferante, D., Hanlin, L., . . . Rohleder, N. (2015). Self-compassionate young adults show lower salivary alpha-amylase responses to repeated psychosocial stress. *Self and Identity, 14*(4), 390-402. doi:10.1080/15298868.2015.1005659

Brennan, P. L., Holland, J. M., Schutte, K. K., & Moos, R. H. (2012). Coping trajectories in later life: A 20-year predictive study. *Aging & Mental Health, 16*(3), 305-316. doi:10.1080/13607863.2011.628975

Bretherton, S. J., & McLean, L. A. (2015). Interrelations of stress, optimism and control in older people's psychological adjustment. *Australasian Journal on Ageing, 34*(2), 103-108. doi:10.1111/ajag.12138

Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology, 82*(1), 102-111. doi:10.1037/0022-3514.82.1.102

Broadbent, J., de Quadros-Wander, S., & McGillivray, J. A. (2014). Perceived control's influence on wellbeing in residential care versus community dwelling older adults. *Journal of Happiness Studies, 15*(4), 845-855. doi:10.1007/s10902-013-9452-9

Brouwer, D., Meijer, R. R., Weekers, A. M., & Baneke, J. J. (2008). On the dimensionality of the Dispositional Hope Scale. *Psychological Assessment, 20*(3), 310-315. doi:10.1037/1040-3590.20.3.310

Brown, L., Bryant, C., Brown, V., Bei, B., & Judd, F. (2015). Investigating how menopausal factors and self-compassion shape well-being: An exploratory path analysis. *Maturitas, 81*(2), 293-299. doi:10.1016/j.maturitas.2015.03.001

Brown, L., Bryant, C., Brown, V., Bei, B., & Judd, F. (2016). Self-compassion, attitudes to ageing and indicators of health and well-being among midlife women. *Aging & Mental Health, 20*(10), 1035-1043. doi:10.1080/13607863.2015.1060946

Browne, M. W., & , & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & Long, J.S. (Ed.), *Testing structural equation models.* (pp. 136-162). Newbury Park, CA: Sage.

Bryant, F. B., Smart, C., & King, S. (2005). Using the past to enhance the present: Boosting happiness through positive reminiscence. *An Interdisciplinary Forum on Subjective Well-Being, 6*(3), 227-260. doi:10.1007/s10902-005-3889-4

Bryant, F. B., & Smith, J. L. (2015). Appreciating life in the midst of adversity: Savoring in relation to mindfulness, reappraisal, and meaning. *Psychological Inquiry, 26*(4), 315-321. doi:10.1080/1047840X.2015.1075351

Butler, E. A., Lee, T. L., & Gross, J. J. (2007). Emotion regulation and culture: Are the social consequences of emotion suppression culture-specific? *Emotion, 7*(1), 30-48. Retrieved from http://psycnet.apa.org/journals/emo/7/1/30/

Butler, R. N. (1963). The life review: an interpretation of reminiscence in the aged. *Psychiatry, 26*, 65-76. doi:10.1007/978-3-662-38534-0_20

Carstensen, L. L., Fung, H. H., & Charles, S. T. (2003). Socioemotional selectivity theory and the regulation of emotion in the second half of life. *Motivation and Emotion, 27*(2), 103-123. doi:10.1023/A:1024569803230

Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist, 54*(3), 165-181. doi:10.1037/0003-066X.54.3.165

Carver, C. S. (2014). Dispositional optimism. *Trends in Cognitive Sciences, 18*(6), 293-299. doi:10.1016/j.tics.2014.02.003

Carver, C. S., & Scheier, M. F. (2001). Optimism, pessimism, and self-regulation. In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice* (pp. 31-51). Washington, DC: American Psychological Association.

Carver, C. S., Scheier, M. F., & Segerstrom, S. C. (2010). Optimism. *Clinical Psychology Review, 30*(7), 879-889. doi:10.1016/j.cpr.2010.01.006

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267-283. doi:10.1037/0022-3514.56.2.267

Castilho, P., Pinto-Gouveia, J., & Duarte, J. (2015). Evaluating the multifactor structure of the long and short versions of the Self-Compassion Scale in a clinical sample. *Journal of Clinical Psychology, 71*(9), 856-870. doi:10.1002/jclp.22187

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research, 1*(2), 245-276. doi:10.1207/s15327906mbr0102_10

Chang, E. C. (1996). Cultural differences in optimism, pessimism, and coping: Predictors of subsequent adjustment in Asian American and Caucasian American college students. *Journal of Counseling Psychology, 43*(1), 113-123. doi:https://doi.org/10.1037%2F0022-0167.43.1.113

Chang, E. C., Maydeu-Olivares, A., & D'Zurilla, T. J. (1997). Optimism and pessimism as partially independent constructs: Relationship to positive and negative affectivity and psychological well-being. *Personality and Individual Differences, 23*(3), 433-440. doi:10.1016/S0191-8869%2897%2900040-8

Chang, E. C., Yu, E. A., & Hirsch, J. K. (2013). On the confluence of optimism and hope on depressive symptoms in primary care patients: Does doubling up on bonum futurun Proffer any added benefits? *The Journal of Positive Psychology, 8*(5), 404-411. doi:10.1080/17439760.2013.818163

Chang, S. O., Kim, J. H., Kong, E. S., Kim, C. G., Ahn, S. Y., & Cho, N. O. (2008). Exploring ego-integrity in old adults: A Q-methodology study. *International Journal of Nursing Studies, 45*(2), 246-256. doi:10.1016/j.ijnurstu.2006.07.020

Charles, S. T. (2011). Emotional experience and regulation in later life. In K. W. Schaie & S. L. Willis (Eds.), *Handbook of the psychology of aging* (7th ed., pp. 295-310). San Diego, CA: Elsevier Academic Press.

Charles, S. T., & Carstensen, L. L. (2010). Social and emotional aging. *Annual Review of Psychology, 61*, 383-409. doi:10.1146/annurev.psych.093008.100448

Charles, S. T., Reynolds, C. A., & Gatz, M. (2001). Age-related differences and change in positive and negative affect over 23 years. *Journal of Personality and Social Psychology, 80*(1), 136-151. doi:10.1037/0022-3514.80.1.136

Chawla, N., & Ostafin, B. (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology, 63*(9), 871-890. doi:10.1002/jclp.20400

Chen, F. F., Jing, Y., Hayes, A., & Lee, J. M. (2013). Two concepts or two approaches? A bifactor analysis of psychological and subjective well-being. *Journal of Happiness Studies, 14*(3), 1033-1068. doi:10.1007/s10902-012-9367-x

Chin, A. M. H. (2007). Clinical effects of reminiscence therapy in older adults: A meta-analysis of controlled trials. *Hong Kong Journal of Occupational Therapy, 17*(1), 10-22. doi:10.1016/S1569-1861(07)70003-7

Cho, J., Martin, P., & Poon, L. W. (2013). Age group differences in positive and negative affect among oldest-old adults: Findings from the Georgia Centenarian Study. *The International Journal of Aging and Human Development, 77*(4), 261-288. doi:10.2190/AG.77.4.a

Chou, K.-L., & Chi, I. (2002). Financial strain and life satisfaction in Hong Kong elderly Chinese: Moderating effect of life management strategies including selection, optimization, and compensation. *Aging & Mental Health, 6*(2), 172-177. doi:10.1080/13607860220126781

Christensen, K. A., Stephens, M. A. P., & Townsend, A. L. (1998). Mastery in women's multiple roles and well-being: Adult daughters providing care to impaired parents. *Health Psychology, 17*(2), 163-171. doi:10.1037/0278-6133.17.2.163

Ciarrochi, J. (2007). The impact of hope, self-esteem, and attributional style on adolescents' school grades and emotional well-being: A longitudinal study. *Journal of Research in Personality, 41*(6), 1161-1178. doi:10.1016/j.jrp.2007.02.001

Ciarrochi, J., Kashdan, T. B., & Harris, R. (2013). The foundations of flourishing. In T. B. Kashdan & J. Ciarrochi (Eds.), *Mindfulness, acceptance, and positive psychology: The seven foundations of well-being* (pp. 1-29). Oakland, CA: Context Press/New Harbinger Publications.

Ciarrochi, J., Parker, P., Kashdan, T. B., Heaven, P. C. L., & Barkus, E. (2015). Hope and emotional well-being: A six-year study to distinguish antecedents, correlates, and consequences. *The Journal of Positive Psychology, 10*(6), 520-532. doi:10.1080/17439760.2015.1015154

Clarke, P., & Smith, J. (2011). Aging in a cultural context: Cross-national differences in disability and the moderating role of personal control among older adults in the United States and England. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 66B*(4), 457-467. doi:10.1093/geronb/gbr054

Cohn, M. A., & Fredrickson, B. L. (2009). Positive emotions. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 13-24). New York, NY: Oxford University Press.

Compton, W. C., Smith, M. L., Cornish, K. A., & Qualls, D. L. (1996). Factor structure of mental health measures. *Journal of Personality and Social Psychology, 71*(2), 406-413. doi:10.1037/0022-3514.71.2.406

Cook, D., & Hayes, S. C. (2010). Acceptance-based coping and the psychological adjustment of Asian and Caucasian Americans. *International Journal of Behavioral Consultation and Therapy, 6*(3), 186-197. doi:10.1037/h0100907

Costa, J., Marôco, J., Pinto-Gouveia, J., Ferreira, C., & Castilho, P. (2016). Validation of the psychometric properties of the Self-Compassion Scale. testing the factorial validity and factorial invariance of the measure among borderline personality disorder, anxiety disorder, eating disorder and general populations. *Clinical Psychology and Psychotherapy, 23*(5), 460-468. doi:10.1002/cpp.1974

Costa, J., & Pinto-Gouveia, J. (2011). Acceptance of pain, self-compassion and psychopathology: Using the Chronic Pain Acceptance Questionnaire to identify patients' subgroups. *Clinical Psychology and Psychotherapy, 18*(4), 292-302. doi:10.1002/cpp.718

Cozzarelli, C. (1993). Personality and self-efficacy as predictors of coping with abortion. *Journal of Personality and Social Psychology, 65*(6), 1224-1236. doi:10.1037/0022-3514.65.6.1224

Crawford, J. R., & Henry, J. D. (2004). The Positive and Negative Affect Schedule (PANAS): Construct validity, measurement properties and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 43*(3), 245-265. doi:10.1348/0144665031752934

Creamer, M., O'Donnell, M. L., Carboon, I., Lewis, V., Densley, K., McFarlane, A., … Bryant, R. A. (2009). Evaluation of the Dispositional Hope Scale in injury survivors. *Journal of Research in Personality, 43*(4), 613-617. doi:10.1016/j.jrp.2009.03.002

Cuijpers, P., van Straten, A., & Smit, F. (2006). Psychological treatment of late-life depression: a meta-analysis of randomized controlled trials. *International Journal of Geriatric Psychiatry, 21*(12), 1139-1149. doi:10.1002/gps.1620

Cummins, R. A., & Nistico, H. (2002). Maintaining life satisfaction: The role of positive cognitive bias. *Journal of Happiness Studies, 3*(1), 37-69. doi:10.1023/a:1015678915305

Cunningham, M. R. (1988). What do you do when you're happy or blue? Mood, expectancies, and behavioral interest. *Motivation and Emotion, 12*(4), 309-331. doi:10.1007/BF00992357

Dahlsgaard, K., Peterson, C., & Seligman, M. E. (2005). Shared virtue: The convergence of valued human strengths across culture and history. *Review of General Psychology, 9*(3), 203-213. doi:10.1037/1089-2680.9.3.203

Dan-Glauser, E. S., & Gross, J. J. (2015). The temporal dynamics of emotional acceptance: Experience, expression, and physiology. *Biological Psychology, 108*, 1-12. doi:10.1016/j.biopsycho.2015.03.005

Davison, T. E., Eppingstall, B., Runci, S., & O'Connor, D. W. (2016). A pilot trial of acceptance and commitment therapy for symptoms of depression and anxiety in older adults residing in long-term care facilities. *Aging & Mental Health*. Advance online publication. doi:10.1080/13607863.2016.1156051

de Frias, C. M., & Whyne, E. (2015). Stress on health-related quality of life in older adults: the protective nature of mindfulness. *Aging & Mental Health, 19*(3), 201-206. doi:10.1080/13607863.2014.924090

de Quadros-Wander, S., McGillivray, J., & Broadbent, J. (2014). The influence of perceived control on subjective wellbeing in later life. *Social Indicators Research, 115*(3), 999-1010. doi:10.1007/s11205-013-0243-9

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies, 9*(1), 1-11. doi:10.1007/s10902-006-9018-1

Delle Fave, A., Brdar, I., Freire, T., Vella-Brodrick, D., & Wissing, M. (2011). The eudaimonic and hedonic components of happiness: Qualitative and quantitative findings. *Social Indicators Research, 100*(2), 185-207. doi:10.1007/s11205-010-9632-5

Department of Social Services. (2015). *National Ageing & Disability Strategy for people from Culturally & Linguistically Diverse (CALD) backgrounds*. Canberra Retrieved from https://www.dss.gov.au/sites/default/files/documents/07_2015/dss1582_aged_care_strategy_cald_a4_vaccessible.pdf.

Desmyter, F., & De Raedt, R. (2012). The relationship between time perspective and subjective well-being of older adults. *Psychologica Belgica, 52*(1), 19-38. doi:10.5334/pb-52-1-19

Dezutter, J., Casalin, S., Wachholtz, A., Luyckx, K., Hekking, J., & Vandewiele, W. (2013). Meaning in life: an important factor for the psychological well-being of

chronically ill patients? *Rehabilitation Psychology, 58*(4), 334-341. doi:10.1037/a0034393

Dezutter, J., Toussaint, L., & Leijssen, M. (2016). Forgiveness, ego-integrity, and depressive symptoms in community-dwelling and residential elderly adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 71*(5), 786-797. doi:10.1093/geronb/gbu146

Dezutter, J., Wiesmann, U., Apers, S., & Luyckx, K. (2013). Sense of coherence, depressive feelings and life satisfaction in older persons: A closer look at the role of integrity and despair. *Aging & Mental Health, 17*(7), 839-843. doi:10.1080/13607863.2013.792780

Diener, E. (2009). Positive psychology: Past, present, and future. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (pp. 7-11). New York, NY: Oxford University Press.

Diener, E. (2013). The remarkable changes in the science of subjective well-being. *Perspectives on Psychological Science, 8*(6), 663-666. doi:10.1177/1745691613507583

Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being, 3*(1), 1-43. doi:10.1111/j.1758-0854.2010.01045.x

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology, 54*, 403-425. doi:10.1146/annurev.psych.54.101601.145056

Diener, E., Oishi, S., & Ryan, K. L. (2013). Universals and cultural differences in the causes and structure of happiness: A multilevel review. In C. L. M. Keyes (Ed.), *Mental well-being: International contributions to the study of positive mental health* (pp. 153-176). New York, NY: Springer Science + Business Media.

Diener, E., & Suh, M. E. (1998). Subjective well-being and age: An international analysis. In K. W. Schaie & M. P. Lawton (Eds.), *Annual review of gerontology and geriatrics, Vol 17: Focus on emotion and adult development* (pp. 304-324). New York, NY: Springer Publishing Co.

Disabato, D. J., Goodman, F. R., Kashdan, T. B., Short, J. L., & Jarden, A. (2016). Different types of well-being? A cross-cultural examination of hedonic and eudaimonic well-being. *Psychological Assessment, 28*(5), 471-482. doi:10.1037/pas0000209

Dougall, A. L., Hyman, K. B., Hayward, M. C., McFeeley, S., & Baum, A. (2001). Optimism and traumatic stress: The importance of social support and coping. *Journal of Applied Social Psychology, 31*(2), 223-245. doi:10.1111/j.1559-1816.2001.tb00195.x

Duggleby, W., Hicks, D., Nekolaichuk, C., Holtslander, L., Williams, A., Chambers, T., & Eby, J. (2012). Hope, older adults, and chronic illness: A metasynthesis of

qualitative research. *Journal of Advanced Nursing, 68*(6), 1211-1223. doi:10.1111/j.1365-2648.2011.05919.x

Dumitrache, C., Windle, G., & Rubio Herrera, R. (2015). Do social resources explain the relationship between optimism and life satisfaction in community-dwelling older people? Testing a multiple mediation model. *Journal of Happiness Studies, 16*(3), 633-654. doi:10.1007/s10902-014-9526-3

Ekas, N. V., Lickenbrock, D. M., & Whitman, T. L. (2010). Optimism, social support, and well-being in mothers of children with autism spectrum disorder. *Journal of Autism and Developmental Disorders, 40*(10), 1274-1284. doi:10.1007/s10803-010-0986-y

Erikson, E. H. (1964). *Childhood and society. (2nd Ed.)*. Oxford, England: W W Norton.

Erikson, E. H. (1968). *Identity: Youth, and crisis*. New York: Norton.

Erikson, E. H., Erikson, J. M., & Kivnick, H. Q. (1989). *Vital involvement in old age*. New York, NY: WW Norton & Co.

Eryilmaz, H., Van De Ville, D., Schwartz, S., & Vuilleumier, P. (2014). Lasting impact of regret and gratification on resting brain activity and its relation to depressive traits. *The Journal of Neuroscience, 34*(23), 7825-7835. doi:10.1523/JNEUROSCI.0065-14.2014

Etezadi, S., & Pushkar, D. (2013). Why are wise people happier? An explanatory model of wisdom and emotional well-being in older adults. *Journal of Happiness Studies, 14*(3), 929-950. doi:10.1007/s10902-012-9362-2

Farquhar, J. C., Wrosch, C., Pushkar, D., & Li, K. Z. (2013). The value of adaptive regret management in retirement. *The International Journal of Aging and Human Development, 76*(2), 99-121. doi:10.2190/ag.76.2.a

Fava, G. A., & Ruini, C. (2003). Development and characteristics of a well-being enhancing psychotherapeutic strategy: well-being therapy. *Journal of Behavior Therapy and Experimental Psychiatry, 34*(1), 45-63. doi:10.1016/S0005-7916(03)00019-3

Feeney, T. K., & Hayes, S. C. (2016). Acceptance and commitment therapy: A contextual view of positive and negative as applied to positive clinical psychology. In A. M. Wood & J. Johnson (Eds.), *The Wiley handbook of positive clinical psychology* (pp. 445-459). Chichester, UK: John Wiley & Sons, Ltd.

Feldman, D. B., Rand, K. L., & Kahle-Wrobleski, K. (2009). Hope and goal attainment: Testing a basic prediction of hope theory. *Journal of Social and Clinical Psychology, 28*(4), 479-497. doi:10.1521/jscp.2009.28.4.479

Feldman, D. B., & Snyder, C. R. (2005). Hope and the meaningful life: Theoretical and empirical associations between goal-directed thinking and life meaning. *Journal of Social and Clinical Psychology, 24*(3), 401-421. doi:10.1521/jscp.24.3.401.65616

Ferguson, S. J., & Goodwin, A. D. (2010). Optimism and well-being in older adults: The mediating role of social support and perceived control. *The International Journal of Aging and Human Development, 71*(1), 43-68. doi:10.2190/AG.71.1.c

Fiksenbaum, L. M., Greenglass, E. R., & Eaton, J. (2006). Perceived social support, hassles, and coping among the elderly. *Journal of Applied Gerontology, 25*(1), 17-30. doi:10.1177/0733464805281908

Flaxman, P. E., & Bond, F. W. (2010). A randomised worksite comparison of acceptance and commitment therapy and stress inoculation training. *Behaviour Research and Therapy, 48*(8), 816-820. doi:10.1016/j.brat.2010.05.004

Fledderus, M., Bohlmeijer, E. T., Smit, F., & Westerhof, G. J. (2010). Mental health promotion as a new goal in public mental health care: A randomized controlled trial of an intervention enhancing psychological flexibility. *American Journal of Public Health, 100*(12), 2372-2378. doi:10.2105/AJPH.2010.196196

Fledderus, M., Oude Voshaar, M. A., ten Klooster, P. M., & Bohlmeijer, E. T. (2012). Further evaluation of the psychometric properties of the Acceptance and Action Questionnaire-II. *Psychological Assessment, 24*(4), 925-936. doi:10.1037/a0028200

Forgas, J. P. (2017). The role of dysphoria in social thinking and behaviour. *Australian Psychologist, 52*(1), 18-20. doi:10.1111/ap.12230

Forman, E. M., Herbert, J. D., Juarascio, A. S., Yeomans, P. D., Zebell, J. A., Goetter, E. M., & Moitra, E. (2012). The Drexel Defusion Scale: A new measure of experiential distancing. *Journal of Contextual Behavioral Science, 1*(1–2), 55-65. doi:10.1016/j.jcbs.2012.09.001

Foulk, M. A., Ingersoll-Dayton, B., Kavanagh, J., Robinson, E., & Kales, H. C. (2014). Mindfulness-Based Cognitive Therapy with older adults: An exploratory study. *Journal of Gerontological Social Work, 57*(5), 498-520. doi:10.1080/01634372.2013.869787

Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. Oxford, England: Washington Square Press.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*(3), 218-226. doi:10.1037/0003-066X.56.3.218

Fredrickson, B. L. (2006). The broaden-and-build theory of positive emotions. In M. Csikszentmihalyi & I. S. Csikszentmihalyi (Eds.), *A life worth living: Contributions to positive psychology* (pp. 85-103). New York, NY: Oxford University Press.

Fredrickson, B. L. (2013). Positive emotions broaden and build. In D. Patricia & P. Ashby (Eds.), *Advances in experimental social psychology* (Vol. Volume 47, pp. 1-53). Boston, MA: Academic Press.

Fredrickson, B. L. (2016). The eudaimonics of positive emotions. In J. Vittersø (Ed.), *Handbook of eudaimonic well-being*. Cham, Switzerland: Springer International Publishing.

Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: Positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of Personality and Social Psychology, 95*(5), 1045-1062. doi:10.1037/a0013262

Freund, A. M. (2008). Successful aging as management of resources: The role of selection, optimization, and compensation. *Research in Human Development, 5*(2), 94-106. doi:10.1080/15427600802034827

Freund, A. M., & Baltes, P. B. (1998). Selection, optimization, and compensation as strategies of life management: Correlations with subjective indicators of successful aging. *Psychology and Aging, 13*(4), 531-543. doi:10.1037/0882-7974.13.4.531

Friedman, E. M., Ruini, C., Foy, R., Jaros, L., Sampson, H., & Ryff, C. D. (2017). Lighten up! A community-based group intervention to promote psychological well-being in older adults. *Aging & Mental Health, 21*(2), 199-205. doi:10.1080/13607863.2015.1093605

Galante, J., Galante, I., Bekkers, M.-J., & Gallacher, J. (2014). Effect of kindness-based meditation on health and well-being: A systematic review and meta-analysis. *Journal of Consulting and Clinical Psychology, 82*(6), 1101-1114. doi:10.1037/a0037249

Gallagher, M. W., & Lopez, S. J. (2009). Positive expectancies and mental health: Identifying the unique contributions of hope and optimism. *The Journal of Positive Psychology, 4*(6), 548-556. doi:10.1080/17439760903157166

Gallegos, A. M., Hoerger, M., Talbot, N. L., Moynihan, J. A., & Duberstein, P. R. (2013). Emotional benefits of mindfulness-based stress reduction in older adults: the moderating roles of age and depressive symptom severity. *Aging & Mental Health, 17*(7), 823-829. doi:10.1080/13607863.2013.799118

Gamez, W., Chmielewski, M., Kotov, R., Ruggero, C., & Watson, D. (2011). Development of a measure of experiential avoidance: The Multidimensional Experiential Avoidance Questionnaire. *Psychological Assessment, 23*(3), 692-713. doi:10.1037/a0023242

Gana, K., Saada, Y., & Amieva, H. (2015). Does positive affect change in old age? Results from a 22-year longitudinal study. *Psychology and Aging, 30*(1), 172-179. doi:10.1037/a0038418

Garland, E. L., Farb, N. A., & Fredrickson, B. L. (2015). Mindfulness broadens awareness and builds eudaimonic meaning: A process model of mindful positive emotion regulation. *Psychological Inquiry, 26*(4), 293-314. doi:10.1080/1047840X.2015.1064294

Garland, E. L., Fredrickson, B., Kring, A. M., Johnson, D. P., Meyer, P. S., & Penn, D. L. (2010). Upward spirals of positive emotions counter downward spirals of negativity: Insights from the broaden-and-build theory and affective neuroscience on the treatment of emotion dysfunctions and deficits in psychopathology. *Clinical Psychology Review, 30*(7), 849-864. doi:10.1016/j.cpr.2010.03.002

Garnefski, N., & Kraaij, V. (2007). The Cognitive Emotion Regulation Questionnaire: Psychometric features and prospective relationships with depression and anxiety in adults. *European Journal of Psychological Assessment, 23*(3), 141-149. doi:10.1027/1015-5759.23.3.141

Garnefski, N., & Kraaij, V. (2009). Cognitive coping and psychological adjustment in different types of stressful life events. *Individual Differences Research, 7*(3), 168-181. Retrieved from http://web.b.ebscohost.com.simsrad.net.ocs.mq.edu.au/ehost/detail/detail?vid=2&sid=19e12943-798f-4ef7-84802c19ceee4373%40sessionmgr102&hid=124&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#AN=44921465&db=pbh

Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. *Personality and Individual Differences, 30*(8), 1311-1327. doi:10.1016/S0191-8869%2800%2900113-6

George, L. S., & Park, C. L. (2013). Are meaning and purpose distinct? An examination of correlates and predictors. *The Journal of Positive Psychology, 8*(5), 365-375. doi:10.1080/17439760.2013.805801

Gerstorf, D., Heckhausen, J., Ram, N., Infurna, F. J., Schupp, J., & Wagner, G. G. (2014). Perceived personal control buffers terminal decline in well-being. *Psychology and Aging, 29*(3), 612-625. doi:10.1037/a0037227

Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy, 84*(3), 239-255. doi:10.1348/147608310X526511

Gilbert, P. (2009a). *The compassionate mind: A new approach to life's challenges.* Oakland, CA: New Harbinger. Retrieved from http://www.pseve.org/journal/upload/gilbert6c.pdf

Gilbert, P. (2009b). The nature and basis for compassion focused therapy. *Hellenic Journal of Psychology, 6*(3), 273-291.

Gilbert, P., & Procter, S. (2006). Compassionate Mind Training for people with high shame and self-criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology and Psychotherapy, 13*(6), 353-379. doi:10.1002/cpp.507

Gloster, A. T., Klotsche, J., Chaker, S., Hummel, K. V., & Hoyer, J. (2011). Assessing psychological flexibility: What does it add above and beyond existing constructs? *Psychological Assessment, 23*(4), 970-982. doi:10.1037/a0024135

Gould, S. J. (1999). A critique of Heckhausen and Schulz's (1995) life-span theory of control from a cross-cultural perspective. *Psychological Review, 106*(3), 597-604. doi:10.1037/0033-295X.106.3.597

Graham, A. R., Sherry, S. B., Stewart, S. H., Sherry, D. L., McGrath, D. S., Fossum, K. M., & Allen, S. L. (2010). The existential model of perfectionism and depressive symptoms: A short-term, four-wave longitudinal study. *Journal of Counseling Psychology, 57*(4), 423-438. doi:10.1037/a0020667

Greenberg, M. S., & Beck, A. T. (1989). Depression versus anxiety: A test of the content-specificity hypothesis. *Journal of Abnormal Psychology, 98*(1), 9-13. doi:10.1037/0021-843X.98.1.9

Greenberg, M. S., & Beck, A. T. (1990). Cognitive approaches to psychotherapy: Theory and therapy. In R. Plutchik & H. Kellerman (Eds.), *Emotion, psychopathology, and psychotherapy* (pp. 177-194). San Diego, CA: Academic Press.

Gruhn, D., Sharifian, N., & Chu, Q. (2016). The limits of a limited future time perspective in explaining age differences in emotional functioning. *Psychology and Aging, 31*(6), 583-593. doi:10.1037/pag0000060

Guadagnoli, E., & Velicer, W. F. (1988). Relation of sample size to the stability of component patterns. *Psychological Bulletin, 103*(2), 265-275. doi:10.1037/0033-2909.103.2.265

Haase, C. M., Heckhausen, J., & Wrosch, C. (2013). Developmental regulation across the life span: Toward a new synthesis. *Developmental Psychology, 49*(5), 964-972. doi:10.1037/a0029231

Haase, J. E., Britt, T., Coward, D. D., Leidy, N. K., & Penn, P. E. (1992). Simultaneous concept analysis of spiritual perspective, hope, acceptance and self-transcendence. *IMAGE: Journal of Nursing Scholarship, 24*(2), 141-147. doi:10.1111/j.1547-5069.1992.tb00239.x

Haidt, J., & Rodin, J. (1999). Control and efficacy as interdisciplinary bridges. *Review of General Psychology, 3*(4), 317-337. doi:10.1037/1089-2680.3.4.317

Hajdu, G., & Hajdu, T. (2015). The impact of culture on well-being: Evidence from a natural experiment. *Journal of Happiness Studies, 17*(3), 1089-1110. doi:10.1007/s10902-015-9633-9

Hallford, D. J., & Mellor, D. (2016). Autobiographical memory and depression: Identity-continuity and problem-solving functions indirectly predict symptoms over time through psychological well-being. *Applied Cognitive Psychology, 30*(2), 152-159. doi:10.1002/acp.3169

Hallford, D. J., Mellor, D., Cummins, R. A., & McCabe, M. P. (2016). Meaning in life in earlier and later older-adulthood: Confirmatory factor analysis and correlates of the Meaning in Life Questionnaire. *Journal of Applied Gerontology*. Advance online publication. doi:10.1177/0733464816658750

Hannah, M. T., Domino, G., Figueredo, A., & Hendrickson, R. (1996). The prediction of ego integrity in older persons. *Educational and Psychological Measurement, 56*(6), 930-950. doi:10.1177/0013164496056006002

Hayes, J. A., Lockard, A. J., Janis, R. A., & Locke, B. D. (2016). Construct validity of the Self-Compassion Scale-Short Form among psychotherapy clients. *Counselling Psychology Quarterly, 29*(4), 405-422. doi:10.1080/09515070.2016.1138397

Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy, 35*(4), 639-665. doi:10.1016/S0005-7894%2804%2980013-3

Hayes, S. C., Levin, M. E., Plumb-Vilardaga, J., Villatte, J. L., & Pistorello, J. (2013). Acceptance and commitment therapy and contextual behavioral science: Examining the progress of a distinctive model of behavioral and cognitive therapy. *Behavior Therapy, 44*(2), 180-198. doi:10.1016/j.beth.2009.08.002

Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy, 44*(1), 1-25. doi:10.1016/j.brat.2005.06.006

Hayes, S. C., Strosahl, K., Wilson, K. G., Bissett, R. T., Pistorello, J., Toarmino, D., . . . McCurry, S. M. (2004). Measuring experiential avoidance: A preliminary test of a working model. *The Psychological Record, 54*(4), 553-578.

He, F., Zhou, Q., Zhao, Z., Zhang, Y., & Guan, H. (2016). Effect of perceived social support and dispositional optimism on the depression of burn patients. *Journal of Health Psychology, 21*(6), 1119-1125. doi:10.1177/1359105314546776

Heathers, J. A. J., Brown, N. J. L., Coyne, J. C., & Friedman, H. L. (2015). The elusory upward spiral: A reanalysis of Kok et al. (2013). *Psychological Science, 26*(7), 1140. doi:10.1177/0956797615572908

Heckhausen, J. (1997). Developmental regulation across adulthood: Primary and secondary control of age-related challenges. *Developmental Psychology, 33*(1), 176-187. doi:10.1037/0012-1649.33.1.176

Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review, 102*(2), 284-304. doi:10.1037//0033-295x.102.2.284

Heckhausen, J., & Wrosch, C. (2016). Challenges to developmental regulation across the life course: What are they and which individual differences matter? *International Journal of Behavioral Development, 40*(2), 145-150. doi:10.1177/0165025415588796

Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological Review, 117*(1), 32-60. doi:10.1037/a0017668

Heintzelman, S. J., & King, L. A. (2014). Life is pretty meaningful. *American Psychologist, 69*(6), 561-574. doi:10.1037/a0035049

Helmes, E., Goffin, R. D., & Chrisjohn, R. D. (2010). Confirmatory analysis of the Bradburn Affect Balance Scale and its relationship with morale in older Canadian adults. *Canadian Journal on Aging, 29*(2), 259-266. doi:10.1017/S0714980810000176

Hilleras, P. K., Jorm, A. F., Herlitz, A., & Winblad, B. (1998). Negative and positive affect among the very old: A survey on a sample age 90 years or older. *Research on Aging, 20*(5), 593-610. doi:10.1177/0164027598205003

Himmelfarb, S., & Murrell, S. A. (1983). Reliability and validity of five mental health scales in older persons. *Journal of Gerontology, 38*(3), 333-339. doi:10.1093/geronj/38.3.333

Hirosaki, M., Ishimoto, Y., Kasahara, Y., Konno, A., Kimura, Y., Fukutomi, E., . . . Matsubayashi, K. (2013). Positive affect as a predictor of lower risk of functional decline in community-dwelling elderly in Japan. *Geriatrics & Gerontology International, 13*(4), 1051-1058. doi:10.1111/ggi.12008

Hirsch, J. K., Sirois, F. M., & Lyness, J. M. (2011). Functional impairment and depressive symptoms in older adults: Mitigating effects of hope. *British Journal of Health Psychology, 16*(4), 744-760. doi:10.1111/j.2044-8287.2010.02012.x

Ho, H. C., Yeung, D. Y., & Kwok, S. Y. (2014). Development and evaluation of the positive psychology intervention for older adults. *The Journal of Positive Psychology, 9*(3), 187-197. doi:10.1080/17439760.2014.888577

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*(3), 513-524. doi:10.1037/0003-066X.44.3.513

Hobfoll, S. E., & Wells, J. D. (1998). Conservation of resources, stress, and aging: Why do some slide and some spring? In J. Lomranz (Ed.), *Handbook of aging and mental health: An integrative approach* (pp. 121-134). New York, NY: Plenum Press.

Hodges, K., & Winstanley, S. (2012). Effects of optimism, social support, fighting spirit, cancer worry and internal health locus of control on positive affect in cancer survivors: A path analysis. *Stress and Health, 28*(5), 408-415. doi:10.1002/smi.2471

Homan, K. J. (2016a). Secure attachment and eudaimonic well-being in late adulthood: The mediating role of self-compassion. *Aging & Mental Health*. Advance online publication. doi:10.1080/13607863.2016.1254597

Homan, K. J. (2016b). Self-compassion and psychological well-being in older adults. *Journal of Adult Development, 23*(2), 111-119. doi:10.1007/s10804-016-9227-8

Huppert, F. A., & Whittington, J. E. (2003). Evidence for the independence of positive and negative well-being: Implications for quality of life assessment. *British Journal of Health Psychology, 8*(1), 107-122. doi:10.1348/135910703762879246

Huta, V. (2017). An overview of hedonic and eudaimonic well-being concepts. In L. Reinecke & M. B. Oliver (Eds.), *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects* (pp. 14-33). New York: Routledge.

Huta, V., & Hawley, L. (2010). Psychological strengths and cognitive vulnerabilities: Are they two ends of the same continuum or do they have independent relationships with well-being and ill-being? *Journal of Happiness Studies, 11*(1), 71-93. doi:10.1007/s10902-008-9123-4

Hwang, S., Kim, G., Yang, J.-W., & Yang, E. (2016). The moderating effects of age on the relationships of self-compassion, self-esteem, and mental health. *Japanese Psychological Research, 58*(2), 194-205. doi:10.1111/jpr.12109

IBM. (2012). *IBM SPSS Statistics 21 core system user's guide*. Armonk, NY: IBM.

Infurna, F. J., Gerstorf, D., Ram, N., Schupp, J., & Wagner, G. G. (2011). Long-term antecedents and outcomes of perceived control. *Psychology and Aging, 26*(3), 559-575. doi:10.1037/a0022890

Ingersoll-Dayton, B., Torges, C., & Krause, N. (2010). Unforgiveness, rumination, and depressive symptoms among older adults. *Aging & Mental Health, 14*(4), 439-449. doi:10.1080/13607860903483136

Isaacowitz, D. M. (2005). Correlates of well-being in adulthood and old age: A tale of two optimisms. *Journal of Research in Personality, 39*(2), 224-244. doi:10.1016/j.jrp.2004.02.003

Isaacowitz, D. M., & Seligman, M. E. (2002). Cognitive style predictors of affect change in older adults. *The International Journal of Aging & Human Development, 54*(3), 233-253. doi:10.2190/J6E5-NP5K-2UC4-2F8B

Isaacowitz, D. M., Vaillant, G. E., & Seligman, M. E. (2003). Strengths and satisfaction across the adult lifespan. *The International Journal of Aging and Human Development, 57*(2), 181-201. doi:10.2190/61EJ-LDYR-Q55N-UT6E

Isen, A. M. (1987). Positive affect, cognitive processes, and social behavior. In L. Berkowitz (Ed.), *Advances in experimental social psychology, Vol 20* (pp. 203-253). San Diego, CA: Academic Press.

Ivtzan, I., Lomas, T., Hefferon, K., & Worth, P. (2016). *Second wave positive psychology: Embracing the dark side of life*. New York, NY: Routledge.

Jackson, L. E., & Coursey, R. D. (1988). The relationship of God control and internal locus of control to intrinsic religious motivation, coping and purpose in life. *Journal for the Scientific Study of Religion, 27*(3), 399-410. doi:10.2307/1387378

Jacob, G. A. (2013). The role of experiential avoidance, psychopathology, and borderline personality features in experiencing positive emotions: A path analysis. *Journal of Behavior Therapy and Experimental Psychiatry, 44*(1), 61-68. doi:10.1016/j.jbtep.2012.07.006

James, J. B., & Zarrett, N. (2005). Ego integrity in the lives of older women: A follow-up of mothers from the Sears, Maccoby, and Levin (1951) Patterns of child rearing study. *Journal of Adult Development, 12*(4), 155-167. doi:10.1007/s10804-005-7084-y

James, J. B., & Zarrett, N. (2006). Ego integrity in the lives of older women. *Journal of Adult Development, 13*(2), 61-75. doi:10.1007/s10804-006-9003-2

James, K. L., & Bhar, S. S. (2016). Brief reminiscence intervention improves affect and pessimism in non-clinical individuals: A pilot study. *Clinical Psychologist, 20*(3), 119-124. doi:10.1111/cp.12068

Janis, L. B., Canak, T., Machado, M. A., Green, R. M., & McAdams, D. P. (2014). *Development and validation of the Northwestern Ego Integrity Scale*. Northwestern University. Evanston, IL.

Jim, H. S., Richardson, S. A., Golden-Kreutz, D. M., & Andersen, B. L. (2006). Strategies used in coping with a cancer diagnosis predict meaning in life for survivors. *Health Psychology, 25*(6), 753-761. doi:10.1037/0278-6133.25.6.753

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality, 72*(6), 1301-1333. doi:10.1111/j.1467-6494.2004.00298.x

Jones, T. G., Rapport, L. J., Hanks, R. A., Lichtenberg, P. A., & Telmet, K. (2003). Cognitive and psychosocial predictors of subjective well-being in urban older adults. *The Clinical Neuropsychologist, 17*(1), 3-18. doi:10.1076/clin.17.1.3.15626

Jopp, D. S., & Smith, J. (2006). Resources and life-management strategies as determinants of successful aging: On the protective effect of selection, optimization, and compensation. *Psychology and Aging, 21*(2), 253-265. doi:10.1037/0882-7974.21.2.253

Joshanloo, M. (2014). Eastern conceptualizations of happiness: Fundamental differences with Western views. *Journal of Happiness Studies, 15*(2), 475-493. doi:10.1007/s10902-013-9431-1

Joshanloo, M. (2016). Revisiting the empirical distinction between hedonic and eudaimonic aspects of well-being using exploratory structural equation modeling. *Journal of Happiness Studies, 17*(5), 2023-2036. doi:10.1007/s10902-015-9683-z

Jovanovic, V. (2015). A bifactor model of subjective well-being: A re-examination of the structure of subjective well-being. *Personality and Individual Differences, 87*, 45-49. doi:10.1016/j.paid.2015.07.026

Ju, H., Shin, J. W., Kim, C.-w., Hyun, M.-h., & Park, J.-w. (2013). Mediational effect of meaning in life on the relationship between optimism and well-being in community elderly. *Archives of Gerontology and Geriatrics, 56*(2), 309-313. doi:10.1016/j.archger.2012.08.008

Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Dell Publishing.

Kahn, J. H., Hessling, R. M., & Russell, D. W. (2003). Social support, health, and well-being among the elderly: What is the role of negative affectivity? *Personality and Individual Differences, 35*(1), 5-17. doi:10.1016/S0191-8869%2802%2900135-6

Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement, 20*(1), 141-151. doi:10.1177/001316446002000116

Karademas, E. C. (2006). Self-efficacy, social support and well-being. *Personality and Individual Differences, 40*(6), 1281-1290. doi:10.1016/j.paid.2005.10.019

Karademas, E. C. (2007). Positive and negative aspects of well-being: Common and specific predictors. *Personality and Individual Differences, 43*(2), 277-287. doi:10.1016/j.paid.2006.11.031

Karekla, M., & Panayiotou, G. (2011). Coping and experiential avoidance: Unique or overlapping constructs? *Journal of Behavior Therapy and Experimental Psychiatry, 42*(2), 163-170. doi:10.1016/j.jbtep.2010.10.002

Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour Research and Therapy, 44*(9), 1301-1320. doi:10.1016/j.brat.2005.10.003

Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *The Journal of Positive Psychology, 3*(4), 219-233. doi:10.1080/17439760802303044

Kashdan, T. B., & Breen, W. E. (2008). Social anxiety and positive emotions: A prospective examination of a self-regulatory model with tendencies to suppress or express emotions as a moderating variable. *Behavior Therapy, 39*(1), 1-12. doi:10.1016/j.beth.2007.02.003

Kashdan, T. B., & Ciarrochi, J. (Eds.). (2013). *Mindfulness, acceptance, and positive psychology: The seven foundations of well-being*. Oakland, CA: Context Press/New Harbinger Publications.

Keng, S.-L., Smoski, M. J., & Robins, C. J. (2016). Effects of mindful acceptance and reappraisal training on maladaptive beliefs about rumination. *Mindfulness, 7*(2), 493-503. doi:10.1007/s12671-015-0480-x

Kercher, K. (1992). Assessing subjective well-being in the old-old. *Research on Aging, 14*(2), 131-168. doi:10.1177/0164027592142001

Kerr, S., O'Donovan, A., & Pepping, C. (2015). Can gratitude and kindness interventions enhance well-being in a clinical sample? *Journal of Happiness Studies, 16*(1), 17-36. doi:10.1007/s10902-013-9492-1

Kessler, E.-M., & Staudinger, U. M. (2009). Affective experience in adulthood and old age: The role of affective arousal and perceived affect regulation.(Report). *Psychology and Aging, 24*(2), 349-362. doi:10.1037/a0015352

Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*(6), 1007-1022. doi:10.1037/0022-3514.82.6.1007

Kim, E. S., Sun, J. K., Park, N., & Peterson, C. (2013). Purpose in life and reduced incidence of stroke in older adults: 'The Health and Retirement Study'. *Journal of Psychosomatic Research, 74*(5), 427-432. doi:10.1016/j.jpsychores.2013.01.013

Kim, S.-H., & Park, S. (2016). A meta-analysis of the correlates of successful aging in older adults. *Research on Aging*. 39(5), 657-677. doi:http://dx.doi.org/10.1177/0164027516656040

King, L. A. (2001). The hard road to the good life: The happy, mature person. *The Journal of Humanistic Psychology, 41*(1), 51. doi:10.1177/0022167801411005

King, L. A. (2001). The health benefits of writing about life goals. *Personality & Social Psychology Bulletin, 27*(7), 798. doi:https://doi.org/10.1177%2F0146167201277003

King, L. A., & Hicks, J. A. (2007). Whatever happened to "What might have been"?: Regrets, happiness, and maturity. *American Psychologist, 62*(7), 625-636. doi:10.1037/0003-066x.62.7.625

King, L. A., & Hicks, J. A. (2012). Positive affect and meaning in life: The intersection of hedonism and eudaimonia. In P. T. P. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 125-141). New York, NY: Routledge/Taylor & Francis Group.

Kivnick, H. Q., & Wells, C. K. (2014). Untapped richness in Erik H. Erikson's rootstock. *The Gerontologist, 54*(1), 40-50. doi:10.1093/geront/gnt123

Klausner, E. J., Clarkin, J. F., Spielman, L., Pupo, C., Abrams, R., & Alexopoulos, G. S. (1998). Late-life depression and functional disability: The role of goal-focused group psychotherapy. *International Journal of Geriatric Psychiatry, 13*(10), 707-716. doi:10.1002/(SICI)1099-1166(1998100)13:103.0.CO;2-Q

Klausner, E. J., Snyder, C. R., & Cheavens, J. (2000). A hope-based group treatment for depressed older adult outpatients. In G. M. Williamson, D. R. Shaffer, & P. A. Parmelee (Eds.), *Physical illness and depression in older adults: A handbook of theory, research, and practice* (pp. 295-310). Dordrecht, Netherlands: Kluwer Academic Publishers.

Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. New York, NY: Guilford Press.

Knight, B. G. (1996). *Psychotherapy with older adults (2nd ed.)*. Thousand Oaks, CA: Sage Publications, Inc.

Knight, B. G., & Laidlaw, K. (2009). Translational theory: A wisdom-based model for psychological interventions to enhance well-being in later life. In V. L. Bengston, D. Gans, N. Putney, & M. Silverstein (Eds.), *Handbook of theories of aging* (2nd ed., pp. 693-705). New York, NY: Springer Publishing Co.

Knight, B. G., & Poon, C. Y. (2008). Contextual adult life span theory for adapting psychotherapy with older adults. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 26*(4), 232-249. doi:10.1007/s10942-008-0084-7

Knight, T., & Ricciardelli, L. A. (2003). Successful aging: Perceptions of adults aged between 70 and 101 years. *International Journal of Aging and Human Development, 56*(3), 223-245. doi:10.2190/cg1a-4y73-wew8-44qy

Kort, Y. A. W. S. D., Midden, C. J. H., Aarts, H., & Van Wagenberg, F. (2001). Determinants of adaptive behavior among older persons: Self-efficacy, importance, and personal dispositions as directive mechanisms. *International Journal of Aging and Human Development, 53*(4), 253-274. doi:10.2190/v52n-q5vn-c3kw-0ly9

Korte, J., Bohlmeijer, E. T., Cappeliez, P., Smit, F., & Westerhof, G. J. (2012). Life review therapy for older adults with moderate depressive symptomatology: A pragmatic randomized controlled trial. *Psychological Medicine, 42*(6), 1163-1173. doi:10.1017/S0033291711002042

Korte, J., Cappeliez, P., Bohlmeijer, E. T., & Westerhof, G. J. (2012). Meaning in life and mastery mediate the relationship of negative reminiscence with psychological distress among older adults with mild to moderate depressive symptoms. *European Journal of Ageing, 9*(4), 343-351. doi:10.1007/s10433-012-0239-3

Korte, J., Westerhof, G. J., & Bohlmeijer, E. T. (2012). Mediating processes in an effective life-review intervention. *Psychology and Aging, 27*(4), 1172-1181. doi:10.1037/a0029273

Kotter-Gruhn, D., & Smith, J. (2011). When time is running out: Changes in positive future perception and their relationships to changes in well-being in old age. *Psychology and Aging, 26*(2), 381-387. doi:10.1037/a0022223

Kraaij, V., Pruymboom, E., & Garnefski, N. (2002). Cognitive coping and depressive symptoms in the elderly: A longitudinal study. *Aging & Mental Health, 6*(3), 275-281. doi:10.1080/13607860220142387

Krause, N. (2007a). Age and decline in role-specific feelings of control. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 62B*(1), S28-S35. doi:10.1093/geronb/62.1.S28

Krause, N. (2007b). Thought suppression and meaning in life: A longitudinal investigation. *The International Journal of Aging and Human Development, 64*(1), 67-82. doi:10.2190/2044-390U-7106-5610

Krause, N. (2007c). Deriving a sense of meaning in late life: An overlooked forum for the development of interdisciplinary theory. In V. L. Bengston, M. L. Silverstein, N. Putney, & D. Gans (Eds.), *Handbook of theories of aging* (2nd ed., pp. 101-116). New York, NY: Springer Publishing Co.

Krause, N. (2012a). Meaning in life and healthy aging. In P. T. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 409-432). New York, NY: Routledge/Taylor & Francis Group.

Krause, N. (2012b). Religion, meaning in life, and change in physical functioning during late adulthood. *Journal of Adult Development, 19*(3), 158-169. doi:10.1007/s10804-012-9143-5

Krause, N., & Shaw, B. A. (2003). Role-specific control, personal meaning, and health in late life. *Research on Aging, 25*(6), 559-586. doi:10.1177/0164027503256695

Krieger, T., Altenstein, D., Baettig, I., Doerig, N., & Holtforth, M. G. (2013). Self-compassion in depression: Associations with depressive symptoms, rumination, and avoidance in depressed outpatients. *Behavior Therapy, 44*(3), 501-513. doi:10.1016/j.beth.2013.04.004

Krieger, T., Berger, T., & Holtforth, M. G. (2016). The relationship of self-compassion and depression: Cross-lagged panel analyses in depressed patients after outpatient therapy. *Journal of Affective Disorders, 202*, 39-45. doi:10.1016/j.jad.2016.05.032

Krieger, T., Hermann, H., Zimmermann, J., & Grosse Holtforth, M. (2015). Associations of self-compassion and global self-esteem with positive and negative affect and stress reactivity in daily life: Findings from a smart phone study. *Personality and Individual Differences, 87*, 288-292. doi:10.1016/j.paid.2015.08.009

Kunzmann, U. (2008). Differential age trajectories of positive and negative affect: Further evidence from the Berlin Aging Study. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 63*(5), pp. 261-270. doi:10.1093/geronb/63.5.p261

Kunzmann, U., Little, T., & Smith, J. (2002). Perceiving control: A double-edged sword in old age. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 57B*(6), P484-P491. doi:10.1093/geronb/57.6.P484

Kunzmann, U., Little, T., & Smith, J. (2002). Perceiving control: A double-edged sword in old age. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 57B*(6), P484-P491. doi:10.1093/geronb/57.6.P484

Lang, F. R., & Carstensen, L. L. (2002). Time counts: Future time perspective, goals, and social relationships. *Psychology and Aging, 17*(1), 125-139. doi:10.1037/0882-7974.17.1.125

Lapierre, S., Dube, M., Bouffard, L., & Alain, M. (2007). Addressing suicidal ideations through the realization of meaningful personal goals. *Crisis: Journal of Crisis Intervention & Suicide, 28*(1), 16-25. doi:10.1027/0227-5910.28.1.16

Latorre, J. M., Serrano, J. P., Ricarte, J., Bonete, B., Ros, L., & Sitges, E. (2015). Life review based on remembering specific positive events in active aging. *Journal of Aging and Health, 27*(1), 140-157. doi:10.1177/0898264314541699

Layous, K., Nelson, S. K., & Lyubomirsky, S. (2013). What is the optimal way to deliver a positive activity intervention? The case of writing about one's best possible selves. *Journal of Happiness Studies, 14*(2), 635-654. doi:10.1007/s10902-012-9346-2

Leary, M. R., Tate, E. B., Adams, C. E., Allen, A. B., & Hancock, J. (2007). Self-compassion and reactions to unpleasant self-relevant events: The implications of treating oneself kindly. *Journal of Personality and Social Psychology, 92*(5), 887-904. doi:10.1037/0022-3514.92.5.887

Leaviss, J., & Uttley, L. (2015). Psychotherapeutic benefits of compassion-focused therapy: an early systematic review. *Psychological Medicine, 45*(5), 927-945. doi:10.1017/s0033291714002141

Leontiev, D. A. (2013). Positive psychology in search for meaning: An introduction. *The Journal of Positive Psychology, 8*(6), 457-458. doi:10.1080/17439760.2013.830766

Leue, A., & Beauducel, A. (2011). The PANAS structure revisited: On the validity of a bifactor model in community and forensic samples. *Psychological Assessment, 23*(1), 215-225. doi:10.1037/a0021400

Leung, B. W.-C., Moneta, G. B., & McBride-Chang, C. (2005). Think positively and feel positively: Optimism and life satisfaction in late life. *The International Journal of Aging and Human Development, 61*(4), 335-365. doi:10.2190/FQTB-EBAJ-H9WP-LMYA

Liau, A. K., Neihart, M. F., Teo, C. T., & Lo, C. H. M. (2016). Effects of the Best Possible Self activity on subjective well-being and depressive symptoms. *The Asia-Pacific Education Researcher, 25*(3), 473-481. doi:10.1007/s40299-015-0272-z

Lightsey, O. R., Jr. (1996). What leads to wellness? The role of psychological resources in well-being. *The Counseling Psychologist, 24*(4), 589-759. doi:10.1177/0011000096244002

Linley, A. P., Joseph, S., Harrington, S., & Wood, A. M. (2006). Positive psychology: Past, present, and (possible) future. *The Journal of Positive Psychology, 1*(1), 3-16. doi:10.1080/17439760500372796

Littman-Ovadia, H., & Nir, D. (2014). Looking forward to tomorrow: The buffering effect of a daily optimism intervention. *The Journal of Positive Psychology, 9*(2), 122-136. doi:10.1080/17439760.2013.853202

Loevinger, J. (1976). *Ego development : Conceptions and theories*. San Francisco: Jossey-Bass Publishers.

Longe, O., Maratos, F. A., Gilbert, P., Evan s, G., Volker, F., Rockliff, H., & Rippon, G. (2010). Having a word with yourself: Neural correlates of self-criticism and self-reassurance. *NeuroImage, 49*(2), 1849-1856. doi:10.1016/j.neuroimage.2009.09.019

López, A., Sanderman, R., & Schroevers, M. J. (2016). Mindfulness and self-compassion as unique and common predictors of affect in the general population. *Mindfulness, 7*(6), 1289-1296. doi:10.1007/s12671-016-0568-y

López, A., Sanderman, R., Smink, A., Zhang, Y., van Sonderen, E., Ranchor, A., & Schroevers, M. J. (2015). A reconsideration of the Self-Compassion Scale's total score: Self-compassion versus self-criticism. *PLoS ONE, 10*(7), e0132940-e0132940. doi:10.1371/journal.pone.0132940

Lopez, S. J., Snyder, C. R., & Pedrotti, J. T. (2003). Hope: Many definitions, many measures. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 91-106). Washington, DC: American Psychological Association.

Losada, A., Marquez-Gonzalez, M., Romero-Moreno, R., & Lopez, J. (2014). Development and validation of the Experiential Avoidance in Caregiving Questionnaire (EACQ). *Aging & Mental Health, 18*(7), 897-904. doi:10.1080/13607863.2014.896868

Losada, A., Marquez-Gonzalez, M., Romero-Moreno, R., Mausbach, B. T., Lopez, J., Fernandez-Fernandez, V., & Nogales-Gonzalez, C. (2015). Cognitive-behavioral therapy (CBT) versus acceptance and commitment therapy (ACT) for dementia family caregivers with significant depressive symptoms: Results of a randomized clinical trial. *Journal of Consulting and Clinical Psychology, 83*(4), 760-772. doi:10.1037/ccp0000028

Lu, L., Shih, J., Lin, Y., & Ju, L. (1997). Personal and environmental correlates of happiness. *Personality and Individual Differences, 23*(3), 453-462. doi:10.1016/S0191-8869%2897%2900060-3

Luoma, J. B., & Platt, M. G. (2015). Shame, self-criticism, self-stigma, and compassion in Acceptance and Commitment Therapy. *Current Opinion in Psychology, 2*, 97-101. doi:10.1016/j.copsyc.2014.12.016

Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *Emotion, 11*(2), 391-402. doi:10.1037/a0022575

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 803-855. doi:10.1037/0033-2909.131.6.803

MacBeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32*(6), 545-552. doi:10.1016/j.cpr.2012.06.003

Machell, K. A., Goodman, F. R., & Kashdan, T. B. (2015). Experiential avoidance and well-being: A daily diary analysis. *Cognition and Emotion, 29*(2), 351-359. doi:10.1080/02699931.2014.911143

Maher, E., & Cummins, R. A. (2001). Subjective quality of life, perceived control and dispositional optimism among older people. *Australasian Journal on Ageing, 20*(3), 139-146. doi:10.1111/j.1741-6612.2001.tb01776.x

Malouff, J. M., & Schutte, N. S. (2016). Can psychological interventions increase optimism? A meta-analysis. *The Journal of Positive Psychology*. Advance online publication. doi:10.1080/17439760.2016.1221122

Marsh, H. W., Balla, J. R., & , & McDonald, R. P. (1988). Goodness of fit indices in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*(3), 391-410. doi:10.1037//0033-2909.103.3.391

Marshall, E.-J., & Brockman, R. N. (2016). The relationships between psychological flexibility, self-compassion, and emotional well-being. *Journal of Cognitive Psychotherapy, 30*(1), 60-72. doi:10.1891/0889-8391.30.1.60

Marsiske, M., Lang, F. B., Baltes, P. B., & Baltes, M. M. (1995). Selective optimization with compensation: Life-span perspectives on successful human development. In R. A. Dixon & L. Backman (Eds.), *Compensating for psychological deficits and declines: Managing losses and promoting gains* (pp. 35-79). Hillsdale, NJ: Lawrence Erlbaum Associates.

Marta-Simões, J., Ferreira, C., & Mendes, A. L. (2016). Exploring the effect of external shame on body appreciation among Portuguese young adults: The role of self-compassion. *Eating Behaviors, 23*, 174-179. doi:10.1016/j.eatbeh.2016.10.006

Martire, L., Stephens, M. A. P., & Franks, M. (1997). Multiple roles of women caregivers: Feelings of mastery and self-esteem as predictors of psychosocial well-being. *Journal of Women and Aging, 9*(1-2), 117-131. doi:10.1300/J074v09n01_10

Mascaro, N., & Rosen, D. H. (2005). Existential meaning's role in the enhancement of hope and prevention of depressive symptoms. *Journal of Personality, 73*(4), 985-1014. doi:10.1111/j.1467-6494.2005.00336.x

Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed. ed.). New York: Van Nostrand Reinhold.

Massey, E., Garnefski, N., Gebhardt, W., & van der Leeden, R. (2011). A daily diary study on the independent and interactive effects of headache and self-regulatory factors on daily affect among adolescents. *British Journal of Health Psychology, 16*(2), 288-299. doi:10.1348/135910710X500828

Maxwell, S. E., Cole, D., & Mitchell, M. (2011). Bias in cross-sectional analyses of longitudinal mediation: Partial and complete mediation under an Autoregressive model. *Multivariate Behavioral Research, 46*(5), 816-841. doi:10.1080/00273171.2011.606716

McAvay, G. J., Seeman, T. E., & Rodin, J. (1996). A longitudinal study of change in domain-specific self-efficacy among older adults. *Journals of Gerontology. Series B, Psychological and Social Sciences, 51*(5), P243. doi:10.1093/geronb/51b.5.p243

McConatha, J. T., & Huba, H. M. (1999). Primary, secondary, and emotional control across adulthood. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 18*(2), 164-170. doi:10.1007/s12144-999-1025-z

McConatha, J. T., McConatha, D., Jackson, J. A., & Bergen, A. (1998). The control factor: Life satisfaction in later adulthood. *Journal of Clinical Geropsychology, 4*(2), 159-168.

McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology, 74*(2), 494-512. doi:10.1037/0022-3514.74.2.494

Meevissen, Y. M. C., Peters, M. L., & Alberts, H. J. E. M. (2011). Become more optimistic by imagining a best possible self: Effects of a two week intervention. *Journal of Behavior Therapy and Experimental Psychiatry, 42*(3), 371-378. doi:10.1016/j.jbtep.2011.02.012

Meléndez Moral, J. C., Fortuna Terrero, F. B., Sales Galán, A., & Mayordomo Rodríguez, T. (2015). Effect of integrative reminiscence therapy on depression, well-being, integrity, self-esteem, and life satisfaction in older adults. *The Journal of Positive Psychology, 10*(3), 240-247. doi:10.1080/17439760.2014.936968

Miloyan, B., Pachana, N. A., & Suddendorf, T. (2016). Future-oriented thought patterns associated with anxiety and depression in later life: The intriguing prospects of prospection. *The Gerontologist*. Advance online publication. doi:10.1093/geront/gnv695

Moraitou, D., & Efklides, A. (2013). Wise thinking, hopeful thinking, and positive aging: Reciprocal relations of wisdom, hope, memory, and affect in young, middle-aged, and older adults. In A. Efklides & D. Moraitou (Eds.), *A positive psychology perspective on quality of life* (pp. 189-218). Dordrecht, Netherlands: Springer.

Moraitou, D., Kolovou, C., Papasozomenou, C., & Paschoula, C. (2006). Hope and adaptation to old age: Their relationship with individual-demographic factors. *Social Indicators Research, 76*(1), 71-93. doi:10.1007/s11205-005-4857-4

Morling, B., & Evered, S. (2006). Secondary control reviewed and defined. *Psychological Bulletin, 132*(2), 269-296. doi:10.1037/0033-2909.132.2.269

Mroczek, D. K., & Kolarz, C. M. (1998). The effect of age on positive and negative affect: A developmental perspective on happiness. *Journal of Personality and Social Psychology, 75*(5), 1333-1349. doi:10.1037/0022-3514.75.5.1333

Muris, P. (2016). A protective factor against mental health problems in youths? A critical note on the assessment of self-compassion. *Journal of Child and Family Studies, 25*, 1461-1465. doi:10.1007/s10826-015-0315-3

Muris, P., Otgaar, H., & Petrocchi, N. (2016). Protection as the mirror image of psychopathology: Further critical notes on the Self-Compassion Scale. *Mindfulness, 7*(3), 787-790. doi:10.1007/s12671-016-0509-9

Muris, P., & Petrocchi, N. (2016). Protection or vulnerability? A meta-analysis of the relations between the positive and negative components of self-compassion and psychopathology. *Clinical Psychology and Psychotherapy*. Advance online publication. doi:10.1002/cpp.2005

Muthen, L. K., & Muthen, B.O. (1998-2007). *Mplus user's guide* (5th ed.). Los Angeles, CA: Muthen & Muthen.

Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science, 6*(1), 10-19. doi:10.1111/j.1467-9280.1995.tb00298.x

Neely, M. E., Schallert, D. L., Mohammed, S. S., Roberts, R. M., & Chen, Y. (2009). Self-kindness when facing stress: The role of self-compassion, goal regulation, and support in college students' well-being. *Motivation and Emotion, 33*(1), 88-97. doi:10.1007/s11031-008-9119-8

Neff, K. D. (2003a). The development and validation of a scale to measure self-compassion. *Self and Identity, 2*(3), 223-250. doi:10.1080/15298860309027

Neff, K. D. (2003b). Self-compassion: An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*(2), 85-101. doi:10.1080/15298860309032

Neff, K. D. (2009). The role of self-compassion in development: A healthier way to relate to oneself. *Human Development, 52*(4), 211-214. doi:10.1159/000215071

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Psychology Compass, 5*(1), 1-12. doi:10.1111/j.1751-9004.2010.00330.x

Neff, K. D. (2013). A pilot study and randomized controlled trial of the Mindful Self-Compassion Program: A pilot and randomized trial of MSC program. *Journal of Clinical Psychology, 69*(1), 28-44. doi:10.1002/jclp.21923

Neff, K. D. (2016a). Does self-compassion entail reduced self-judgment, isolation, and over-identification? A response to Muris, Otgaar, and Petrocchi (2016). *Mindfulness, 7*(3), 791-797. doi:10.1007/s12671-016-0531-y

Neff, K. D. (2016b). The Self-Compassion Scale is a valid and theoretically coherent measure of self-compassion. *Mindfulness, 7*(1), 264-274. doi:10.1007/s12671-015-0479-3

Neff, K. D., & Dahm, K. A. (2015). Self-compassion: What it is, what it does, and how it relates to mindfulness. In D. B. Ostafin, D. M. Robinson, & P. B. Meier (Eds.), *Handbook of mindfulness and self-regulation* (pp. 121-137). New York, NY: Springer.

Neff, K. D., & Faso, D. J. (2015). Self-compassion and well-being in parents of children with autism. *Mindfulness, 6*(4), 938-947. doi:10.1007/s12671-014-0359-2

Neff, K. D., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*(3), 263-287. doi: 10.1080/13576500444000317

Neff, K. D., Kirkpatrick, K. L., & Rude, S. S. (2007). Self-compassion and adaptive psychological functioning. *Journal of Research in Personality, 41*(1), 139-154. doi:10.1016/j.jrp.2006.03.004

Neff, K. D., & McGehee, P. (2010). Self-compassion and psychological resilience among adolescents and young adults. *Self and Identity, 9*(3), 225-240. doi:10.1080/15298860902979307

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality, 41*(4), 908-916. doi:10.1016/j.jrp.2006.08.002

Neff, K. D., & Vonk, R. (2009). Self-compassion versus global self-esteem: Two different ways of relating to oneself. *Journal of Personality, 77*(1), 23-50. doi:10.1111/j.1467-6494.2008.00537.xNeff, K. D., Hsieh, Y.-P., & Dejitterat, K. (2005). Self-compassion, achievement goals, and coping with academic failure. *Self and Identity, 4*(3), 263-287. doi:10.1080/13576500444000317

Neff, K. D., Whitaker, T. A., & Karl, A. (in press). Examining the factor structure of the Self-Compassion Scale in four distinct populations: Is the use of a total scale score justified? *Journal of Personality Assessment*.

Newsom, J. T., & Schulz, R. (1996). Social support as a mediator in the relation between functional status and quality of life in older adults. *Psychology and Aging, 11*(1), 34-44. doi:10.1037/0882-7974.11.1.34

Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences, 51*(6), 704-708. doi:10.1016/j.paid.2011.06.012

North, R., Holahan, C., Carlson, C., & Pahl, S. (2014). From failure to flourishing: The roles of acceptance and goal reengagement. *Journal of Adult Development, 21*(4), 239-250. doi:10.1007/s10804-014-9195-9

O'Connor, B. P., & Vallerand, R. J. (1998). Psychological adjustment variables as predictors of mortality among nursing home residents. *Psychology and Aging, 13*(3), 368-374. doi:10.1037/0882-7974.13.3.368

O'Donnell, M. (2015). *The impact of bullying and ACT variables on meaning in life for adolescents.* (MS), Colorado State University, Ann Arbor. Retrieved from http://search.proquest.com/docview/1757999368/ProQuest Dissertations Publishing database. (1757999368)

Odou, N., & Brinker, J. (2015). Self-compassion, a better alternative to rumination than distraction as a response to negative mood. *The Journal of Positive Psychology, 10*(5), 447-457. doi:10.1080/17439760.2014.967800

Olson, E. A., Fanning, J. T., Awick, E. A., Chung, H. D., & McAuley, E. (2014). Differential trajectories of well-being in older adult women: The role of optimism. *Applied Psychology: Health and Well-Being, 6*(3), 362-380. doi:10.1111/aphw.12033

Ong, A. D., Bergeman, C., & Boker, S. M. (2009). Resilience comes of age: Defining features in later adulthood. *Journal of Personality, 77(6)*, 1777-1804. doi:http://dx.doi.org/10.1111/j.1467-6494.2009.00600.x

Ong, A. D., Edwards, L. M., & Bergeman, C. S. (2006). Hope as a source of resilience in later adulthood. *Personality and Individual Differences, 41*(7), 1263-1273. doi:10.1016/j.paid.2006.03.028

Orzech, K. M., Shapiro, S. L., Brown, K. W., & McKay, M. (2009). Intensive mindfulness training-related changes in cognitive and emotional experience. *The Journal of Positive Psychology, 4*(3), 212-222. doi:10.1080/17439760902819394

Ostir, G. V., Ottenbacher, K. J., & Markides, K. S. (2004). Onset of frailty in older adults and the protective role of positive affect. *Psychology and Aging, 19*(3), 402-408. doi:10.1037/0882-7974.19.3.402

Ottenbreit, N. D., & Dobson, K. S. (2008). Avoidance. In K. S. Dobson & D. J. A. Dozois (Eds.), *Risk factors in depression* (pp. 447-470). San Diego, CA: Elsevier Academic Press.

Pachana, N. A., Mitchell, L. K., & Knight, B. G. (2015). Using the CALTAP lifespan developmental framework with older adults. *GeroPsych, 28*(2), 77-86. doi:10.1024/1662-9647/a000126

Palgi, Y., & Shmotkin, D. (2010). The predicament of time near the end of life: Time perspective trajectories of life satisfaction among the old-old. *Aging & Mental Health, 14*(5), 577-586. doi:10.1080/13607860903483086

Pang, J., Strodl, E., & Oei, T.-P. S. (2013). The factor structure of the COPE Questionnaire in a sample of clinically depressed and anxious adults. *Journal of Psychopathology and Behavioral Assessment, 35*(2), 264-272. doi:10.1007/s10862-012-9328-z

Park, C. L., Malone, M. R., Suresh, D., Bliss, D., & Rosen, R. I. (2008). Coping, meaning in life, and quality of life in congestive heart failure patients. *Quality of Life Research: An International Journal of Quality of Life Aspects of Treatment, Care & Rehabilitation, 17*(1), 21-26. doi:10.1007/s11136-007-9279-0

Pearson, L. (2006). *The effect of integrative reminiscence on depression, ego integrity and personal mastery in the elderly.* (PhD), Alliant International University, San Francisco Bay, US. Proquest Dissertations & Theses database. (UMI Number: 3215404)

Pepping, C. A., Davis, P. J., O'Donovan, A., & Pal, J. (2015). Individual differences in self-compassion: The role of attachment and experiences of parenting in childhood. *Self and Identity, 14*(1), 104-117. doi:10.1080/15298868.2014.955050

Perez-Blasco, J., Sales, A., Meléndez, J. C., & Mayordomo, T. (2016). The effects of mindfulness and self-compassion on improving the capacity to adapt to stress situations in elderly people living in the community. *Clinical Gerontologist, 39*(2), 90-103. doi:10.1080/07317115.2015.1120253

Peterson, C., & Park, N. (2009). Classifying and measuring strengths of character. In S. J. Lopez & C. R. Snyder (Eds.), *Oxford handbook of positive psychology* (2nd ed., pp. 25-33). New York, NY: Oxford University Press.

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: American Psychological Association.

Peterson, C., & Seligman, M. E. P. (2004). Hope. In M. E. P. Seligman & C. Peterson (Eds.), *Character strengths and virtues: A handbook and classification* (pp. 569-582). Washington, DC: American Psychological Association.

Petrocchi, N., Ottaviani, C., & Couyoumdjian, A. (2014). Dimensionality of self-compassion: translation and construct validation of the self-compassion scale in an Italian sample. *Journal of Mental Health, 23*(2), 72-77. doi:10.3109/09638237.2013.841869

Phillips, W. J., & Ferguson, S. J. (2013). Self-compassion: A resource for positive aging. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 68*(4), 529-539. doi:10.1093/geronb/gbs091

Pinquart, M. (2001). Age differences in perceived positive affect, negative affect, and affect balance in middle and old age. *Journal of Happiness Studies, 2*(4), 375-405. doi:10.1023/A:1013938001116

Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International, 27*(2), 90-114. doi:10.1007/s12126-002-1004-2

Pinquart, M., & Forstmeier, S. (2012). Effects of reminiscence interventions on psychosocial outcomes: A meta-analysis. *Aging & Mental Health, 16*(5), 541-558. doi:10.1080/13607863.2011.651434

Pinquart, M., & Sorensen, S. (2000). Influences of socioeconomic status, social network, and competence on subjective well-being in later life: A meta-analysis. *Psychology and Aging, 15(2)*, 187-224. doi:http://dx.doi.org/10.1037/0882-7974.15.2.187

Proyer, R. T., Gander, F., Wellenzohn, S., & Ruch, W. (2014). Positive psychology interventions in people aged 50–79 years: long-term effects of placebo-controlled online interventions on well-being and depression. *Aging & Mental Health, 18*(8), 997-1005. doi:10.1080/13607863.2014.899978

Proyer, R. T., Ruch, W., & Buschor, C. (2013). Testing strengths-based interventions: A preliminary study on the effectiveness of a program targeting curiosity, gratitude, hope, humor, and zest for enhancing life satisfaction. *Journal of Happiness Studies, 14*(1), 275-292. doi:10.1007/s10902-012-9331-9

Przezdziecki, A., & Sherman, K. A. (2016). Modifying affective and cognitive responses regarding body image difficulties in breast cancer survivors using a self-compassion-based writing intervention. *Mindfulness, 7*(5), 1142-1155. doi:10.1007/s12671-016-0557-1

Raes, A. K., Bruyneel, L., Loeys, T., Moerkerke, B., & De Raedt, R. (2015). Mindful attention and awareness mediate the association between age and negative affect. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 70*(2), 181-190. doi:10.1093/geronb/gbt074

Raes, F., Pommier, E., Neff, K. D., & Van Gucht, D. (2011). Construction and factorial validation of a short form of the Self-Compassion Scale. *Clinical Psychology and Psychotherapy, 18*(3), 250-255. doi:10.1002/cpp.702

Rand, K. L. (2009). Hope and optimism: Latent structures and influences on grade expectancy and academic performance. *Journal of Personality, 77*(1), 231-260. doi:10.1111/j.1467-6494.2008.00544.x

Randenborgh, A., Huffmeier, J., LeMoult, J., & Joormann, J. (2010). Letting go of unmet goals: Does self-focused rumination impair goal disengagement? *Motivation and Emotion, 34*(4), 325. doi:10.1007/s11031-010-9190-9

Ranzijn, R. (2002). Towards a positive psychology of ageing: Potentials and barriers. *Australian Psychologist, 37*(2), 79-85. doi:10.1080/00050060210001706716

Ranzijn, R., & Luszcz, M. (1999). Acceptance: A key to wellbeing in older adults? *Australian Psychologist, 34*(2), 94-98. doi:10.1080/00050069908257435

Raque-Bogdan, T. L., Ericson, S. K., Jackson, J., Martin, H. M., & Bryan, N. A. (2011). Attachment and mental and physical health: Self-compassion and mattering as mediators. *Journal of Counseling Psychology, 58*(2), 272-278.

Ratelle, C. F., Vallerand, R. J., Chantal, Y., & Provencher, P. (2004). Cognitive adaptation and mental health: A motivational analysis. *European Journal of Social Psychology, 34*(4), 459-476. doi:10.1002/ejsp.208

Reed, A. E., Chan, L., & Mikels, J. A. (2014). Meta-analysis of the age-related positivity effect: Age differences in preferences for positive over negative information. *Psychology and Aging, 29(1)*, 1-15. doi:10.1037/a0035194

Reker, G. T., Birren, J. E., & Svensson, C. M. (2012). Restoring, maintaining, and enhancing personal meaning in life through autobiographical methods. In P. T. P. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 383-407). New York, NY: Routledge/Taylor & Francis Group.

Reker, G. T., & Fry, P. S. (2003). Factor structure and invariance of personal meaning measures in cohorts of younger and older adults. *Personality and Individual Differences, 35*(5), 977-993. doi:10.1016/S0191-8869%2802%2900312-4

Renner, F., Schwarz, P., Peters, M. L., & Huibers, M. J. H. (2014). Effects of a best-possible-self mental imagery exercise on mood and dysfunctional attitudes. *Psychiatry Research, 215*(1), 105-110. doi:10.1016/j.psychres.2013.10.033

Ricci Bitti, P. E., Zambianchi, M., & Bitner, J. (2015). Time perspective and positive aging. In M. Stolarski, N. Fieulaine, & W. van Beek (Eds.), *Time perspective theory; Review, research and application: Essays in honor of Philip G. Zimbardo* (pp. 437-450). Switzerland: Springer International Publishing.

Rius-Ottenheim, N., Kromhout, D., van der Mast, R. C., Zitman, F. G., Geleijnse, J. M., & Giltay, E. J. (2012). Dispositional optimism and loneliness in older men. *International Journal of Geriatric Psychiatry, 27*(2), 151-159. doi:10.1002/gps.2701

Rius-Ottenheim, N., van der Mast, R. C., Zitman, F. G., & Giltay, E. J. (2013). The role of dispositional optimism in physical and mental well-being. In A. Efklides & D. Moraitou (Eds.), *A positive psychology perspective on quality of life* (pp. 149-173). Dordrecht: Springer.

Robins, C. J., Keng, S. L., Ekblad, A. G., & Brantley, J. G. (2012). Effects of mindfulness-based stress reduction on emotional experience and expression: A randomized controlled trial. *Journal of Clinical Psychology, 68*(1), 117-131. doi:10.1002/jclp.20857

Rodin, J., & Langer, E. J. (1977). Long-term effects of a control-relevant intervention with the institutionalized aged. *Journal of Personality and Social Psychology, 35*(12), 897-902. doi:10.1037/0022-3514.35.12.897

Roesch, S. C., & Vaughn, A. A. (2006). Evidence for the factorial validity of the dispositional hope scale: Cross-ethnic and cross-gender measurement equivalence. *European Journal of Psychological Assessment, 22*(2), 78-84. doi:10.1027/1015-5759.22.2.78

Rothermund, K., & Brandstadter, J. (2003). Coping with deficits and losses in later life: From compensatory action to accommodation. *Psychology and Aging, 18*(4), 896-905. doi:10.1037/0882-7974.18.4.896

Rowe, J. W., & Kahn, R. L. (1987). Human aging: Usual and successful. *Science*, *237(4811)*, 143-149. doi:10.1126/science.3299702

Rowe, J. W., & Kahn, R. L. (2015). Successful aging 2.0: Conceptual expansions for the 21st century. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 70(4)*, 593-596. doi:10.1093/geronb/gbv025

Ruini, C., Albieri, E., & Vescovelli, F. (2015). Well-being therapy: State of the art and clinical exemplifications. *Journal of Contemporary Psychotherapy, 45*(2), 129-136. doi:10.1007/s10879-014-9290-z

Ruini, C., & Ryff, C. D. (2016). Using eudaimonic well-being to improve lives. In A. M. Wood & J. Johnson (Eds.), *The Wiley handbook of positive clinical psychology* (pp. 153-166). Chichester, UK: John Wiley & Sons.

Russell, D. W., & Cutrona, C. E. (1991). Social support, stress, and depressive symptoms among the elderly: Test of a process model. *Psychology and Aging, 6*(2), 190-201. doi:10.1037/0882-7974.6.2.190

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166. doi:10.1146/annurev.psych.52.1.141

Ryff, C. D. (1989a). Beyond Ponce de Leon and life satisfaction: New directions in quest of successful ageing. *International Journal of Behavioral Development, 12*(1), 35-55. doi:10.1177/016502548901200102

Ryff, C. D. (1989b). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069-1081. doi:10.1037/0022-3514.57.6.1069

Ryff, C. D. (1989c). In the eye of the beholder: Views of psychological well-being among middle-aged and older adults. *Psychology and Aging, 4*(2), 195-210. doi:10.1037/0882-7974.4.2.195

Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics, 83*(1), 10-28. doi:10.1159/000353263

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719-727. doi:10.1037/0022-3514.69.4.719

Ryff, C. D., Lee, Y. H., Essex, M. J., & Schmutte, P. S. (1994). My children and me: Midlife evaluations of grown children and of self. *Psychology and Aging, 9*(2), 195-205. doi:10.1037/0882-7974.9.2.195

Ryff, C. D., Love, G. D., Urry, H. L., Muller, D., Rosenkranz, M. A., Friedman, E. M., . . . Singer, B. H. (2006). Psychological well-being and ill-being: Do they have distinct or mirrored biological correlates? *Psychotherapy and Psychosomatics, 75*(2), 85-95. doi:10.1159/000090892

Ryff, C. D., & Singer, B. H. (1998). The role of purpose in life and personal growth in positive human health. In P. T. P. Wong & P. S. Fry (Eds.), *The human quest for meaning: A handbook of psychological research and clinical applications* (pp. 213-235). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Ryff, C. D., & Singer, B. H. (2006). Best news yet on the six-factor model of well-being. *Social Science Research, 35*(4), 1103-1119. doi:10.1016/j.ssresearch.2006.01.002

Ryff, C. D., Singer, B. H., & Dienberg Love, G. (2004). Positive health: connecting well-being with biology. *Philosophical transactions of the Royal Society of London. Series B, Biological Sciences, 359*(1449), 1383-1394. doi:10.1098/rstb.2004.1521

Rylands, K., & Rickwood, D. J. (2001). Ego-integrity versus ego-despair: The effect of "accepting the past" on depression in older women. *The International Journal of Aging and Human Development, 53*(1), 75-89. doi:10.2190/1LN2-J92C-2168-THPH

Salanova, M., Bakker, A., & Llorens, S. (2006). Flow at work: Evidence for an upward spiral of personal and organizational resources. *An Interdisciplinary Forum on Subjective Well-Being, 7*(1), 1-22. doi:10.1007/s10902-005-8854-8

Salsman, J. M., Brown, T. L., Brechting, E. H., & Carlson, C. R. (2005). The link between religion and spirituality and psychological adjustment: The mediating role of optimism and social support. *Personality and Social Psychology Bulletin, 31*(4), 522-535. doi:10.1177/0146167204271563

Santor, D. A., & Zuroff, D. C. (1994). Depressive symptoms: Effects of negative affectivity and failing to accept the past. *Journal of Personality Assessment, 63*(2), 294-312. doi:10.1207/s15327752jpa6302_9

Sarason, I. G., Sarason, B. R., Shearin, E. N., & Pierce, G. R. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relationships, 4*(4), 497-510. doi:10.1177/0265407587044007

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*(3), 219-247. doi:10.1037/0278-6133.4.3.219

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*(6), 1063-1078. doi:10.1037/0022-3514.67.6.1063

Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice.* (pp. 189-216). Washington, DC, US: American Psychological Association.

Schirda, B., Valentine, T. R., Aldao, A., & Prakash, R. S. (2016). Age-related differences in emotion regulation strategies: Examining the role of contextual factors. *Developmental Psychology, 52*(9), 1370-1380. doi:10.1037/dev0000194

Scott, W., Daly, A., Yu, L., & McCracken, L. M. (2016). Treatment of chronic pain for adults 65 and over: Analyses of outcomes and changes in psychological flexibility following interdisciplinary Acceptance and Commitment Therapy (ACT). *Pain Medicine*. Advance online publication. doi:10.1093/pm/pnw073

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York, NY: Free Press.

Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5-14. doi:10.1037/0003-066X.55.1.5

Seligman, M. E., Park, N., & Peterson, C. (2004). The Values In Action (VIA) classificationof character strengths. *Ricerche di Psicologia, 27*(1), 63-78. Retrieved from http://simsrad.net.ocs.mq.edu.au/login?url=http://HH9MG3RW5Q.search.serialssolutions.com/?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rfr_id=info:sid/Ovid:psyc4&rft.genre=article&rft_id=info:doi/&rft_id=info:pmid/&rft.issn=0391-6081&rft.volume=27&rft.issue=1&rft.spage=63&rft.pages=63-78&rft.date=2004&rft.jtitle=Ricerche+di+Psicologia&rft.atitle=The+Values+In+Action+%28VIA%29+classification+of+character+strengths.&rft.aulast=Seligman

Shallcross, A. J., Ford, B. Q., Floerke, V. A., & Mauss, I. B. (2013). Getting better with age: The relationship between age, acceptance, and negative affect. *Journal of Personality and Social Psychology, 104*(4), 734-749. doi:10.1037/a0031180

Shapira, L. B., & Mongrain, M. (2010). The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *The Journal of Positive Psychology, 5*(5), 377-389. doi:10.1080/17439760.2010.516763

Sherman, A. M., & Cotter, K. A. (2013). Well-being among older adults with OA: direct and mediated patterns of control beliefs, optimism and pessimism. *Aging & Mental Health, 17*(5), 595-608. doi:10.1080/13607863.2013.765831

Shonin, E., Van Gordon, W., Compare, A., Zangeneh, M., & Griffiths, M. D. (2015). Buddhist-derived Loving-Kindness and Compassion Meditation for the treatment of psychopathology: a systematic review. *Mindfulness, 6*(5), 1161-1180. doi:10.1007/s12671-014-0368-1

Siedlecki, K. L., Salthouse, T. A., Oishi, S., & Jeswani, S. (2014). The relationship between social support and subjective well-being across age. *Social Indicators Research, 117(2)*, 561-576. doi:http://dx.doi.org/10.1007/s11205-013-0361-4

Silberstein, L. R., Tirch, D., Leahy, R. L., & McGinn, L. (2012). Mindfulness, psychological flexibility and emotional schemas. *International Journal of Cognitive Therapy, 5*(4), 406-419. doi:10.1521/ijct.2012.5.4.406

Simons, M., Peeters, S., Janssens, M., Lataster, J., & Jacobs, N. (2016). Does age make a difference? Age as moderator in the association between time perspective and happiness. *Journal of Happiness Studies*. Advance online publication. doi:10.1007/s10902-016-9806-1

Sinha, S., Nayyar, P., & Sinha, S. (2002). Social support and self-control as variables in attitude toward life and perceived control among older people in India. *The Journal of Social Psychology, 142*(4), 527-540. doi:10.1080/00224540209603916

Skinner, E. A. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology, 71*(3), 549-570. doi:10.1037/0022-3514.71.3.549

Smeets, E., Neff, K. D., Alberts, H., & Peters, M. (2014). Meeting suffering with kindness: Effects of a brief self-compassion intervention for female college students. *Journal of Clinical Psychology, 70*(9), 794-807. doi:10.1002/jclp.22076

Smith, J. L. (2015). Self-compassion and resilience in senior living residents. *Seniors Housing & Care Journal, 23*(1), 16-31. Retrieved from http://connection.ebscohost.com/c/articles/110797520/self-compassion-resilience-senior-living-residents

Sneed, J. R., Whitbourne, S. K., & Culang, M. E. (2006). Trust, identity, and ego integrity: Modeling Erikson's core stages over 34 years. *Journal of Adult Development, 13*(3-4), 148-157. doi:10.1007/s10804-007-9026-3

Sneed, J. R., Whitbourne, S. K., Schwartz, S. J., & Huang, S. (2012). The relationship between identity, intimacy, and midlife well-being: Findings from the Rochester Adult Longitudinal Study. *Psychology and Aging, 27*(2), 318-323. doi:10.1037/a0026378

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249-275. doi:10.1207/s15327965pli1304_01

Snyder, C. R., Cheavens, J. S., & Michael, S. T. (2005). Hope theory: History and elaborated model. In J. A. Eliott (Ed.), *Interdisciplinary perspectives on hope* (pp. 101-118). Hauppauge, NY: Nova Science Publishers.

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., . . . Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570-585. doi:10.1037/0022-3514.60.4.570

Spira, A. P., Beaudreau, S. A., Jimenez, D., Kierod, K., Cusing, M. M., Gray, H. L., & Gallagher-Thompson, D. (2007). Experiential avoidance, acceptance, and depression in dementia family caregivers. *Clinical Gerontologist, 30*(4), 55-64. doi:10.1300/J018v30n04_04

Springer, K. W., Pudrovska, T., & Hauser, R. M. (2011). Does psychological well-being change with age? Longitudinal tests of age variations and further exploration of the multidimensionality of Ryff's model of psychological well-being. *Social Science Research, 40*(1), 392-398. doi:10.1016/j.ssresearch.2010.05.008

Stavrova, O., & Luhmann, M. (2015). Social connectedness as a source and consequence of meaning in life. *The Journal of Positive Psychology, 11*(5), 470-479. doi:10.1080/17439760.2015.1117127

Steed, L. G. (2002). A psychometric comparison of four measures of hope and optimism. *Educational and Psychological Measurement, 62*(3), 466-482. doi:10.1177/00164402062003005

Steger, M. F. (2012). Experiencing meaning in life: Optimal functioning at the nexus of well-being, psychopathology, and spirituality. In P. T. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. 165-184). New York, NY: Routledge/Taylor & Francis Group.

Steger, M. F. (2016). Hedonia, eudaimonia, and meaning: Me versus us; fleeting versus enduring. In J. Vittersø (Ed.), *Handbook of eudaimonic well-being* (pp. 175-182). Cham, Switzerland: Springer International Publishing.

Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93. doi:10.1037/0022-0167.53.1.80

Steger, M. F., & Kashdan, T. B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies, 8*(2), 161-179. doi:10.1007/s10902-006-9011-8

Steger, M. F., Kashdan, T. B., Sullivan, B. A., & Lorentz, D. (2008). Understanding the search for meaning in life: Personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 76*(2), 199-228. doi:10.1111/j.1467-6494.2007.00484.x

Steger, M. F., Oishi, S., & Kashdan, T. B. (2009). Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology, 4*(1), 43-52. doi:10.1080/17439760802303127

Steger, M. F., Sheline, K., Merriman, L., & Kashdan, T. B. (2013). Using the science of meaning to invigorate values-congruent, purpose-driven action. In T. B. Kashdan & J. Ciarrochi (Eds.), *Mindfulness, acceptance, and positive psychology: The seven foundations of well-being* (pp. 240-266). Oakland, CA: Context Press/New Harbinger Publications.

Stephens, M. A. P., Druley, J. A., & Zautra, A. J. (2002). Older adults' recovery from surgery for osteoarthritis of the knee: Psychosocial resources and constraints as predictors of outcomes. *Health Psychology, 21*(4), 377-383. doi:10.1037/0278-6133.21.4.377

Steverink, N., Westerhof, G. J., Bode, C., & Dittmann-Kohli, F. (2001). The personal experience of aging, individual resources, and subjective well-being. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 56B*(6), 364–373. doi:10.1093/geronb/56.6.p364

Stolarski, M., Matthews, G., Postek, S., Zimbardo, P., & Bitner, J. (2014). How we feel is a matter of time: Relationships between time perspectives and mood. *Journal of Happiness Studies, 15*(4), 809-827. doi:10.1007/s10902-013-9450-y

Svendsen, J., Osnes, B., Binder, P.-E., Dundas, I., Visted, E., Nordby, H., . . . Sørensen, L. (2016). Trait self-compassion reflects emotional flexibility through an association with high vagally mediated heart rate variability. *Mindfulness, 7*(5), 1103-1113. doi:10.1007/s12671-016-0549-1

Swift, A. U., & Chipperfield, J. G. (2013). Secondary control belief combinations (adjustment and acceptance) and well-being in older adults. *Canadian Journal on Aging/La Revue canadienne du vieillissement, 32*(4), 349-359. doi:10.1017/s0714980813000391

Swift, H. J., Vauclair, C.-M., Abrams, D., Bratt, C., Marques, S., & Lima, M.-L. (2014). Revisiting the paradox of well-being: The importance of national context. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 69*(6), 920-929. doi:10.1093/geronb/gbu011

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Needham Heights, MA: Allyn & Bacon.

Tallman, B., Shaw, K., Schultz, J., & Altmaier, E. (2010). Well-being and posttraumatic growth in unrelated donor marrow transplant survivors: A nine-year longitudinal study. *Rehabilitation Psychology, 55*(2), 204-210. doi:10.1037/a0019541

Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. (2000). Psychological resources, positive illusions, and health. *American Psychologist, 55*(1), 99-109. doi:10.1037/0003-066X.55.1.99

Thoits, P. A. (1995). Stress, coping, and social support processes: where are we? What next? *Journal of Health and Social Behavior, 35*(Extra Issue), 53-79. doi:10.2307/2626957

Thompson, E. H., Woodward, J. T., & Stanton, A. L. (2011). Moving forward during major goal blockage: Situational goal adjustment in women facing infertility. *Journal of Behavioral Medicine, 34*(4), 275-287. doi:10.1007/s10865-010-9309-1

Thompson, M. P., Kaslow, N. J., Short, L. M., & Wyckoff, S. (2002). The mediating roles of perceived social support and resources in the self-efficacy-suicide attempts relation among African American abused women. *Journal of Consulting and Clinical Psychology, 70*(4), 942-949. doi:10.1037/0022-006X.70.4.942

Thompson, S. C., Nanni, C., & Levine, A. (1994). Primary versus secondary and central versus consequence-related control in HIV-positive men. *Journal of Personality and Social Psychology, 67*(3), 540-547. doi:10.1037/0022-3514.67.3.540

Thompson, S. C., & Spacapan, S. (1991). Perceptions of control in vulnerable populations. *Journal of Social Issues, 47*(4), 1-21. doi:10.1111/j.1540-4560.1991.tb01831.x

Torges, C. M., Stewart, A. J., & Duncan, L. E. (2008). Achieving ego integrity: Personality development in late midlife. *Journal of Research in Personality, 42*(4), 1004-1019. doi:10.1016/j.jrp.2008.02.006

Townsend, A., Noelker, L., Deimling, G., & Bass, D. (1989). Longitudinal impact of interhousehold caregiving on adult children's mental health. *Psychology and Aging, 4*(4), 393-401. doi:10.1037/0882-7974.4.4.393

Trompetter, H. R., Bohlmeijer, E. T., Veehof, M. M., & Schreurs, K. M. G. (2015). Internet-based guided self-help intervention for chronic pain based on Acceptance and Commitment Therapy: a randomized controlled trial. *Journal of Behavioral Medicine, 38*(1), 66-80. doi:10.1007/s10865-014-9579-0

Trompetter, H. R., de Kleine, E., & Bohlmeijer, E. T. (2016). Why does positive mental health buffer against psychopathology? An exploratory study on self-compassion as a resilience mechanism and adaptive emotion regulation strategy. *Cognitive Therapy and Research*. Advance online publication. doi:10.1007/s10608-016-9774-0

Trunzo, J. J., & Pinto, B. M. (2003). Social support as a mediator of optimism and distress in breast cancer survivors. *Journal of Consulting and Clinical Psychology, 71*(4), 805-811. doi:10.1037/0022-006X.71.4.805

Umphrey, L. R., & Sherblom, J. C. (2014). The relationship of hope to self-compassion, relational social skill, communication apprehension, and life satisfaction. *International Journal of Wellbeing, 4*(2), 1-18. doi:10.5502/ijw.v4i2.1

Vaillant, G. E. (1994). "Successful aging" and psychosocial well-being: Evidence from a 45-year study. In E. H. Thompson (Ed.), *Older men's lives* (pp. 22-41). Thousand Oaks, CA: Sage Publications.

Vaillant, G. E. (2000). Adaptive mental mechanisms: Their role in a positive psychology. *American Psychologist, 55*(1), 89-98. doi:10.1037/0003-066X.55.1.89

Vaillant, G. E. (2002). *Aging well*. Boston, MA: Little, Brown & Company.

Vaillant, G. E. (2012). *Triumphs of experience: The men of the Harvard Grant Study*. Cambridge, MA: Belknap Press of Harvard University Press.

Vaillant, G. E. (2013). Psychiatry, religion, positive emotions and spirituality. *Asian Journal of Psychiatry, 6*(6), 590-594. doi:10.1016/j.ajp.2013.08.073

Van Dam, N. T., Sheppard, S. C., Forsyth, J. P., & Earleywine, M. (2011). Self-compassion is a better predictor than mindfulness of symptom severity and quality of life in mixed anxiety and depression. *Journal of Anxiety Disorders, 25*(1), 123-130. doi:10.1016/j.janxdis.2010.08.011

Van der Heyden, K., Dezutter, J., & Beyers, W. (2015). Meaning in life and depressive symptoms: A person-oriented approach in residential and community-dwelling older adults. *Aging & Mental Health, 19*(12), 1063-1070. doi:10.1080/13607863.2014.995589

van Dierendonck, D. (2004). The construct validity of Ryff's Scales of Psychological Well-being and its extension with spiritual well-being. *Personality and Individual Differences, 36*(3), 629-643. doi:10.1016/S0191-8869%2803%2900122-3

Vaughan, M. D., & Rodriguez, E. M. (2013). The influence of Erik Erikson on positive psychology theory and research. In J. D. Sinnott (Ed.), *Positive psychology:*

Advances in understanding adult motivation (pp. 231-245). New York, NY: Springer Science.

Vollmann, M., Antoniw, K., Hartung, F.-M., & Renner, B. (2011). Social support as mediator of the stress buffering effect of optimism: The importance of differentiating the recipients' and providers' perspective. *European Journal of Personality, 25*(2), 146-154. doi:10.1002/per.803

Vowinckel, J. C., Westerhof, G. J., Bohlmeijer, E. T., & Webster, J. D. (2015). Flourishing in the now: Initial validation of a present-eudaimonic time perspective scale. *Time & Society*. Advance online publication. doi:10.1177/0961463x15577277

Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology, 85*(1), 132-142. doi:10.1037/0021-9010.85.1.132

Waterman, A. S., Schwartz, S. J., & Conti, R. (2008). The implications of two conceptions of happiness (hedonic enjoyment and eudaimonia) for the understanding of intrinsic motivation. *Journal of Happiness Studies, 9*(1), 41-79. doi:10.1007/s10902-006-9020-7

Watson, D., & Clark, L. A. (1997). Measurement and mismeasurement of mood: Recurrent and emergent issues. *Journal of Personality Assessment, 68*(2), 267-296. doi:10.1207/s15327752jpa6802_4

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063-1070. doi:10.1037/0022-3514.54.6.1063

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology, 76*(5), 820-838. doi:10.1037/0022-3514.76.5.820

Webster, J. D., Bohlmeijer, E. T., & Westerhof, G. J. (2010). Mapping the future of reminiscence: A conceptual guide for research and practice. *Research on Aging, 32*(4), 527-564. doi:10.1177/0164027510364122

Webster, J. D., Bohlmeijer, E. T., & Westerhof, G. J. (2014). Time to flourish: the relationship of temporal perspective to well-being and wisdom across adulthood. *Aging & Mental Health, 18*(8), 1046-1056. doi:10.1080/13607863.2014.908458

Wei, M., Liao, K. Y.-H., Ku, T.-Y., & Shaffer, P. A. (2011). Attachment, self-compassion, empathy, and subjective well-being among college students and community adults. *Journal of Personality, 79*(1), 191-221. doi:10.1111/j.1467-6494.2010.00677.x

Weis, R., & Speridakos, E. (2011). A Meta-Analysis of hope enhancement strategies in clinical and community settings. *Psychology of Well-Being, 1*(1), 1-16. doi:10.1186/2211-1522-1-5

Westerhof, G. J., & Bohlmeijer, E. T. (2014). Celebrating fifty years of research and applications in reminiscence and life review: State of the art and new directions. *Journal of Aging Studies, 29*, 107-114. doi:10.1016/j.jaging.2014.02.003

Westerhof, G. J., Bohlmeijer, E. T., & McAdams, D. P. (2015). The relation of ego integrity and despair to personality traits and mental health. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*. Advance online publication. doi:10.1093/geronb/gbv062

Westerhof, G. J., Bohlmeijer, E. T., van Beljouw, I. M. J., & Pot, A. M. (2010). Improvement in personal meaning mediates the effects of a life review intervention on depressive symptoms in a randomized controlled trial. *Gerontologist, 50*(4), 541-549. doi:10.1093/geront/gnp168

Westerhof, G. J., Bohlmeijer, E. T., & Webster, J. D. (2010). Reminiscence and mental health: a review of recent progress in theory, research and interventions. *Ageing & Society, 30*(04), 697-721. doi:10.1017/S0144686X09990328

Westermeyer, J. F. (1998). Predictors and characteristics of mental health among men at midlife: A 32-year longitudinal study. *American Journal of Orthopsychiatry, 68*(2), 265-273. doi:10.1037/h0080335

Westermeyer, J. F. (2004). Predictors and characteristics of Erikson's life cycle model among men: A 32-year longitudinal study. *The International Journal of Aging and Human Development, 58*(1), 29-48. doi:10.2190/3VRW-6YP5-PX9T-H0UH

Westermeyer, J. F. (2013). Predictors and characteristics of successful aging among men: A 48-year longitudinal study. *The International Journal of Aging and Human Development, 76*(4), 323-345. doi:10.2190/ag.76.4.c

Wetherell, J. L., Petkus, A. J., Alonso-Fernandez, M., Bower, E. S., Steiner, A. R. W., & Afari, N. (2016). Age moderates response to acceptance and commitment therapy vs. cognitive behavioral therapy for chronic pain. *International Journal of Geriatric Psychiatry, 31*(3), 302-308. doi:10.1002/gps.4330

Whitbourne, S. K., Sneed, J. R., & Sayer, A. (2009). Psychosocial development from college through midlife: A 34-year sequential study. *Developmental Psychology, 45*(5), 1328-1340. doi:10.1037/a0016550

Whitbourne, S. K., & Waterman, A. S. (1979). Psychosocial development during the adult years: Age and cohort comparisons. *Developmental Psychology, 15*(4), 373-378. doi:10.1037//0012-1649.15.4.373

Whitbourne, S. K., Zuschlag, M. K., Elliot, L. B., & Waterman, A. S. (1992). Psychosocial development in adulthood: A 22-year sequential study. *Journal of Personality and Social Psychology, 63*(2), 260-271. doi:10.1037/0022-3514.63.2.260

Wiesmann, U., & Hannich, H.-J. (2011). A salutogenic analysis of developmental tasks and ego integrity vs. despair. *The International Journal of Aging and Human Development, 73*(4), 351-369. doi:10.2190/ag.73.4.e

Williams, M. J. (2014). Examining the factor structures of the Five Facet Mindfulness Questionnaire and the Self-Compassion Scale. *Psychological Assessment, 26*(2), 407-418. doi:10.1037/a0035566

Wilson, G. T. (1996). Acceptance and change in the treatment of eating disorders and obesity. *Behavior Therapy, 27*(3), 417-439. doi:10.1016/S0005-7894(96)80025-6

Windle, G., & Woods, R. T. (2004). Variations in subjective wellbeing: The mediating role of a psychological resource. *Ageing and Society, 24*(4), 583-602. doi:10.1017/s0144686x04002107

Windsor, T. D., & Anstey, K. J. (2010). Age differences in psychosocial predictors of positive and negative affect: A longitudinal investigation of young, midlife, and older adults. *Psychology and Aging, 25*(3), 641-652. doi:10.1037/a0019431

Wolgast, M. (2014). What does the Acceptance and Action Questionnaire (AAQ-II) really measure? *Behavior Therapy, 45*(6), 831-839. doi:10.1016/j.beth.2014.07.002

Wolgast, M., Lundh, L.-G., & Viborg, G. (2011). Cognitive reappraisal and acceptance: An experimental comparison of two emotion regulation strategies. *Behaviour Research and Therapy, 49*(12), 858-866. doi:10.1016/j.brat.2011.09.011

Wolgast, M., Lundh, L.-G., & Viborg, G. (2013). Cognitive restructuring and acceptance: An empirically grounded conceptual analysis. *Cognitive Therapy and Research, 37*(2), 340-351. doi:10.1007/s10608-012-9477-0

Wong, P. T. (2011). Positive psychology 2.0: Towards a balanced interactive model of the good life. *Canadian Psychology/Psychologie canadienne, 52*(2), 69-81. doi:10.1037/a0022511

Wong, P. T. (2012). Introduction. In P. T. Wong (Ed.), *The human quest for meaning: Theories, research, and applications* (2nd ed., pp. xxvii-xliv). New York, NY: Routledge.

Wong, P. T. P. (2000). Meaning of life and meaning of death in successful aging. In A. Tomer (Ed.), *Death attitudes and the older adult: Theories, concepts, and applications* (pp. 23-35). New York, NY: Brunner-Routledge.

World Health Organisation. (1948). *Preamble to the Constitution of the World Health Organization*. as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

World Health Organization. (2015). *World Report On Ageing and Health*. Retrieved from http://www.who.int/ageing/events/world-report-2015-launch/en/

Wrobleski, K. K., & Snyder, C. R. (2005). Hopeful thinking in older adults: Back to the future. *Experimental Aging Research, 31*(2), 217-233. doi:10.1080/03610730590915452

Wrosch, C., Bauer, I., & Scheier, M. F. (2005). Regret and quality of life across the adult life span: The influence of disengagement and available future goals. *Psychology and Aging, 20*(4), 657-670. doi:10.1037/0882-7974.20.4.657

Wrosch, C., Scheier, M. F., Miller, G. E., Schulz, R., & Carver, C. S. (2003). Adaptive self-regulation of unattainable goals: Goal disengagement, goal reengagement, and subjective well-being. *Personality and Social Psychology Bulletin, 29*(12), 1494-1508. doi:10.1177/0146167203256921

Wurm, S., Tesch-Römer, C., & Tomasik, M. J. (2007). Longitudinal findings on aging-related cognitions, control beliefs, and health in later life. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 62B*(3), 156-164. doi:10.1037/0022-3514.77.6.1271

Yang, Y., Zhang, M., & Kou, Y. (2016). Self-compassion and life satisfaction: The mediating role of hope. *Personality and Individual Differences, 98*, 91-95. doi:10.1016/j.paid.2016.03.086

Ying, Y. (2009). Contribution of self-compassion to competence and mental health in social work students. *Journal of Social Work Education, 45*(2), 309-323. doi:10.1037/0003-066x.61.3.227

Zacher, H., McKenna, B., & Rooney, D. (2013). Effects of self-reported wisdom on happiness : not much more than emotional intelligence? *Journal of Happiness Studies, 14*(6), 1697-1716. doi:10.1007/s10902-012-9404-9

Zessin, U., Dickhäuser, O., & Garbade, S. (2015). The relationship between self-compassion and well-being: A meta-analysis. *Applied Psychology: Health and Well-Being, 7*(3), 340-364. doi:10.1111/aphw.12051

Zhang, J. W., & Chen, S. (2016). Self-compassion promotes personal improvement from regret experiences via acceptance. *Personality and Social Psychology Bulletin, 42*(2), 244-258. doi:10.1177/0146167215623271

Zhou, L., Chen, J., Liu, X., Lu, D., & Su, L. (2013). Negative cognitive style as a mediator between self-compassion and hopelessness depression. *Social Behavior and Personality, 41*(9), 1511-1518. doi:10.2224/sbp.2013.41.9.1511

Zimbardo, P. G. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology, 77*(6), 1271-1288. doi:10.1037/0022-3514.77.6.1271

List of Appendices

APPENDIX A:
ETHICS APPROVAL FOR STUDY 1 - OPTIMISM

MACQUARIE
UNIVERSITY ~ SYDNEY

22 June 2005

Ms Sue Ferguson
Department of Psychology
Division of Linguistics and Psychology
College of Science and Technology

Reference: HE27MA Y2005-R04123

Dear Ms Ferguson

FINAL APPROVAL

Title of project: ***Attitudes, coping styles, volunteer activities and well-being in older adults***

Your responses to the outstanding issues raised by the Committee have satisfactorily been addressed. You may now proceed with your research.

Please note the following standard requirements of approval:

1. Approval will be for a period of twelve months. At the end of this period, if the project has been completed, abandoned, discontinued or not commenced for any reason, you are required to submit a Final Report on the project. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. The Final Report is available at http://www.ro.mq.edu.au/ethics/human/forms
2. However, at the end of the 12 month period if the project is still current you should instead submit an application for renewal of the approval if the project has run for less than three (3) years. This form is available at http://www.ro.mq.edu.au/ethics/human/forms. If the project has run for more than three (3)) ears you cannot renew approval for the project. You will need to complete and submit a Pinal Report (see Point 1 above) and submit a new application for the project. (The three year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).
3. Please remember the Committee must be notified of any alteration to the project.
4. You must notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that might affect continued ethical acceptability of the project.
5. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University (http://www.ro.mq.edu.au/ethicsfhuman).

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide Macquarie University's Research Grants Officer with a copy of this letter as soon as possible. The Research Grants Officer will not inform external funding agencies that you have final approval for your project and funds will not be released until the Research Grants Officer has received a copy of this final approval letter.

Yours sincerely

Dr Catriona Mackenzie
Chair, Ethics Review Committee (Human Ethics

APPENDIX B:
ETHICS APPROVAL FOR STUDY 2 - SELF-COMPASSION

From: Ethics Secretariat ethics.secretariat@mq.edu.au

To: Ms Susan Jeanne Ferguson <sue.ferguson@mq.edu.au>

Cc: melinda.mcalpine@students.mq.edu.au,

date: Wed, Jun 22, 2011 at 2:22 PM

subject: Final Approval- Ethics application reference-5201100467

mailed-by: mq.edu.au

Dear Ms Ferguson

Re: "Self-compassion and well-being in older adults" (Ethics Ref: 5201100467)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

The following personnel are authorised to conduct this research:

Ms Susan Jeanne Ferguson- Chief Investigator/Supervisor

Ms Elizabeth Figliuzzi & Ms Melinda McAlpine- Co-Investigators

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports. Your first progress report is due on 22 June 2012.

If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy/

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you need to provide a hard copy letter of Final Approval to an external organisation as evidence that you have Final Approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely

Dr Karolyn White

Director of Research Ethics

Chair, Human Research Ethics Committee

APPENDIX C:
ETHICS APPROVAL FOR STUDY 3 - ACCEPTING THE PAST AND PRESENT

MACQUARIE UNIVERSITY

Research Office
Research Hub, Building C5C East
MACQUARIE UNIVERSITY NSW 2109 AUSTRALIA

Phone +61 (0)2 9850 8612
Fax +61 (0)2 9850 4465

Ethics
Phone +61 (0)2 9850 6848

Email ethics.secretariat@ro.mq.edu.au
Web www.research.mq.edu.au/researchers/ethics/human_ethics

31 May 2010

Dr Catherine McMahon
Department of Psychology
Macquarie University

Reference: 5201000420

Dear Dr McMahon

FINAL APPROVAL

Title of project: ***Coping and Acceptance in Older Adults***

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research. The following personnel are authorised to conduct this research:

Dr Catherine McMahon - Chief Investigator/Supervisor
Ms Susan J Ferguson, Miss Florence Choi, Miss Tamara Brkic and Mr Richard Wilkinson- Co- Investigators

Please note the following standard requirements of approval:

1. The approval of this project is **conditional** upon your continuing compliance with the *National Statement on Ethical Conduct in Human Research (2007).*

2. Approval will be for a period of five (5 years) subject to the provision of annual reports. **Your first progress report is due on 31/05/2011.**

   If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report on the project.

   Progress Reports and Final Reports are available at the following website:
   http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. Please notify the Committee of any amendment to the project.

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that might affect continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at: http://www.research.mq.edu.au/about/research_@_macquarie/policies,_procedures_and_conduct

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide Macquarie University's Research Grants Officer with a copy of this letter as soon as possible. The Research Grants Officer will not inform external funding agencies that you have final approval for your project and funds will not be released until the Research Grants Officer has received a copy of this final approval letter.

Yours sincerely

Dr Karolyn White
Director of Research Ethics
Chair, Human Research Ethics Committee

Cc: Ms Susan J Ferguson, Department of Psychology, Macquarie University

Miss Florence Choi, 10/41 Broughton Road, Artarmon 2064 NSW

Miss Tamara Brkic, 57 David Avenue, North Ryde NSW 2113

Mr Richard Wilkinson, 3/164 Wellington Street, Bondi, 2026

APPENDIX D:
ETHICS APPROVAL FOR STUDY 4 - ACCEPTING THE PRESENT AND HOPE FOR THE FUTURE

Approved- Ethics application - McMahon (Ref: 5201200213)

2 messages

Ethics Secretariat <ethics.secretariat@mq.edu.au> Thu, May 10, 2012 at 11:50 AM

To: A/Prof Cathy McMahon <cathy.mcmahon@mq.edu.au>
Cc: Ms Susan Jeanne Ferguson <sue.ferguson@mq.edu.au>, Ms Monica Liston <monica.liston@students.mq.edu.au>, Ms Lareena Brown <lareena.brown@students.mq.edu.au>, Ms Amanda Davis <amanda.davis@students.mq.edu.au>, Ms Millar Naomi Powell <naomi.millar-powell@students.mq.edu.au>

Dear A/Prof McMahon

Re: "Preparing for and accepting stress in older adults: proactive coping, hope and acceptance in older adults" (Ethics Ref: 5201200213)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

A/Prof Cathy McMahon
Ms Amanda Davis
Ms Lareena Brown
Ms Millar Naomi Powell
Ms Monica Liston
Ms Susan Jeanne Ferguson

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 10 May 2013
Progress Report 2 Due: 10 May 2014
Progress Report 3 Due: 10 May 2015
Progress Report 4 Due: 10 May 2016
Final Report Due: 10 May 2017

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy/

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely
Dr Karolyn White
Director of Research Ethics
Chair, Human Research Ethics Committee

APPENDIX E:
PUBLISHED FORMAT OF STUDY 1 (CHAPTER 3A)

INT'L. J. AGING AND HUMAN DEVELOPMENT, Vol. 71(1) 43-68, 2010

OPTIMISM AND WELL-BEING IN OLDER ADULTS: THE MEDIATING ROLE OF SOCIAL SUPPORT AND PERCEIVED CONTROL

SUSAN JEANNE FERGUSON, BA HONS, MCLINPSYCH

ANDREA D. GOODWIN BA, PGDIP PSYCH

Macquarie University, Sydney, Australia

ABSTRACT

To investigate how psychosocial resources may improve well-being for older adults, this study explored the relationship among questionnaire measures of optimism, social support and perceptions of control in predicting subjective well-being (measured with the positive affect subscale of the Affect Balance Scale) (Bradburn, 1969) and psychological well-being (measured with the purpose in life scale of the Ryff Psychological Well-being scales) (Ryff, Lee, Essex, & Schmutte, 1994) among older adults. The potential mediating roles of perceived social support and perception of control were also explored. Participants were 225 adults aged from 65 to 94 years. Optimism was found to be a predictor of both subjective and psychological well-being, and perceived social support was found to mediate the relationship between optimism and subjective well-being, but not psychological well-being. In contrast, perception of control was found to mediate the relationship between optimism and psychological well-being, but not subjective well-being. Longitudinal research is needed to confirm these pathways.

Understanding and promoting positive aspects of well-being in older adults is important given the growing number of older adults, particularly in Western industrialized countries such as Australia where, for example, the over 65s were

doi: 10.2190/AG.71.1.c
http://baywood.com

9% of the population in 1976, yet are projected to be 26% of the population by 2050 (Australian Bureau of Statistics, 2008). Most studies in this age group have focused on depression, stress, and distress, rather than the positive aspects of well-being. Positive well-being has been conceptualized according to Ryff and colleagues (Keyes, Shmotkin, & Ryff, 2002; Ryff, Singer, & Love, 2004) and others (Ryan & Deci, 2001; Waterman, Schwartz & Conti, 2008) as *subjective* (hedonic) well-being, which emphasizes happiness and pleasure; and *psychological* (eudaimonic) well-being, which focuses on the fulfillment of human potential. Most recently an entire issue of the *Journal of Happiness Studies* (2008, volume 9, issue 1) has been devoted to eudaimonic approaches to well-being, beginning with Deci and Ryan discussing its distinction from hedonic well-being. There is also growing empirical evidence for these two aspects of well-being being related but distinct (e.g., Compton, Smith, Cornish, & Qualls, 1996; Ryff & Keyes, 1995). Keyes et al. (2002), for example, in both exploratory and confirmatory factor analyses supported a higher order well-being factor with two distinct oblique factors: psychological and subjective well-being. The highest loading for subjective well-being (SWB) was positive affect and the highest for psychological well-being (PWB) was purpose in life. Similarly, McGregor and Little (1998) found two factors: subjective well-being (which included positive affect) and psychological well-being (which included purpose in life). Ryff et al. (2004) have even found different biological correlates for these two aspects of well-being.

Further to this argument for focusing on positive aspects of well-being, Salsman, Brown, Brechting, and Carlson (2005) have suggested that although many studies have examined relationships between individual positive psychology variables and outcomes, there are few studies that have examined the relationships among multiple positive psychology variables. A greater understanding of the role of multiple positive psychological influences and outcomes would enable the development of programs to improve well-being in older adults.

In this study, positive affect is used as a measure of subjective well-being because it is comparatively modifiable and has a present orientation to life experiences (compared with a past orientation of life satisfaction). While several studies (e.g., Diener & Suh, 1998) and a meta-analytic review (Pinquart, 2001) found that positive affect decreases with age, a longitudinal study over 23 years found that positive affect tends to remain fairly stable with age (Charles, Reynolds, & Gatz, 2001), but with a slight decrease in the oldest ages. Thus maintenance of positive affect in older adults is of particular interest. While there is no agreed definition for psychological well-being, which makes comparison of studies difficult, discussions of this concept uniformly assert that well-being is more than just happiness and focuses on the realization of a person's true potential: on growth and purpose in life (Ryff, 1989). Ryff and Singer (1998) identified purpose in life as a proactive and intentional aspect of well-being and a central component of positive mental health, so this construct will be used as a measure of psychological well-being in this study. Pinquart's (2002) meta-analysis of

purpose in life in old age found a small age-associated decline in purpose in life, as did Ryff and Keyes (1995).

Given the clear distinction between the two types of well-being, it is important to determine whether the psychosocial variables included in the current study differentially relate to psychological well-being and subjective well-being. If differences are found, then this will facilitate the development of more specific goals for interventions and strategies to improve well-being in older adults.

Predictors of Well-Being

(1) Optimism

Dispositional optimism has been defined as the generalized expectation that a person will obtain good outcomes in life (Carver & Scheier, 2001). It is construed as a stable personality characteristic. The positive effects of optimism have been demonstrated across diverse stressful situations (see Lightsey, 1996; Scheier & Carver, 1985; & Scheier, Carver, & Bridges, 1994 , for reviews). Positive effects of optimism could either be mediated through positive coping strategies, for example, optimists use more problem-focused strategies, information seeking and positive reframing (Scheier, Carver, & Bridges, 2001), or through psychosocial variables such as perceived social support and perception of control. It is these potential mediating relationships that are the focus of the current study.

(2) Social Support

In older adults perceived social support is associated with greater positive affect (Jones, Rapport, Hanks, Lichtenberg, & Telmet, 2003; Stephens, Druley, & Zautra, 2002) and life satisfaction (Jones et al., 2003; Newsom & Schultz, 1996). In addition, Kahn, Hessling, and Russell (2003) found that in older adults, social support predicted 57% of the variance in life satisfaction after controlling for dispositional negative affectivity (neuroticism). Therefore, the social support and subjective well-being relationship does not appear to be spurious and applies to various dimensions of subjective well-being in older adults. The relationship between social support and psychological well-being has not been explored as thoroughly. While Pinquart's (2002) meta-analytic review concluded that high-quality social relationships promote purpose in life, he did not find any studies specifically using perceived social network support measures. He argued high-quality relationships motivate people to do positive things for others, which then give them a sense of being useful and respected. Thus we would expect social support to also be associated with purpose in life.

Social support has been found to mediate the relationship between optimism and distress in breast cancer survivors (Trunzo & Pinto, 2003), in disaster workers (Dougall, Hyman, Hayward, McFeeley, & Baum, 2001) and in college students

(Brissette, Scheier, & Carver, 2002). To our knowledge, the current study will be the first to explore the potential mediating role of social support between optimism and well-being in older adults, particularly with positive aspects of well-being, though there has been suggestive evidence using the construct of relationship harmony in predicting life satisfaction in Hong Kong Chinese older adults (Leung, Moneta, & McBride-Chang, 2005).

(3) Perceived Control

The degree to which people believe they can bring about desired outcomes in their environment and avoid undesirable ones has been conceptualized as generalized control (Skinner, 1996). Control is related to positive aspects of subjective well-being, for example, happy people typically feel that they have personal control over their own lives (see reviews by Cummins & Nistico, 2002, and Myers & Diener, 1995). A sense of control has been repeatedly identified as an important factor in the well-being of older adults in particular (see Thompson & Spacapan, 1991 for a review). For example, Kunzmann, Little, and Smith (2002) found perceived control was related to positive and negative affect in older adults. Although the degree of control is lower in older ages (Heckhausen & Schultz, 1995; McConatha, McConatha, Jackson, & Bergen, 1998), the need for control has an increasing contribution to happiness with increased age (Cummins & Nistico, 2002).

It could be argued that individuals need to have a sense of control in their lives to enable them to set and pursue goals in a purposeful and meaningful way, and hence achieve high psychological well-being, though few studies have explored this. Sinha, Nayyar, and Sinha (2002) found that perception of control was related to existential meaning and purpose in life in older adults in India; and social support enhanced perceived control and purpose in life. The related concept of internal locus of control predicted purpose in life in an African-American sample aged 18-68 years (Thompson, Kaslow, Short, & Wyckoff, 2002). Additionally, Ahrens and Ryff (2006) found perceived control moderates some of the relationships between role stress in midlife and well-being measures, though not purpose in life. They do not, however, report tests for direct relationships between perceived control and purpose in life.

One possibility, based on Taylor and colleagues' cognitive adaptation theory (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000), is that optimism and perceived control are largely independent personal resources, or cognitive illusions, which have protective psychological effects and hence contribute to well-being, particularly under conditions of stress (for empirical support see Ratelle, Vallerand, Chantal, & Provencher, 2004; Taylor et al., 2000; Wanberg & Banas, 2000). Similarly, Cummins and Nistico (2002), argue that cognitive schemata result in "positive cognitive biases" (e.g., control and optimism), which homeostaticly maintain life satisfaction. A second possibility (Cozzarelli, 1993; Maher

& Cummins, 2001) is that these two resources may reflect overlapping constructs, but Christensen, Stephens, and Townsend (1998) found mastery (which overlaps with perceived control) predicted life satisfaction even after controlling for dispositional optimism.

This study explores an interesting third possibility: that optimism contributes to control beliefs and strategies. The positive mental set which is part of an optimistic personality may also contribute to high perceptions of control over the environment and, through those perceptions, may lead to well-being. To date, neither research nor theory has explored the potential relationship between optimism and perception of control: a condition necessary to develop a hypothesis for a potential mediating relationship. This study explores whether perceptions of control mediate the relationship between optimism and subjective well-being; and/or between optimism and psychological well-being.

Aims of the Study

In summary, the research literature has not yet explored the relationship between psychosocial variables and multiple positive aspects of well-being in relation to older adults. Although studies have examined relationships between optimism, well-being and perceived social support and between optimism, well-being and perception of control, it appears that none have examined these constructs together. Additionally, research has not yet explored the relationships among these psychosocial variables with a view to examining potentially differential outcomes for subjective well-being and psychological well-being. Therefore, the first aim of the study was to extend the positive psychology and gerontology literature by examining the relationships among optimism, social support, perceptions of control and both subjective well-being and psychological well-being. A further aim was to explore social support and perceptions of control as potential mediators of the beneficial effects of optimism on well-being in older adults. As an exploratory step, it was proposed to include both potential mediators in the analyses for each type of well-being separately to determine if relationships between variables are robust. These posited models, with both social support and perception of control partially mediating the effects of optimism on each type of well-being (purpose in life and positive affect), are shown in Figure 1. Note, however that while each measure of well-being will be examined separately, they have been amalgamated into a single diagram here for illustrative purposes as the proposed paths to well-being in these initially posited models are the same.

Finally, alternate models of the relationships between these variables will also be explored. Specifically, the possibility that positive affect may lead to higher perceptions of social support as suggested by Cummins and Nistico (2002), and Myers and Diener (1995) will be tested. Also, in the same alternate model, whether positive affect leads to higher perceptions of control will also be tested based on McAvay, Seeman, and Rodin's (1996) finding that negative affect led

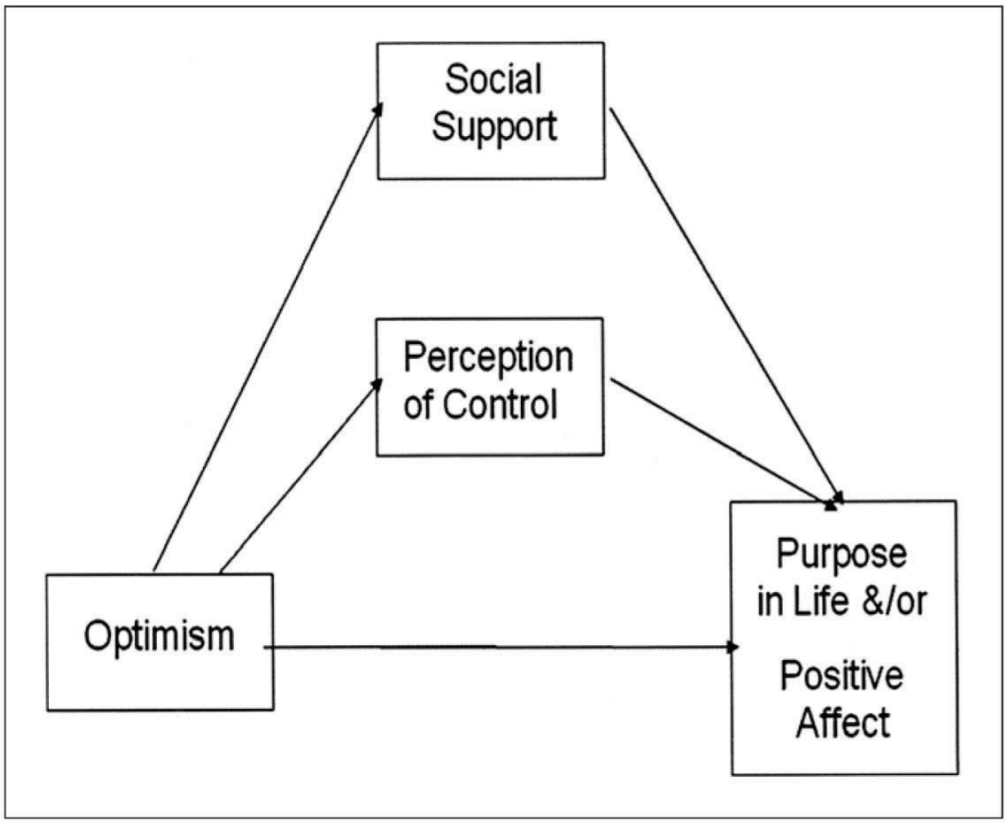


Figure 1. Posited model with hypothesized mediating roles of perception of control and social support on the relation between optimism and both purpose in life (psychological well-being) and positive affect (subjective well-being).

to lower control perceptions. Finally, to see if these effects (if they occur) are unique to affect or generalize to other aspects of well-being, whether having a sense of purpose in life may also contribute to higher perceived support and higher perceived control will also be explored.

METHOD

Participants

A total of 225 participants (145 women; 80 men), aged from 65 to 94 years (mean of 73 years), were recruited in Sydney from retirement villages, volunteer, and other community organizations. Most were married (52.4%), followed by widowed (24.4%), never married (14.2%), and divorced (8.9%). Sixty-one percent had someone living with them. Participants' education ranged from 3 years up (mean 12.95 years). Seventy-six percent were born in Australia;

other birthplaces included United Kingdom or Ireland (12.9%), New Zealand (2.2%), China (.5%), India (.5%). Whilst only 34% of participants belonged to a formal volunteer organization, 74% undertook volunteer work of some type. Eighty percent of participants rated their health as good or better (excellent: 8.9%, very good: 27.6%, good: 43.6%); the remainder rated their health as fair (16%) or poor (4%). Fifty-seven percent rated their income as adequate; quite good: 24%, very good: 14%, and insufficient: 12%.

Questionnaires

All measures used are existing published scales. Alpha reliabilities from the current study are reported for each scale in Table 1. All scales were scored so that higher scores represented higher levels of that variable.

Two outcome variables were used to measure well-being: psychological well-being and subjective well-being.

Psychological Well-Being (PWB)

The Purpose in Life sub-scale from Ryff's (1989) psychological well-being measure was used as the measure of PWB. It has a mix of positively (e.g., "I enjoy making plans for the future and working to make them a reality") and negatively worded items (e.g., "I used to set goals for myself, but now that seems a waste of time"). The 14-item version was used, which has an internal consistency alpha of .88 and demonstrated correlations with other positive well-being measures (Ryff et al., 1994). According to Ryff and Singer (2006) the subscales show good discriminant validity.

Table 1. Ranges, Means, Standard Deviations, and Reliabilities of Major Variables

Variable	*N*	Possible range	Obtained range	Mean	Standard deviation	Scale alpha
Purpose in Life (OV)	223	6-84	39-84	66.56	10.51	.85
Positive Affect (OV)	212	0-5	0-5	3.86	1.19	.57
Optimism (PV)	226	0-12	3-12	8.38	2.00	.76
Social Support (MV)	210	1-6	2-6	5.19	.75	.92
Perception of Control (MV)	225	3-15	5-15	11.71	2.05	.71

OV = Outcome variable, PV = Predictor variable, MV = Mediator variable.

Note: Scales were scored so that higher means represent high Purpose in Life (psychological well-being), Positive Affect (subjective well-being), Optimism, Social Support and Perception of Control.

Subjective Well-Being (SWB)

The Affect Balance Scales (ABS) (Bradburn, 1969) five-item subscale of Positive Affect was used as the measure of subjective well-being. Respondents indicated yes or no about feelings during the "past few weeks." An example item is: "did you ever feel particularly excited and interested in something?" In older adults reliabilities ranging from .65 to .70 have been found (Himmelfarb & Murrell, 1983). Bradburn (1969) provided evidence of correlations with other well-being measures and social participation.

Dispositional Optimism

The predictor variable, dispositional optimism, was measured using the Life Orientation Test – Revised (LOT-R) (Scheier et al., 1994). The LOT-R consists of 10 items (four of which are fillers). Three items reflect an optimistic disposition, for example: "In uncertain times I usually expect the best." Only the optimistic item total was used in this study, as previous studies have indicated optimism and pessimism load on separate factors (e.g., Chang, Maydeu-Olivares, & D'Zurilla, 1997).

Social Support

The Social Support Questionnaire – Short Form (SSQ-R) (Sarason, Sarason, Shearin, & Pierce, 1987) support satisfaction subscale was used to measure social support. Participants were asked to state how many people they could count on in a given situation and how satisfied they were with the level of support they received. For the latter, participants indicated on a scale from 1 to 6 whether they were very dissatisfied (1) or very satisfied (6) about the support they received (for example, "Whom can you really count on to be dependable when you need help?"). The participant's support satisfaction score (SSQ-SR) was the sum of his or her satisfaction responses divided by the number of items (6). Sarason et al. (1987) found internal consistency alphas of between .90 and .93 for the satisfaction scale, and demonstrated good scale validity (through relationships with other measures of support and with loneliness, depression and anxiety).

Perceived Control

A scale with three questions was used to measure perceived control (McConatha et al., 1998), with each question rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were: (1) "I often feel that most situations are out of my control"; (2) "Usually I feel that I have control over what is going on in my life" and (3) "Life is complicated; a person like me can't understand what is going on." The scale internal-consistency alpha was .60 in McConatha and colleagues' (1998) study, and .71 in the current study. These researchers also demonstrated the control scale's validity through its relationship to life

satisfaction, health and fitness. A later study (McConatha & Huber, 1999) also showed discriminant validity for the perceived control scale showing different age changes compared to those found with a measure of control over emotions.

Procedure

After receiving institutional ethics approval, approval from the community and volunteer organizations and retirement villages was obtained. Then several strategies were used to contact potential participants, distribute and collect questionnaires. These included: (i) leaving bulk questionnaires at drop-off points with a secure collection box and collecting completed questionnaires at a later date; and (ii) researchers attending meetings of members/residents to explain the purpose of the study and answer questions: interested members could collect a questionnaire from the researcher, with the researcher who returned to the next scheduled meeting to collect completed questionnaires. Stamped addressed envelopes were also given to members/residents to return completed questionnaires to the project supervisor by mail if they preferred. Confidentiality was assured, as was the voluntary nature of participation. Participants had to be 65 years of age or more. The questionnaire took approximately 45 minutes to complete.

RESULTS

Descriptive statistics and correlations were first obtained using SPSS 16. Path analyses were then carried out with Amos 7 (Arbuckle, 2006) in order to test a series of potentially mediating relationships, using the maximum-likelihood method. The significance of indirect effects was tested using bootstrapped standard errors in Amos and in Mplus 5 (Muthen, & Muthen, 1998-2007). Initial mediations were tested with two types of well-being as outcome variables (psychological well-being and subjective well-being), one predictor variable (optimism) and two potentially mediating variables (social support and perception of control). For all tests the type I error rate was set at $\alpha = .05$.

Descriptive Statistics

Descriptive statistics for the two outcome variables, psychological well-being (Purpose in Life) and subjective well-being (Positive Affect); the predictor variable, optimism; and the two mediator variables, social support and perception of control are presented in Table 1. Participants reported high scores for each variable. For example, for psychological well-being with a possible range of 6-84, the obtained range was 39-84 with a mean score of 66.56 (SD = 10.51).

Correlational Analyses

Correlations among the two measures of well-being, optimism, social support and perception of control are presented in Table 2. Optimism (OPT) showed a

Table 2. Correlations among Variables

Variable	1	2	3	4	5
1 Purpose in Life (OV)	—				
2 Positive Affect (OV)	.39**	—			
3 Optimism (PV)	.46**	.44**	—		
4 Social Support (MV)	.30**	.37**	.33**	—	
5 Perception of Control (MV)	.58**	.29**	.45**	.28**	—

OV = Outcome variable, PV = Predictor variable, MV = Mediator variable.
**$p < .01$

significant moderately positive association with Purpose in Life (PIL), Positive Affect (PA) and the two mediator variables—social support (SS) and perception of control (POC). Age was not correlated significantly with any of the variables, so it was not considered in further analyses.

Mediational Analyses

The following four conditions must be met to establish mediation (Baron & Kenny, 1986); variables in the current study are included in brackets. Step 1: the predictor variable (optimism) is related to the outcome variable (purpose in life and positive affect). Step 2: the predictor variable (optimism) is related to the potential mediator (social support and perception of control). Step 3: the mediator (social support and perception of control) is related to the outcome variable (purpose in life and positive affect), and this relation remains once the predictor variable (optimism) is included in the model. Step 4: the relation between the predictor variable and the outcome variable significantly decreases once the mediator is included in the model.

All analyses were carried out with cases with missing data on any of the key variables removed, leaving a sample size of 197 for model testing. Comparisons of those included in the final models with those excluded due to missing data found no differences between the groups on age, perceived health, marital status or volunteering. There was, however a trend for slightly more females than males to be excluded from the model testing due to missing data χ^2 (224) = 3.792, $p = .067$. There was also a borderline difference between groups on education $t(217) = 1.959$, $p = .051$, with those excluded having slightly fewer years of education ($M = 11.58$, $SD = 3.711$) than those included in model testing ($M = 13.15$, $SD = 3.847$). Those excluded were also significantly slightly more likely to have insufficient income χ^2 (224) = 8.235, $p = .040$. Thus there is a

slightly disproportionate loss of data from those with lower socioeconomic status, but not from those of greater age or poorer health, which might have affected the models' wellbeing outcomes.

The posited models above (separately for PIL and PA) were fitted first. Tests of alternate models were then carried out. The *p* values for the path coefficients for all models fitted were checked against bootstrapped estimates and found to be consistent; therefore any slight variations from normality in distributions did not make a difference to the results. The majority of remaining direct paths are significant in all models, the exceptions are marked "ns" in Figures 2 and 3.

As suggested by Kline (2005), the model χ^2 was used as a "badness-of-fit index, as the higher its value, the worse the model's correspondence to the data" (p. 135). Kline also recommends the use of the Root Mean Square Error of Approximation (RMSEA; Browne, & Cudeck, 1993), as a further test of model fit because it is does not assume the researcher's model is perfect. Higher values again indicate worse model fit (RMSEA of >.1 suggests poor fit). Thirdly, Kline (2005) recommends the use of the Comparative Fit Index (CFI) (Bentler, 1990), and suggests that values >.9 may indicate good fit of the researcher's model. Finally, the Tucker-Lewis Index (TLI) is also reported for each model as it is a fit index relatively unaffected by sample size (Marsh, Balla, & McDonald, 1988), values closer to 1 indicating better model fit. Each of these fit indices is reported for all models in Figures 2 and 3.

In all models with acceptable fit, bootstrapping was then used to test the significance of indirect paths (and therefore if mediation was occurring), that is, testing step 4 in Baron and Kenny's (1986) procedure. When models contained only one indirect path to any variable from the same origin, *p*-values were provided by AMOS. When more than one indirect path was found to any terminating variable from the same originating variable in a model, the specific indirect paths were checked for significance with the Mplus program (Muthen & Muthen, 1998-2007), which also bootstraps to provide tests of significance. Results of these AMOS, and where appropriate, Mplus bootstrap analyses of indirect effects are presented in Figures 2 and 3 (for PIL and PA respectively), in the form of standardised coefficients for the indirect paths and *z* tests of significance with resulting *p* values of significance.

Optimism was retained in all models as an exogenous variable, as it is measured in this study as a stable personality trait. All models for Purpose in Life are presented in Figure 2, and all models for Positive Affect are presented in Figure 3.

Testing Models of Purpose in Life

Looking first at the models for purpose in life, Figure 2 shows the estimates for model fit. The posited model (Model 1) was not a good fit and there was no significant path from SS to PIL; this path was therefore dropped from all

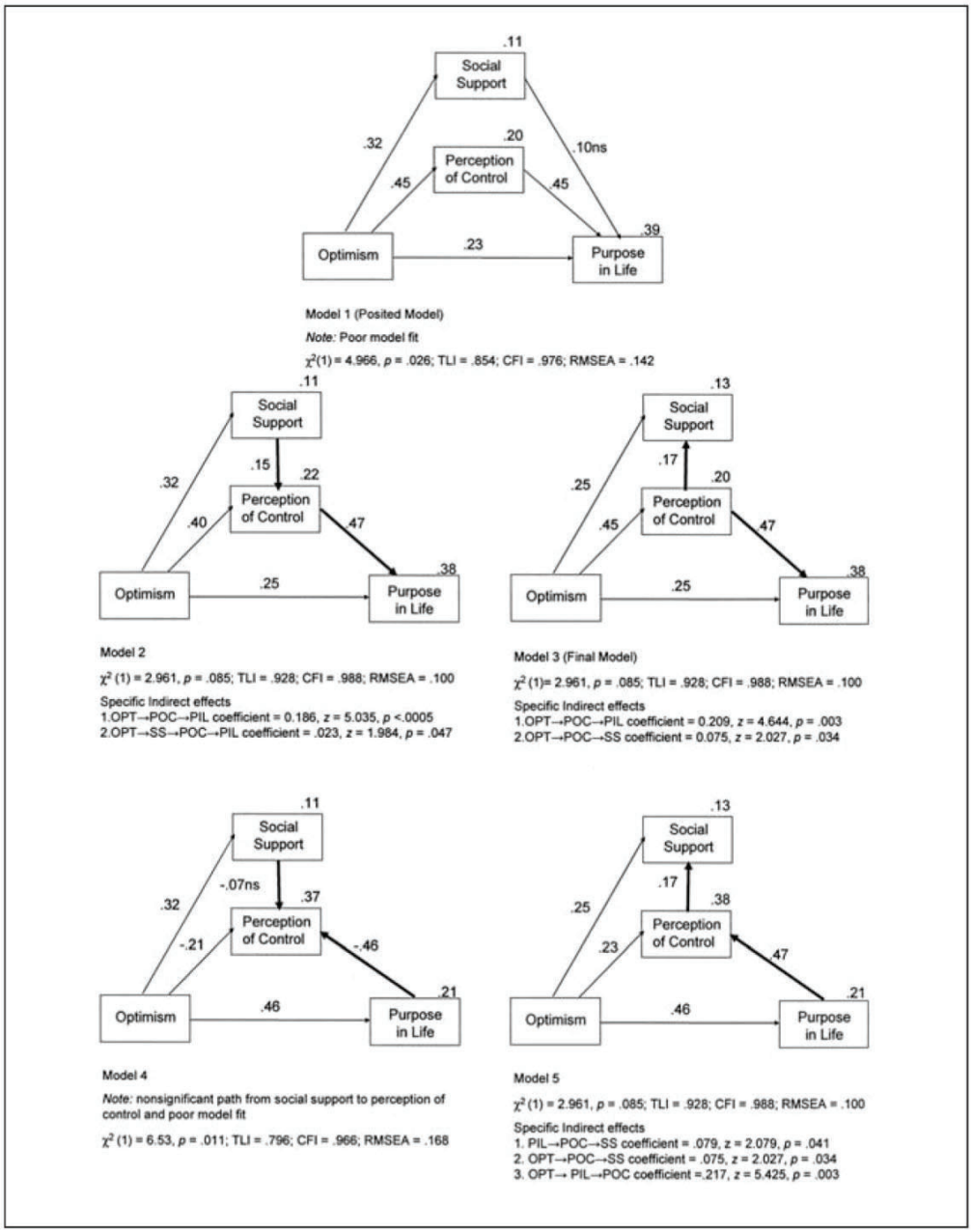


Figure 2. Models of Purpose in Life.

Each model shows standardized path coefficients for optimism, perception of control, social support, and purpose in life (psychological well-being). All path coefficients in each model are significant except those labeled ns. Arrows showing paths that differ between models are highlighted. Under each model are the Model Fit Indices, and where there is acceptable model fit, then standardized coefficients are presented for each indirect path. **Note**: OPT = Optimism, SS = Social Support, POC = Perceptions of Control, PIL = Purpose in Life.

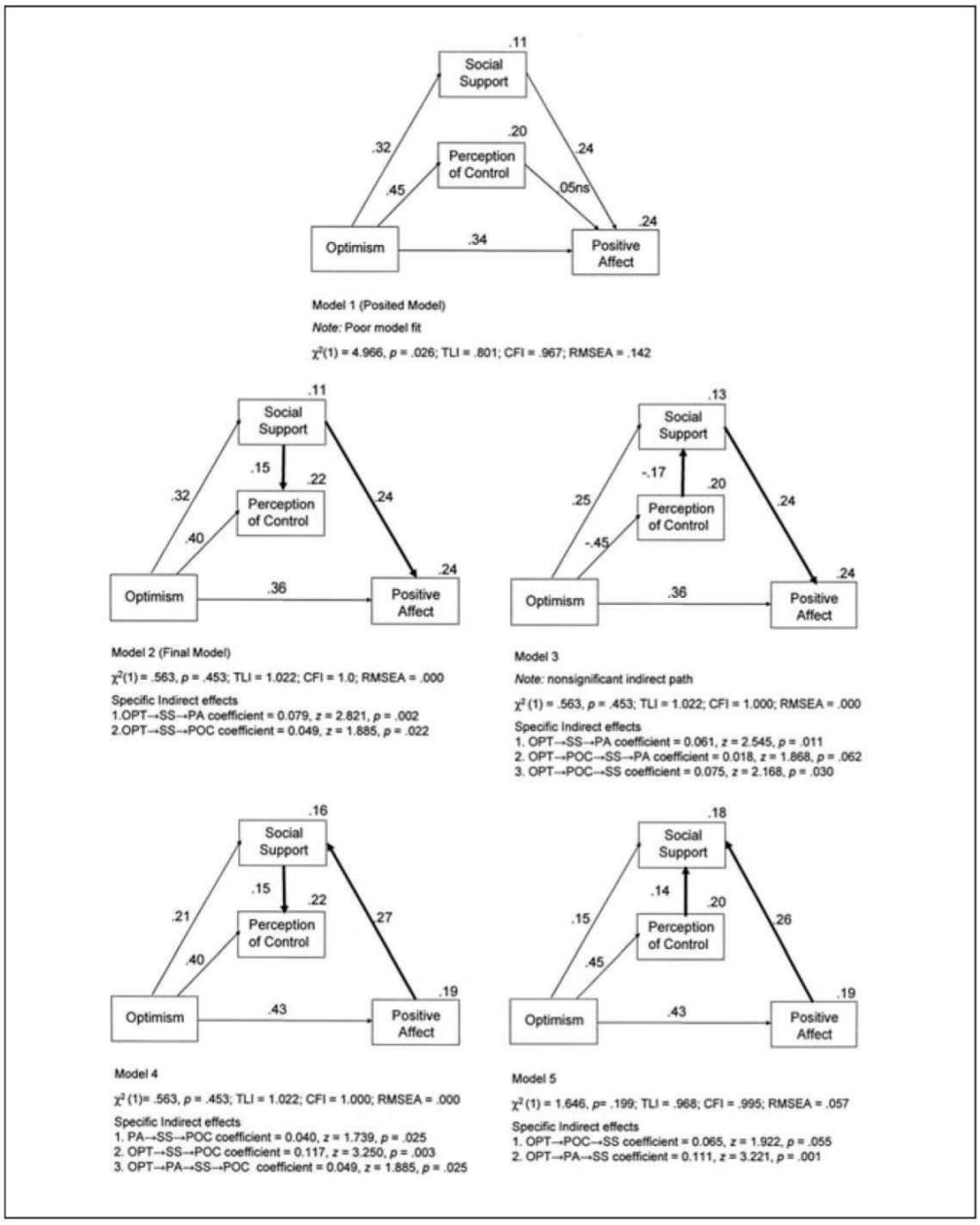


Figure 3. Models for Positive Affect.

Each model shows standardized path coefficients for optimism, perception of control, social support, and positive affect (subjective well-being). All path coefficients in each model are significant except those labeled ns. Arrows showing paths that differ between models are highlighted. Under each model are the Model Fit Indices, and where there is acceptable model fit, then standardized coefficients are presented for each indirect path. **Note**: OPT = Optimism, SS = Social Support, POC = Perceptions of Control, PIL = Purpose in Life.

subsequent model tests. A replacement path was required to proceed with the path analysis. The model clearly requires a link between SS and POC, as these two variables are significantly correlated. Given both directions of this new path were plausible; models were constructed separately for each. Hence models 2 and 3, were added to those originally proposed (see Figure 2). Next, models were constructed to test the possibility, mentioned in the introduction, that well-being may contribute to perceptions of control, rather than the other way around. The unexpected need for the additional pathway between SS and POC (see above) necessitated two models here as well. Thus Models 4 and 5 were also constructed and tested. The paths that vary between models are shown in bold in Figure 2.

Model 4 does not have acceptable fit so it was rejected. Models 2, 3, and 5 showed equivalent acceptable fit. Models 2 and 3 both have the best statistical fit for the data and best predictive value for PIL; they differ only in the direction of the path between SS and POC. Following rejection of Models 1 and 4, in the remaining mediational models tested, Steps 1 to 3 requirements for mediation (as outlined above) were met for all remaining paths as illustrated in Figure 2, with all required direct path coefficients reaching statistical significance. Further testing within these models for mediation effects (Step 4) was then done by examining specific indirect effects (see Figure 2).

In Model 2 for PIL, the indirect path from OPT to POC to PIL is highly significant; but the path from OPT via both SS and POC to PIL is also significant, but at a lower level. Thus, the significant mediation in Model 2 is predominantly the path originally posited, where POC partially mediates the relationship between OPT and PIL, but with a small contribution to PIL also coming from the second indirect path from OPT through first SS and then POC. In Model 3 for PIL, there are two indirect paths, one from OPT to POC to PIL, as originally posited, this was again highly significant; and the second indirect path was from OPT to POC to SS, this was also significant. Model 5 had no indirect paths to PIL, but two indirect paths to SS and one to POC. The first specific indirect path was from PIL to POC to SS and was significant; the second indirect path was from OPT to POC to SS and was also significant. The third indirect path in Model 5 is from OPT to PIL to POC and was highly significant.

In summary, for purpose in life, Models 2 and 3 explain the most variance in PIL (38%, compared to 21% for Model 5), and both show the simple partial mediation of the OPT to PIL relationship via POC, and they differ only in the proposed direction of the relationship between SS and POC. Model 3 (Figure 3) was chosen as the final model for purpose in life as it is the most parsimonious (with only one indirect path to PIL), yet still explains 38% of the variance in PIL; it also has good model fit, and all direct and indirect paths are significant. This final model has a highly significant indirect path showing partial mediation of the effects of OPT on PIL by POC, as originally posited.

Testing Models of Positive Affect

Now turning to models for positive affect, Figure 3 shows the estimates for model fit. Here also, as with the model of PIL, the posited model (Model 1) was not a good fit Additionally, there was no significant path from POC to PA, necessitating the removal of this path from subsequent models. As with the PIL models, in predicting PA the model clearly does require a link between SS and POC. Models 2 and 3 for PA were thus constructed in the same manner as for PIL and can be seen in Figure 3. Next models were constructed to test the possibility mentioned in the introduction that positive affect may contribute to social support, rather than the other way around. Again the addition of the two alternate directions of the pathway between SS and POC necessitated 2 models for this, Models 4 and 5. All models for PA are shown in Figure 3, again with the paths that vary between models bolded.

Model 5 for PA does have acceptable statistical fit (see Figure 3). However, Models 2, 3, and 4 all have identical excellent fit indices. In summary, for the prediction of Positive Affect, Models 2, 3, 4, and 5 all had acceptable fit. Thus mediation effects were tested for each of these models (in the same manner as for the PIL models). Following the rejection of Model 1 (the posited model), in the remaining mediational models tested, Steps 1 to 3 requirements for mediation (as outlined above) were met for all remaining direct paths as illustrated in Figure 3, with all required path coefficients reaching statistical significance. As with the models of PIL above, further testing within these PA models for mediation effects (Step 4) was then done by examining specific indirect effects (see Figure 3).

Model 2 has two indirect paths, one from OPT to SS to PA, which was highly significant. Thus the relationship between OPT and PA was partially mediated by social support as originally posited. The second indirect path from OPT to SS to POC was also significant, but only at the $p < .05$ level. Model 3 had two indirect paths to PA, and one to SS. The first specific indirect path is from OPT to SS to PA and it was significant here, as it was in Model 2. Indirect path 2 in Model 3, from OPT to POC to SS to PA was not significant. The third indirect path from OPT to POC to SS was significant. Due to the non-significant indirect path Model 3 was rejected. Model 4 has three indirect paths, path 1 is from PA to SS to POC, and it was significant but only at the .05 level. Indirect path 2 was from OPT to SS to POC and it was highly significant. The third indirect path for Model 4 was from OPT to PA to SS to POC and this was also significant, but only at the .05 level. Finally, Model 5 has two indirect paths, both from OPT to SS. The first path is from OPT to POC to SS, this was not significant; the second path was from OPT to PA to SS and it was significant. Given the presence of a non-significant indirect path, Model 5 was rejected.

While there is some evidence for a role of PA in affecting SS rather than the other way around (Model 4), Models 2 and 3 explain the most variance in positive

affect (24% compared to 19%). Model 3 contains one indirect path that is, in fact, not significant (see Figure 3), so it was rejected. Model 2 was thus chosen as the final model for positive affect, as it seems to be the best explanation for the data, given the good model fit, significance of all direct and indirect paths, and that the aim was to predict positive affect. This final model has a highly significant indirect path from OPT to SS to PA. Thus the relationship between OPT and PA was partially mediated by SS as originally posited.

DISCUSSION

Optimism was a strong predictor of both types of well-being. Its effects were, however, predominantly mediated by different variables, depending on the outcome being tested. When multiple mediators were entered into the same model, social support, but not perceived control, mediated the effects of optimism on positive affect, our measure of subjective well-being; however, while perceived control mediated optimism in predicting purpose in life, our measure of psychological well-being, social support was not a significant mediator for psychological well-being. Thus, this study provides conditional evidence for the mediating role of social support and perception of control in the relation between optimism and well-being because the significance of the mediating role is conditional upon the type of well-being measured: subjective well-being or psychological well-being. Findings regarding different mediators for subjective well-being and psychological well-being, while not supporting the original posited models shown in Figure 1, do provide support for previous findings that hedonic (subjective) and eudaimonic (psychological) views of well-being represent two separate dimensions and theoretical positions (Keyes et al., 2002; Ryan & Deci, 2001; Ryff et al., 2004; van Dierendonck, 2004) and have different, though overlapping predictors.

Finding for Subjective Well-Being (Measured as Positive Affect)

While not supporting the full posited model, this study did find evidence for the posited mediating role of social support between optimism and subjective well-being in the final model (Model 2) for Positive Affect. Although research had not yet explored these relationships with older adults, this result is consistent with findings of other studies in a range of populations (Brissette et al., 2002, Trunzo & Pinto, 2003). Further, the relationship between perceived social support and subjective well-being implicit in the mediation results is consistent with the findings of studies with older adults in a range of settings (Jones et al., 2003; Newsom & Schultz, 1996; Stephens et al., 2002).

Note that interestingly, this final model also includes two additional paths. The first was from optimism to perceptions of control consistent with predictions that positive views of the future would contribute to a sense of being able to

control aspects of one's life. The second additional path supported in the final model is from social support to perceptions of control. This finding is consistent with Bandura's (1997) conceptualization in which having support from others maintains perceptions of domain specific efficacy, and is consistent with research findings of Sinha et al. (2002), Krause (2007), and McAvay et al. (1996). The results of the present study suggest that this effect of social support on efficacy generalizes to broader perceptions of control.

What factors underlie the optimism to perceived social support to subjective well-being mediational pathway demonstrated in the final model (Model 2) for positive affect? People with a more optimistic disposition may be more attractive to others as they have a positive outlook. Thus they may attract more people, develop more friendships and maintain closer relationships with their family, whereas people may feel uncomfortable and perhaps overwhelmed in the company of pessimistic people and avoid being with them (Brissette et al., 2002; Dougall et al., 2001). By attracting more people, optimists may increase the size of their support network, which could potentially increase the number of people who are available and willing to help them (Dougall et al., 2001; Trunzo & Pinto, 2003), and thus they may be more likely to express satisfaction with their level of social support. Older adults who are more optimistic therefore tend to have greater perceived social support (Brissette et al., 2002; Dougall et al., 2001). Through perceiving friends and family as supportive, it is more likely that optimistic older adults, in contrast to pessimistic older adults, will feel more satisfied with their lives and experience more positive affect, as found in the current study, because as previous research has shown (Jones et al., 2003; Stephens et al., 2002), higher social support is associated with higher positive affect.

Finding for Psychological Well-Being (Measured as Purpose in Life)

This study also, while not supporting the posited model for purpose in life, did find evidence for a mediating role of perception of control between optimism and psychological well-being as seen in Models 2 and 3 for Purpose in Life. Although previous studies have not explicitly examined multiple mediators, our results are consistent with findings of associations between optimism and well-being (e.g., Chang et al., 1997) in younger samples, and perception of control and well-being (e.g., Lu, Shih, Lin, & Ju, 1997; Sinha et al., 2002) in various age groups, including between control and purpose in life specifically (Jackson & Coursey, 1988).

Note Model 3 was chosen as the Final model for PIL as it is the most parsimonious, yet it still also includes a second indirect path, in this case from optimism to perception of control and then to social support. Thus while social support is not predicting purpose in life, optimism is having multiple impacts on

older individuals in this sample, being associated both directly and indirectly with not just purpose in life but also perceptions of control and social support (which is also true in Model 2). This path from perception of control to social support (as seen in Models 3 and 5 for both forms of well-being) is consistent with Thompson et al. (2002) who suggested that self-efficacy beliefs are predictive of social support, however, their study was cross-sectional & did not test alternative models. Additionally, there are as yet no longitudinal studies supporting this direction of the relationship between support and control, whereas several studies have found the reverse, that is, social support leading to measures of efficacy or role specific control (Krause, 2007; McAvay et al., 1996; Sinha et al., 2002). This contradiction implicit in previous findings regarding the direction of this effect informed our approach of testing both directions of effect in the present study. While statistically significant in models of both types of well-being, the relationship is small (.15 to .17), however, and the direction remains inconclusive.

What factors underlie the optimism to perception of control to psychological well-being mediational pathway found in both Models 2 and 3 for purpose in life? It could also be argued that the present study's findings of effects for optimism and perceived control on well-being partially support Taylor et al.'s (2000) cognitive adaptation theory and research on positive illusions which posit that both optimism and perception of control act as protective resources to promote well-being and contribute to an individual's ability to find meaning from adverse experiences (Taylor et al., 2000). Meaning is a key aspect of psychological well-being and is part of the purpose in life construct, so this model would predict purpose in life from optimism and control. This study's findings could also be argued to support an expansion of Cummins and Nistico's (2002) homeostatic model of life satisfaction to include the prediction of other positive aspects of subjective well-being (such as positive affect).

There are, however, several problems with interpreting the current results as supportive of these theories. First, the lack of support for control acting either directly or as a mediator in predicting positive affect goes against this argument. Secondly, neither of these theoretical models can account for the mediating pathways found in the present study, as both consider optimism and control perceptions separately, assuming that each makes an independent contribution to well-being. Now, while it is possible that both control and optimism act as positive illusions and bias the processing of incoming information, as these theories both suggest, they would need to be modified to take into account the path from dispositional optimism to perceived control to well-being found in the current study. Thirdly, neither theory can explain the role of social support in well-being, though perhaps they could be extended to argue that perceptions of social support may also be a product of positively biased interpretations of incoming information. Fourthly, neither theory allows for the possibility of potential reversing of their proposed causal direction, or for bidirectional influences.

Finally, neither theory takes into account the differences between subjective and psychological well-being and thus cannot account for the discrepant findings between these two outcomes.

Tentatively one could argue instead that optimistic older adults, rather than just having control perceptions distorted through an interpretative positivity bias, may adopt active coping strategies to achieve their goals or to reengage with alternative goals, which in turn would bolster, develop and enhance their sense of personal control. They may subsequently reevaluate their goals and priorities, which would enable them to find a sense of meaning from their experiences and a sense of purpose for the future. This process is similar to Baltes' Selective Optimization with Compensation theory (Baltes & Baltes, 1990) and could perhaps be further explored in that context. Each aspect of this proposed pathway needs to be explored and validated in future research, though there is evidence for the first step, that is, optimistic adults do tend to use more active, problem-focused coping strategies (Scheier et al., 2001); and the current study provides evidence that perceived control is linked to a sense of purpose in life, though the processes by which this occurs remain to be explored.

Tests of Alternate Direction of Effects (from Well-Being to Social Support and/or Control)

Several of the models statistically supported in the current study (Model 5 for purpose in life and Models 4 and 5 for positive affect) suggest that the causal direction may be the reverse of what was predicted. Well-being, particularly positive affect, may contribute to perceptions of social support; or in the case of purpose in life, to perceptions of control over outcomes. Given the cross-sectional nature of these findings, what evidence is there from previous longitudinal studies to suggest that this or the originally posited causal direction is more plausible? While Myers and Diener (1995) suggested the causal direction from traits to subjective well-being may be reversed, they provided no evidence for this. Diener, Oishi, and Lucas (2003) again make this claim, but the only evidence they cited are Cunningham (1988) and Isen (1987) that inducing positive moods leads to greater sociability, which they equate with extraversion. While this could potentially contribute to greater perceptions of social support, the link is rather tenuous at this stage. Indeed, longitudinal studies such as Russell and Cutrona (1991) found in older adults that social support predicted levels of depression 12 months later. Similarly, Stephens and colleagues (2002) linked prior levels of social support to later improvements in knee pain and positive affect in osteoarthritis patients. Results of longitudinal studies also suggest that perceptions of control (mastery) precede well-being (Martire, Stephens, & Franks, 1997; Townsend, Noelker, Deimling, & Bass, 1989). Thus, despite quite good statistical model fit for some models with pathways from well-being to other variables (Models 5 for both and Model 4 for positive affect only), these models are less

plausible than the remaining models as prior evidence does not support them. Additional longitudinal studies need to be conducted to confirm this conclusion.

Overall Findings

Overall, this study provides consistent evidence of, and further support for, the beneficial effects of optimism on both types of well-being in older adults, both directly and when mediated through perceived social support or perception of control. For example, the direct effect of optimism on purpose in life accounts for 21% of the variance (in Models 4 and 5 where there is no indirect path to optimism); and the direct effect of optimism on positive affect accounts for 19% (in corresponding models). When indirect paths are included, the variance explained by optimism is raised to 38% for purpose in life, and to 24% for positive affect. Optimism, then, appears to be quite a strong contributor to well-being in older adults, and to have its effect at least partially through its influence on positive perceptions (e.g., of the provision of social support) and expectations (e.g., of control over outcomes). This explanation is supported by Leung et al.'s (2005) finding that the effects of optimism on life satisfaction (a measure of subjective well-being) were mediated by expectations (of relationship harmony) and perceptions (of financial status) in Chinese older adults in Hong Kong.

Limitations and Future Research

Some limitations of this study should be noted. First, the research is limited by the exclusive use of self-report measures, thus the potential constraints of shared method variance is potentially problematic. Further studies using multiple informants would enhance the validity of these findings.

The use of single aspects of both subjective well-being and psychological well-being may have limited the extent to which these concepts were examined and the generalizability of the conclusions. A positive affect scale with greater reliability such as the Positive and Negative Affect Scales (PANAS) (Watson, Clark, & Tellegen, 1988) could be used in future research. Also, additional dimensions of psychological well-being (e.g., personal growth) and of subjective well-being (e.g., negative affect or life satisfaction) could be included to see if the same mediational relations hold for each type of well-being. Also, another measure of perceptions of control could be used to clarify whether the current findings have been influenced by two of the three items used being negatively worded. Future research could include a wider range of variables and their relations with each other and with the two types of well-being. In particular, self-esteem could be included, as it is mentioned in both theoretical models discussed previously (Cummins & Nistico, 2002; Taylor et al., 2000). Optimism may be mediated through self-esteem for some aspects of well-being. Revisions to

these models could be proposed following additional confirmation of the mediational pathways found in the current study.

A further limitation to the generalizability of the findings is that the sample was not representative of all older adults, as the majority of participants were community dwelling, engaged in volunteer activities, rated their health as good (or better) and were highly educated for their age group. Future research could explore the generalizability of these findings, not only to frail older adults, but also to older adults who are not involved in volunteer work and those from non-Western cultures.

While the model choice following rejection of the original models was not haphazard, each model being based on either past empirical relations or theoretical propositions, there is still a danger that fitting the models could capitalize on the peculiarities of this sample rather than being generalizable. Thus the final models need to be confirmed in an independent sample.

As the study was cross-sectional, there is more than one way to interpret the data, since the direction of the relation is not known. Longitudinal studies that examine changes in relationships among variables over time would help to define more clearly issues of direction. There was minimal guidance from theory regarding the relationships among the variables. Further exploration of theoretical bases for relationships, such as social cognition models would be useful in future research.

Finally, given the plethora of terms used, researchers need to define clearly the type of social support (Barrera, 1986; Thoits, 1995) and the type of control (Haidt & Rodin, 1999; Skinner, 1996; Thompson & Spacapan, 1991) they include in their future studies to ensure that the correct construct is being examined.

CONCLUSION

The results of this study indicate that optimism is a powerful predictor of well-being in older adults, and that both perceived social support and perception of control are powerful predictors of well-being, but importantly that they differentially relate to psychological well-being and subjective well-being. One implication is that it is important to consider different psychosocial variables and different processes in the context of, the specific type of "well-being." Optimism seems to work in part by increasing older adults' perceptions of support from friends and family and this then makes them happy; but to feel a sense of purpose and meaning in life optimism works in part through fostering a sense that they have some control over their environment. This may be because of the different focus of the resource, with social support as a "social" resource and optimism and perception of control as "personal" resources, but further research is required to explore these relations in domain-specific contexts, for example, when older adults relocate to a retirement village or a nursing home, so that appropriate resources may be provided to maintain and enhance levels of both

subjective and psychological well-being. This distinction between types of well-being and their predictors is important for research and also when developing policies and designing and implementing interventions aimed at promoting enhanced quality of life for older adults.

ACKNOWLEDGMENTS

The authors thank Dr. Alan Taylor for his analysis of the data and for his invaluable statistical advice. We also thank Doone Richmond and Tanya Gebbie for their involvement in the selection of measures and collection of data and Dr. Catherine McMahon, Associate Professor Kay Bussey, Dr. John Cunningham, and the anonymous reviewers for helpful comments on drafts of this article.

REFERENCES

Ahrens, C. J. C., & Ryff, C. D. (2006). Multiple roles and well-being: Sociodemographic and psychological moderators. *Sex Roles, 55*, 801-815.

Arburkle, J. L. (2006). *AMOS 7.0 user's guide*. Chicago: SPSS Inc.

Australian Bureau of Statistics. (2008). *Yearbook Australia 2008*. Canberra: Australian Bureau of Statistics.

Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1-34). New York: Cambridge University Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology, 51,* 1173-1182.

Barrera, M. (1986). Distinctions between social support concepts, measures, and models. *American Journal of Community Psychology, 14,* 413-445.

Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin, 107*, 238-246.

Bradburn, N. (1969). *The structure of psychological well-being*. Chicago: Aldine.

Brissette, I., Scheier, M. N. F., & Carver, C. S. (2002). The role of optimism in social network development, coping and psychological adjustment during a life transition. *Journal of Personality and Social Psychology, 82*, 102-111.

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.

Carver, C. S., & Scheier, M. F. (2001). Optimism, pessimism, and self-regulation. In E. C. Chang (Ed.), *Optimism and pessimism: Implications for theory, research, and practice* (pp. 31-52). Washington, DC: American Psychological Association.

Chang, E. C., Maydeu-Olivares, A., & D'Zurilla, T. J. (1997). Optimism and pessimism as partially independent constructs: Relationship to positive and negative affectivity and psychological well-being. *Personality and Individual Differences, 23*, 433-440.

Charles, S. T., Reynolds, C. A., & Gatz, M. (2001). Age-related differences and change in positive and negative affect over 23 years. *Journal of Personality and Social Psychology, 80*, 136-151.

Christensen, K. A., Stephens, M. A. P., & Townsend, A. L. (1998). Mastery in women's multiple roles and well-being: Adult daughters providing care for impaired parents. *Health Psychology, 17*, 163-171.

Compton, W. C., Smith, M. L., Cornish, K. A., & Qualls, D. L. (1996). Factor structure of mental health measures. *Journal of Personality and Social Psychology, 71*, 406-413.

Cozzarelli, C. (1993). Personality and self-efficacy as predictors of coping with abortion. *Journal of Personality and Social Psychology, 65,* 1224-1236.

Cummins, R. A., & Nistico, H. (2002). Maintaining life satisfaction: The role of positive cognitive biases. *Journal of Happiness Studies, 3*, 37-69.

Cunningham, M. R. (1988). What do you do when you're happy or blue? Mood, expectancies, and behavioral interest. *Motivation and Emotion, 12*(4), 309-331.

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia and well-being: An introduction. *Journal of Happiness Studies, 9*, 1-11.

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology, 54*, 403-425.

Diener, E., & Suh, M. E. (1998). Subjective well-being and age: An international analysis. *Annual Review of Gerontology and Geriatrics, 17,* 304-324.

Dougall, A. L., Hyman, K. B., Hayward, M. C. McFeeley, S., & Baum, A. (2001). Optimism and traumatic stress: The importance of social support and coping. *Journal of Applied Social Psychology, 31*, 223-245.

Haidt, J., & Rodin, J. (1999). Control and efficacy as interdisciplinary bridges. *Review of General Psychology, 3*, 317-337.

Heckhausen, J., & Schultz, R. (1995). A lifespan theory of control. *Psychological Review, 102,* 284-304.

Himmelfarb, S., & Murrell, S. A. (1983). Reliability and validity of five mental health status scales in older persons. *Journal of Gerontology, 38*, 333-339.

Isen, A. M. (1987). Positive affect, cognitive processes, and social behavior. *Advances in Experimental Social Psychology, 20,* 203-253.

Jackson, L. E., & Coursey, R. D. (1988). The relationship of God control and internal locus of control to intrinsic religious motivation, coping and purpose in life. *Journal of the Scientific Study of Religion, 27*, 399-410.

Jones, T. G., Rapport, L. J., Hanks, R. A., Lichtenberg, P. A., & Telmet, K. (2003). Cognitive and psychosocial predictors of subjective well-being in urban older adults. *The Clinical Neuropsychologist, 17*, 3-18.

Kahn, J. H., Hessling, R. M., & Russell, D. W. (2003). Social support, health, and well-being among the elderly: What is the role of negative affectivity? *Personality and Individual Differences, 35*, 5-17.

Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*, 1007-1022.

Kline, R. B. (2005). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Krause, N. (2007). Age and decline in role-specific control. *Journal of Gerontology: Social Sciences, 62B*, S28-S35.

Kunzmann, U., Little, T., & Smith. J. (2002). Perceiving control: A double-edged sword in old age. *The Journals of Gerontology: Series B Psychological Science, 57B*, 484-491.

Leung, B. W., Moneta, G. B., & McBride-Chang, C. (2005). Think positively and feel positively: Optimism and life satisfaction in late life. *International Journal of Aging and Human Development, 61*, 335-365.

Lightsey, O. R. (1996). What leads to wellness? The role of psychological resources in well-being. *The Counseling Psychologist, 24*, 589-735.

Lu, L., Shih, J. B., Lin, Y. Y., & Ju, L. S. (1997). Personal and environmental correlates of happiness. *Personality and Individual Differences, 23*, 453-462.

Maher, E., & Cummins, R. A. (2001). Subjective quality of life, perceived control, and dispositional optimism among older people. *Australasian Journal on Ageing, 20*, 139-146.

Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness of fit indices in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*, 391-410.

Martire, L. M., Stephens, M. A. P., & Franks, M. M. (1997). Multiple roles of women caregivers: Feelings of mastery and self-esteem as predictors of psychosocial well-being. *Journal of Women and Aging, 9*, 117-131.

McAvay, G. J., Seeman, T. E., & Rodin, J. (1996). A longitudinal study of change in domain-specific self-efficacy among older adults. *Journal of Gerontology, 51*, P243-P253.

McConatha, J. T., & Huber, H. M. (1999). Primary, secondary and emotional control across adulthood. *Current Psychology, 18*, 164-170.

McConatha, J. T., McConatha, D., Jackson, J. A., & Bergen, A. (1998). The control factor: Life satisfaction in later adulthood. *Journal of Clinical Geropsychology, 4*, 159-168.

McGregor, I., & Little, B. R. (1998). Personal projects, happiness and meaning: On doing well and being yourself. *Journal of Personality and Social Psychology, 74*, 494-512.

Muthen, L. K., & Muthen, B. O. (1998-2007). *Mplus User's Guide* (5th Ed.). Los Angeles, CA: Muthen & Muthen.

Myers, D. G., & Diener. E. (1995). Who is happy? *Psychological Science, 6,* 10-19.

Newsom, J. T., & Schulz, R. (1996). Social support as a mediator in the relation between functional status and quality of life in older adults. *Psychology and Aging, 11*, 34-44.

Pinquart, M. (2001). Age differences in perceived positive affect, negative affect, and affect balance in middle and old age. *Journal of Happiness Studies, 2*, 375-405.

Pinquart, M. (2002). Creating and maintaining purpose in life in old age: A meta-analysis. *Ageing International, 27*, 90-114.

Ratelle, C. F., Vallerand, J., Chantal, Y., & Provencher, P. (2004). Cognitive adaptation and mental health: A motivational analysis. *European Journal of Social Psychology, 54*, 459-476.

Russell, D. W., & Cutrona, C. E. (1991). Social support, stress, and depressive symptoms among the elderly: Test of a process model. *Psychology and Aging, 6*, 190-201.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic & eudaimonic well-being. *Annual Review of Psychology, 52,* 141-166.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1059-1081.

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*, 719-717.

Ryff, C. D., Lee, Y. H., Essex, M. J., & Schmutte, P. S. (1994). My children and me: Midlife evaluations of grown children and self. *Psychology and Aging, 9*, 195-205.

Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry, 9*, 1-28.

Ryff, C. D., & Singer, B. (2006). Best news yet on the six-factor model of well-being. *Social Science Research, 35*, 1103-1119.

Ryff, C. D., Singer, B. H., & Love, G. D. (2004). Positive health: Connecting well-being with biology. *Philosophical Transactions of the Royal Society of London, 359*, 1383-1394.

Salsman, J. M., Brown, T. L., Brechting, E. H., & Carlson, C. R. (2005). The link between religion and spirituality and psychological adjustment: The mediating role of optimism and social support. *Personality and Social Psychology Bulletin, 31*, 522-535.

Sarason, I. G., Sarason, B. R., Shearin, E. M., & Pierce, G. R. (1987). A brief measure of social support: Practical and theoretical implications. *Journal of Social and Personal Relations, 4*, 497-510.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*, 219-247.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*, 1063-1978.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being . In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice* (pp. 189-216). Washington, DC: American Psychological Association.

Sinha, S. P., Nayyar, P., & Sinha, S. P. (2002). Social support and self-control as variables in attitude toward life and perceived control among older people in India. *The Journal of Social Psychology, 142*, 527-540.

Skinner, E. A. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology, 71,* 549-570.

Stephens, M. A. P., Druley, J. A., & Zautra, A. J. (2002). Older adults' recovery from surgery for osteoarthritis of the knee: Psychological resources as predictors of outcomes. *Health Psychology, 21*, 377-383.

Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. (2000). Psychological resources, positive illusions, and health. *American Psychologist, 55*, 99-109.

Thoits, P. A. (1995). Stress, coping, and social support processes: Where are we? What next? *Journal of Health and Social Behavior, 35*, 53-79.

Thompson, M. P., Kaslow, N. J., Short, L. M., & Wyckoff, S. (2002). The mediating roles of perceived social support and resources in the self-efficacy-suicide attempts relation among African American abused women. *Journal of Consulting and Clinical Psychology, 70*, 942-949.

Thompson, S. C., & Spacapan, S. (1991). Perceptions of control in vulnerable populations. *Journal of Social Issues, 47*, 1-21.

Townsend, A., Noelker, L., Deimling, G., & Bass, D. (1989). Longitudinal impact of interhousehold caregiving on adult children's mental health. *Psychology and Aging, 4*, 393-401.

Trunzo, J. J., & Pinto, B. M. (2003). Social support as a mediator of optimism and distress in breast cancer survivors. *Journal of Consulting and Clinical Psychology, 71*, 805-811.

van Dierendonck, D. (2004). The construct validity of Ryff's scales of psychological well-being and its extension with spiritual well-being. *Personality and Individual Differences, 36*, 629-643.

Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology, 85*, 137-142.

Waterman, A. S., Schwartz, S. J., & Conti, R. (2008). The implications of two conceptions of happiness (hedonic enjoyment and eudaimonia) for the understanding of intrinsic motivation. *Journal of Happiness Studies, 9*, 41-79.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.

Direct reprint requests to:

Susan J. Ferguson
Department of Psychology
Macquarie University
Sydney, NSW, Australia, 2019
e-mail: Sue.Ferguson@mq.edu.au

APPENDIX F:
PUBLISHED FORMAT OF STUDY 2 (CHAPTER 4A)

Appendix F of this thesis has been removed as it contains published material under copyright. Removed contents published as:

Wendy J. Phillips, Susan J. Ferguson (2013) Self-Compassion: A Resource for Positive Aging, *The Journals of Gerontology: Series B*, Volume 68, Issue 4, pp. 529–539.
https://doi.org/10.1093/geronb/gbs091

APPENDIX G:
STATEMENT OF AUTHORSHIP FOR STUDY 2 - SELF-COMPASSION AND POSITIVE AGEING (CHAPTER 4A)

School of Behavioural, Cognitive and Social Sciences
University of New England
Armidale NSW 2351
Australia

Phone 61 2 6773 3531
wendy.phillips@une.edu.au
www.une.edu.au/**staff-profiles/bcss/wphilli4**

26 January 2017

Statement of Authorship

I hereby confirm that I co-wrote the article below with Ms Sue Ferguson.

> Phillips, W. J., & Ferguson, S. J. (2013). Self-compassion: A resource for positive aging. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 68*(4), 529-539 doi:10.1093/geronb/gbs091

Sue and I contributed equally to this manuscript. Sue designed the study, selected variables, organised ethics approval, collected data, and contributed to the writing of the article. My contribution was confined to the later stages of the project, which involved data analysis and writing.

Yours sincerely,

Wendy Phillips PhD
Senior Lecturer in Psychology

APPENDIX H:
PUBLISHED FORMAT OF STUDY 4 (CHAPTER 6)

Appendix H of this thesis has been removed as it contains published material under copyright. Removed contents published as:

Ferguson, S.J., Taylor, A.J. & McMahon, C. (2017) Hope for the Future and Avoidance of the Present: Associations with Well-being in Older Adults. *Journal of Happiness Studies*. Vol. 18, pp. 1485–1506. https://doi.org/10.1007/s10902-016-9787-0