A mixed-methods investigation of the Best Possible Selves intervention:

Relationships and thriving

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Dedication

To Richard, my witness on this journey; to Meredith, the reason for the whole thing; and to Neale and Norma, who taught me about happiness, and relationships.
Abstract
Positive psychology has been criticised as being dominated by quantitative research. As a field, positive psychology has also tended to be overly focused on individual well-being, on the ‘self’ rather than the ‘other’. The research described in this thesis addressed both these issues by: (a) conducting a mixed-methods research program which consisted of an experiment ($n = 141$) using a participant-focused, qualitative lens in conjunction with quantitative analysis, and (b) considering the role of both the other, and the self, in data analysis, and the development of an other-focused intervention. Results are presented as five research papers, two of which have been published, the other three are under review.

The Best Possible Self (BPS) was the intervention used in this research program. The BPS is an expressive-writing activity in which participants write about their life working out in the best possible way. The first paper (published) of this program of study was a critical review of the BPS literature, which categorised the extant research by type of evidence sought, and synthesised the results from the 31 studies to determine the efficacy of the BPS intervention. The literature review concluded with the identification of topics for future research. Gaps in the literature which were addressed and presented in the remaining four papers included: the potential of the BPS as a hope intervention; the broaden-and-build theory of positive emotions as a potential mechanism explaining efficacy; the lack of qualitative analysis of BPS texts; and the overly individualistic focus inherent in the BPS activity.

In the second paper, quantitative and qualitative analysis of the participant experience in the online, BPS intervention study showed that participants had: significantly decreased negative affect, significantly increased hope, and a significant reappraisal of mental health. Furthermore, participants generally found the experience to be worthwhile, and their thought-action repertoires were broadened depending on condition assignment,
rather than positive emotions.

In the third paper, content analysis of the participant texts written during the BPS intervention showed that: the texts provided a consistent representation of the layperson’s view of the good life; social well-being was the most important aspect of a good life; and relationships with others enabled individuals to feel good about themselves, enjoy the company of others, and to contribute to the wider world.

The fourth paper (published) showed that leisure was a significant component of participant’s best possible self and that affiliation with others was the most important psychological mechanism by which leisure contributed to well-being. Regarding the importance of leisure, there were significant individual differences for age and income, but not gender.

In the follow-up stage, and reported in the fifth paper, participants were introduced to the Best Possible Other (BPO) intervention (an extension of the BPS). The BPO was developed in response to the finding that, when writing about their own well-being, more than half of the participants wrote about their hopes for the well-being of close others. The BPO allowed participants to express their wish for the social, financial, psychological, and physical well-being of their loved one, along with leisure and a sense of meaning. The BPO has potential as an intervention to express other-interest, other-oriented hope, closeness, and compassion.

In summary, individual thriving occurs in myriad ways and by investigating the BPS intervention, the present research showed that the well-being of the individual is inextricably linked to the well-being of others.
Declaration of originality

I attest that the enclosed work is original.

Signed:

Paula Loveday

Date: 29 January 2018
Acknowledgements

This thesis was possible because I had the support of two amazing supervisors: Christian M. Jones, and Geoff P. Lovell. You both helped me in different ways and together it added up to just what I needed. Thank you both for everything.

One-hundred-and-forty-one individuals shared their hopes and dreams as my ‘participants’. Without them there would be no thesis.

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Original contributions from the research

*Full articles published in peer-reviewed journals*


*Full articles under review with peer-reviewed journals*


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Chapter 1: General Introduction

1.1 Positive Psychology

Positive psychology is the scientific study of human thriving. Positive psychology has been described as an investigation into the “conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions” (Gable & Haidt, 2005, p. 103). Unlike traditional psychology, which focused on treatment of dysfunction, the field of positive psychology was designed to make deliberate efforts to increase the positive functioning of all people, including those with dysfunction. The originators of positive psychology described the field as being concerned with “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, Steen, Park, & Peterson, 2005, p. 5). Scientific rigour was seen as being the hallmark of the profession. The “destination of positive psychology”, according to Peterson and Park (2003), is the “study of the good life and the strategy for getting there is the scientific method” (Peterson & Park, 2003, p. 145).

Since its establishment, the field of positive psychology is said to have “grown substantially in size, reach, impact, and breadth” (Rusk & Waters, 2013, p. 220). According to Rusk and Waters (2013), in 2011 there were over 18,000 positive psychology articles in the Psychinfo database, and the aggregate impact factor of the field of positive psychology was 2.64. It should be noted that the selection criteria for the Rusk and Waters (2013) review of the literature was very broad, and a recent review, with tighter inclusion criteria (peer-reviewed articles which were embedded in the field of positive psychology), found that between 1999 and 2013 there were 1,336 articles published in the field (Donaldson, Dollwet, & Rao, 2015).

It is argued here that research in positive psychology can be characterised as having an empirical emphasis - 58% of articles in the review conducted by Donaldson et al. (2015)
were classified as empirical. The field also has a quantitative bias - 78% of empirical articles used a quantitative design for data collection and analysis (Donaldson et al., 2015).

Rich (2001) advocated for both qualitative and quantitative approaches to be used in the new field of positive psychology research, and questioned whether it was possible to understand “creativity via ANOVAs, happiness with regression, or the good life through structural equation modelling?” (Rich, 2001, p. 9). Despite the quantitative dominance of the field that has occurred in the intervening years, Rich (2016) continued to argue that qualitative methods should be viewed as a “paradigm of equal value to quantitative methods” (Rich, 2016, p. 220).

A recent special issue of the Journal of Positive Psychology, which was dedicated to qualitative research, addressed the quantitative bias inherent in the field and suggested the ways in which qualitative enquiry would advance positive psychology. Amongst the advantages identified, the one most pertinent to the current study was the ability of qualitative research to “address different questions of the phenomena of interest, as well as the data produced” (Hefferon, Ashfield, Waters, & Synard, 2017, p. 215). The ability to address different questions was a key determinant for including qualitative components in the current research program, particularly questions concerning the layperson’s view of the good life, and the participant experience in an online intervention study.

**1.2 Mixed-Methods Research**

Whilst the researcher acknowledges the under-representation of qualitative research in positive psychology - 11.5% (Donaldson et al., 2015), and supports the redressing of the quantitative bias in the field of positive psychology, this thesis argues that in many cases an either/or approach is not as fruitful as a combination of both approaches would be. The combined approach is known as mixed-methods research. Research that employs a mixed-methods approach to data collection and analysis represents only 10.5% of articles in positive
psychology (Donaldson et al., 2015). Plano Clark (2017) argues that a mixed-methods approach that strategically combines quantitative and qualitative methods would lead to “more nuanced, contextualized, and corroborated conclusions about human flourishing and well-being” (Plano Clark, 2017, p. 305).

Mixed-methods research is defined as “a class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study” (Johnson & Onwuegbuzie, 2004, p. 17). Maxwell (2016, p. 14) argues that it is the use of qualitative and quantitative strategies in ways that are “mutually informative, rather than separate and compartmentalised” that defines a study as mixed-method, rather than how strategies are labelled. Finally, the choice of mixed-methods as the research approach is most appropriate when qualitative or quantitative analysis alone is inadequate, or when the merging of both quantitative and qualitative approaches lead to a “more complete understanding of the research problem” (Creswell, Klassen, Plano Clark, & Smith, 2011, p. 4).

1.3 Intervention Selection

The intervention selected for the current research program was an expressive-writing activity, developed by Laura King in 2001, which became known as the Best Possible Selves (BPS) intervention (King, 2001). If, and when, humans contemplate their futures it is clear that there is a very large, but finite, number of possible ways in which that future might unfold. From all the possible ‘selves’ that an individual might eventually become, there is one that is, by definition, the best possible self. Over the last two decades, researchers have asked their participants to imagine their ‘best possible self’ and write about what they have imagined. Stage 1 of the research program resulted in Paper 1 (published) which was a critical review of the BPS literature and provided a synthesis of the findings that have been made since the inaugural BPS study, along with suggestions for future research, many of
which are addressed in Papers 2-5.

The instruction used by King (2001) for the BPS intervention in the original BPS study was:

*Think about your life in the future. Imagine that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all of your life goals. Think of this as the realisation of all your life dreams. Now write about what you imagined.* (King, 2001, p. 801).

In subsequent BPS studies, including the study undertaken in the current research program, the text for the BPS instruction has been modified and most studies now include reference to the ‘best possible self’ in the instruction text.

In addition to the quantitative bias, positive psychology has also been criticised for being overly focused on individual well-being. Wong (2011) states that “positive motivations for the well-being of others have not attracted much attention from positive psychology researchers” (Wong, 2011, p. 72). The BPS is a self-focused intervention. Its title - best possible *self*, and the task completed by participants - writing about oneself in the future, attest to the self-focused nature of the BPS. It could be argued that interventions such as the BPS confirm the assertion of Wong (2011). However, due to a lack of qualitative analysis of BPS texts, it is unknown whether this self-focused intervention prohibits the expression of positive motivations for the well-being of others. In stages 2 and 3 of the research, the relationship between the ‘self’ and the ‘other’ provided a lens through which to examine the text written by participants.

**1.4 Aim of the Research**

Based on the limitations of previous research, the aim of the current research program was to discover whether a mixed-methods approach to data collection and analysis would
lead to “richer insights and stronger conclusions about optimal human functioning” as suggested by Plano Clark (2017, p. 305). To approach this aim, three research objectives were considered (see Figure 1.1).

**Research Objective 1**
- Synthesise what research has discovered thus far about the BPS, and determine the direction for future research.
- *Addressed in Paper 1*

**Research Objective 2**
- Use a mixed-methods approach to address the identified gaps in the BPS literature, in particular related to: efficacy, extension, psychological mechanisms, outcome measures, the laypersons view of the good life, and the participant experience with the BPS intervention.
- *Addressed in Papers 2, 3, and 4*

**Research Objective 3**
- Explore the other-oriented BPO intervention to assess its potential as a positive psychology intervention.
- *Addressed in Paper 5*

Figure 1.1. *Research aim and objectives*

The research was conducted in three stages.

**1.4.1 Stage 1.**

The research program began with a critical review of the BPS literature, results of which are provided in Paper 1 which was published in the *Journal of Happiness Studies*. The literature review was conducted to meet the following research objective:

- Synthesise what research has discovered thus far about the BPS, and determine the direction for future research.
1.4.2 Stage 2.

Having identified BPS research questions that could be answered using a quantitative approach, an experiment \((n = 141)\) was conducted that investigated these quantitative questions. Paper 2 (under review) presents quantitative findings, with a qualitative overlay regarding the participant experience. Paper 3 and Paper 4 (published in the *Journal of Positive Psychology*) addressed research questions that had been identified as being of a qualitative nature. These were addressed by content analysis and thematic analysis of text-based information provided by participants in the experiment. Papers 2, 3 and 4 each addressed separate research questions (see Figure 2) to achieve their different research aims; however, all three papers provided data to meet the following research objective:

- Use a mixed-methods approach to address the identified gaps in the BPS literature, in particular related to: efficacy, extension, psychological mechanisms, outcome measures, and the participant experience with the BPS intervention.

1.4.3 Stage 3.

Based on the finding in Paper 3 that, when completing the BPS, more than half of participants described the best possible future for another, the Best Possible Other (BPO) intervention was developed and introduced to participants in the follow-up stage of the experiment. The BPO is an other-oriented extension to the BPS. A number of sub-questions were addressed in Paper 5 (under review) which helped meet the following research objective:

- Explore the other-oriented BPO intervention to assess its potential as a positive psychology intervention.

Related to each research objective, specific research questions were answered. Figure 1.2 details the specific research questions and how they are positioned within this sequence of investigation.
Figure 1.2. Research questions
1.5 Theoretical and Conceptual Frameworks

Hope theory was the major theoretical foundation for this program of research. In early work conceptualising hope, Snyder et al. (1991) proposed a definition for hope describing it as a “cognitive set that is based on a reciprocally-derived sense of successful agency-thinking (goal-directed determination), and pathways-thinking (planning to meet goals)” (p. 571). Thus, a hopeful individual does not necessarily have a ‘Pollyanna’ sense that all will be well, rather they possess strategies to achieve their goals, and a belief that they will enact these strategies. The BPS activity was originally conceived as a way to elicit an individual’s life goals (King, 2001). It is argued therefore, that when researchers ask participants to complete the BPS intervention, participants are given the opportunity to experience hope. As participants imagine their future during the BPS intervention they may have an increased sense of goal-directed determination, and may access thoughts regarding plans to meet their goals. Hope theory and the goal-based hope scale were used (in Paper 2) to explore the potential of the BPS as a hope intervention.

The broaden-and-build theory of positive emotions provided an additional theoretical foundation for the research (Fredrickson, 1998). In her early work on positive emotions, Fredrickson (2001) suggested that positive emotions “broaden an individual’s momentary thought-action repertoire and build personal resources - physical, intellectual, and social” (p. 218). This thesis responded to the call for the investigation of positive thoughts and positive emotions as mediating variables in explaining the efficacy of positive psychological interventions (Layous & Lyubomirsky, 2014). The broaden-and-build hypothesis consists of two components: the broaden hypothesis and the build hypothesis. It is the broaden hypothesis which is of particular interest in the current research. The broaden hypothesis states that positive emotions broaden thought-action urges, which is in contrast with negative emotions which are said to narrow thought-action urges (Fredrickson, 2013). The broaden-
hypothesis and the twenty-statements-test (as a measure of thought-action repertoires) (Fredrickson & Branigan, 2005) were used to explore (in Paper 2) positive emotions as a mediating variable for the efficacy of the BPS.

Self-determination theory (SDT) provided the final theoretical underpinning for the research. In early work on self-determination theory, Ryan and Deci (2000) noted three components that enhance internal motivation, namely: autonomy, competence, and relatedness. It is argued that in describing their lives working out in the best possible way, individuals are likely to express a sense of competence at having achieved their life goals and autonomy as they have directed their life in the way they have chosen. Early reading of the BPS texts confirmed this was so. It was also noted that relatedness was frequently mentioned. Therefore, SDT was initially proposed as the conceptual model for coding of the BPS texts (Paper 3). However, initial coding showed that participants were describing elements of well-being (such as physical well-being, and positive emotions) which could not justifiably be coded to any one of the three components of SDT. Therefore, a broader well-being model was needed. Note that SDT remained important in the thesis as it was invoked to understand the sub-themes described in both Papers 3 and 4.

The broader well-being model that was chosen for coding the BPS texts in Paper 3 was a model proposed by Feeney and Collins (2015), which was their summation of the well-being literature. The five-component model: hedonic, eudaimonic, physical, social, and psychological well-being (Feeney & Collins, 2015) was chosen as it provided a better match than SDT for the components of well-being that were identified in early reading of the BPS texts. Additionally, this five-component model is the well-being model used by Feeney and Collins (2015) in research exploring the important role that relationships play in individual thriving, which was a topic of interest in understanding the role of the other in individual well-being.
In Paper 4, which investigated the ways in which leisure enhances well-being, a conceptual framework was required that more specifically addressed the relationship between leisure and well-being. The framework chosen for analysis of the leisure component of the BPS texts was developed by Newman, Tay, and Diener (2014) and represents their summation of the literature regarding leisure and well-being. The Detachment-Recovery, Autonomy, Mastery, Meaning, and Affiliation (DRAMMA) framework identifies the five psychological mechanisms in play as leisure enhances well-being (Newman et al., 2014). Application of the DRAMMA model allowed a fuller understanding of the way in which leisure is represented in, and enhances, a good life.

1.6 Research Design

The design for the mixed-methods research undertaken here can be described as convergent, in that “quantitative and qualitative data were collected concurrently” (Creswell et al., 2011, p. 8). The BPS literature review (Loveday, Lovell, & Jones, 2016) (chapter 2) provided a wealth of recommendations for future research directions, many of which were addressed in this research program. Some of the identified questions, such as whether the BPS had potential to increase hope, required the collection of quantitative data. Other questions, such as which particular elements of the good life might be revealed in the BPS texts, required access to text-based data which would benefit from qualitative analysis.

The research was designed as an experiment with three conditions: one designed as a neutral control condition, and two conditions which employed the BPS intervention (to collect qualitative data). The experiment consisted of two stages, an initial stage, and a follow-up stage four weeks later. Each of the five research papers that follow provide the reader with a more detailed account of the interventions employed, participant demographics, instruments used, and tests and analyses carried out.
1.7 Organisation of Thesis

The thesis has been organised (see Figure 1.3) in a way that Chapters 2-6 are the five research papers (two published and three under review). Each of Chapters 2-6 commences with a short overview which consists of: a summary of the study, the research questions addressed, results obtained, and author contribution. This is followed by the Paper, published or currently under review. Chapter 7 synthesises the findings, identifies limitations, makes suggestions for future research, and concludes the thesis.
Figure 1.3. Overview of chapters and papers.
Pre-and-post intervention measures, delivered in the following order:

**LOT-R**  Life Orientation Test — Revised
**SHS**  State Hope Scale
**PANAS**  Positive and Negative Affect Scale
**MHC-SF**  Mental Health Continuum—Short Form
**Priming**  Describe a positive event from the past 12 months
**Control**  Describe the past 24 hours in a non-emotional way
**BPS**  Best Possible Selves intervention
**Experience**  Interest, enjoyment, and difficulty questions
**TST**  Twenty Statements Test
**Demographic**  Gender, education, age, living with partner, children, household income

* Administered
- Not administered

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**Figure 1.4. Overview of study – Initial stage**
* Administered
- Not administered
BPS Describe your life in the future working out in the best possible way
BPO Describe a loved one’s future working out in the best possible way
Priming Describe a positive event in a loved one’s life from the past 12 months
Experience Enjoyment, interest, difficulty (BPS compared with BPO)

Pre-intervention measures:
State Hope Scale (SHS)
Mental Health Continuum- Short Form (MCH-SF)

Post-intervention measures:
State Hope Scale (SHS)

Figure 1.5. Overview of study – Follow-up stage
Chapter 2: Literature Review (published in The Journal of Happiness Studies)

2.1 Overview of Paper 1

Paper 1 was a systematic review of the Best Possible Selves (BPS) literature. Over 30 BPS studies (>4,000 total participants) have been conducted since 2001. The review categorised the studies by the type of evidence being sought as follows: (a) Correlation studies, (b) Outcome variables, (c) Trauma comparison, (d) Delivery method, (e) Portfolio studies, and (f) Moderating variables. Table 1 is extensive and provides details of each study conducted, including measures used, and results obtained.

2.2 Research Questions

The following research questions were addressed in Paper 1:

• RQ1: What type of evidence has been collected regarding the BPS, and which research questions have been addressed to date?

• RQ2: What does a synthesis of the findings in the BPS academic literature reveal about the efficacy and operation of the BPS intervention?

• RQ3: What direction should future research take?

2.3 Findings

Findings from the review included that the BPS has been shown to improve physical health, optimism, positive affect, and life satisfaction. The BPS can be administered to students, adults, children, and those with mental health issues. Furthermore, the BPS can be delivered online or in-person, and as one of a portfolio of interventions. Completion methods include: handwriting, typing, speaking, and drawing.

From the list of areas identified in the literature review as future research foci, the following topics were included in the research program completed in this thesis: (a) the
broaden-and-build theory as an explanation for efficacy of the BPS - Paper 2; (b) hope as an additional outcome measure - Paper 2; (c) priming the BPS with a positive mood induction - Paper 2; (d) qualitative analysis of BPS texts to gain an insight into the layperson’s view of the good life – Paper 3, and the factors that constitute a good life – Paper 4; and (e) an other-oriented version of the BPS known as the best-possible-other (BPO) - Paper 5.

2.4 Author Contribution

PL: conceptualisation and development of research questions, development of method, analysis, drafting, writing, editing, final draft

CJ: principal supervisor for PhD, development of research questions, editing, final draft

GL: second supervisor for PhD, editing, final draft
The Best Possible Selves Intervention: A Review of the Literature to Evaluate Efficacy and Guide Future Research

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Abstract Since its inception in 2001, the best possible selves (BPS) activity has been the focus of more than 30 studies which have shown it to be a viable intervention for increasing optimism, positive affect, health and well-being. It is timely to critically review the findings from the BPS literature and suggest directions for future research. The majority of BPS studies have used an experimental methodology and have administered the BPS activity to diverse groups including students, adults, depressive individuals and suicidal inpatients. The BPS intervention can be effective when administered in-person or on-line and repeating the activity appears to enhance efficacy. Suggestions for future research include: (a) investigation of mediator variables, (b) additional outcome variables such as hope and appreciation, (c) comparative studies regarding dosage to enhance effectiveness, (d) extension of the BPS into a best-possible-other activity, (e) diversity of delivery methods, and (f) thematic content analysis of BPS text.

Keywords Best possible selves · Best possible other · Literature review · Writing interventions · Hope · Well-being

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1 Introduction

The best possible selves (BPS) activity is a writing intervention developed by Laura King (2001), in which participants write about themselves in the future, imaging that everything has worked out in the best possible way. The instructions used for the BPS intervention are:

"Think about your life in the future. Imagine that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all of your life goals. Think of this as the realization of all your life dreams. Now write about what you imagined (King 2001, p. 801).

In the original experiment, King contrasted the BPS activity with a trauma-writing activity, arguing that writing about a topic that was engaging and meaningful (as the BPS was shown to be) and that promoted emotion regulation would be as beneficial as writing about a traumatic event and that participants would be spared the negative emotion that is associated with trauma writing (King 2001). Participants who wrote about their BPS for 20 min per day over four consecutive days had, compared with participants in the control group (who wrote about their plans for the day ahead), increased net positive affect (p < .001) at the end of the intervention, increased well-being 4 weeks later (p = .05) and fewer visits to health centers 3 months later (p < .01) (King 2001). Similar results were evident for participants in the trauma-writing condition however, as hypothesized by King, participants reported that they found the BPS activity to be less upsetting than the control (p < .001) whereas the trauma-writing was evaluated as more upsetting than the control (p < .001) (King 2001).

In a commentary paper regarding the broader intervention literature, the BPS intervention was described as an activity with a ‘rapidly expanding body of literature accumulating around it’ (Schueller et al. 2014, p. 93). Our review confirms this with the identification of 30 research articles pertaining to the BPS intervention, of which 23 have been published since 2010. The aim of the present review is to: (a) categorize the extent BPS research by type of evidence sought and then research question addressed, (b) report the findings within each category so as to evaluate the efficacy of the BPS and (c) suggest directions for future research.

2 Methodology

This systematic literature review used three search strategies to source published BPS studies. Initially, meta-analyses and commentary papers which focused on positive psychological interventions and/or writing interventions were consulted to identify future-focused positive activities that use the writing paradigm (Boilier et al. 2013; Frattaroli 2006; Schueller and Parks 2014; Sin and Lyubomirsky 2009). This search generated 12 studies. The second strategy was to examine electronic databases including PsychInfo, Scopus, Web of Science and Google Scholar using the following search terms: ‘best possible self/self’selves’, ‘positive psychological/psychology interventions’ and ‘writing’. Abstracts were reviewed to determine whether the study pertained to the BPS activity and a further 14 relevant papers were identified. Finally, the reference lists of all 26 papers were examined and a further five papers were included.

A total of 31 studies (4616 participants) were included in this review based on the following criteria: (a) available in English-language, (b) peer-reviewed articles,
The Best Possible Selves Intervention: A Review of the...

(c) published between 2001 (the first BPS study) and 2016, and (d) used the BPS intervention (or a close approximation).

The first level of analysis was to categorise papers by the type of evidence being sought. The vast majority of studies (n = 28) used an experimental (n = 24) or quasi-experimental, non-randomised (n = 4) methodology. Correlational studies (n = 3) have been conducted, two of which were led by King herself (King and Raspin 2004; King and Smith 2004). The second level of analysis was to identify studies (n = 6) in which the BPS was one of a portfolio of positive psychological interventions being tested (n = 4) or where the BPS results were reported as a ‘treatment condition’ in conjunction with another intervention (n = 2). In all remaining studies the BPS was used as a stand-alone intervention and/or reported separately. The third level of analysis was to identify studies in which participants completed a single session of the BPS intervention where the induction of a specific effect was the focus (n = 6). The final analysis was to group together longitudinal experiments that addressed similar research questions (n = 16). This grouping resulted in three research areas: BPS compared with a trauma intervention (n = 5), BPS using different delivery methods (n = 3), and long-term experiments to investigate moderating variables and persistence of well-being enhancement (n = 8). Table 1 summarises these studies and identifies significant findings with separate sections reflecting the following categories: (a) correlation studies, (b) outcome variables, (c) trauma comparison, (d) delivery method, (e) portfolio studies, and (f) moderating variables. N.B., a number of studies could have been allocated to more than one category, the allocation was based on a narrative approach to this review of the literature.

3 Study Categories

3.1 Correlation Studies

Much BPS research is situated within the field of positive psychology which uses ‘scientific techniques to investigate the good life’ (Peterson and Park 2003, p. 145). In a recent exploration of the role of self-control in lay theories of the good life, the authors identified that their outcome measures for the good life were limited and that there are ‘undoubtedly additional factors that constitute the good life’ (Wirtz et al. 2016, p. 9). As participants complete the BPS exercise they describe their own (lay) version of the good life. Examination of the writing completed during BPS experiments may help to uncover the additional factors that constitute the good life. Thus far, little use has been made of the insights contained within the writing generated during the BPS activity and most BPS studies do not report (other than a manipulation check) analysis of the BPS text.

The BPS activity may be a particularly instructive and perhaps underestimated, intervention within positive psychology. Positive psychology, as defined by its co-founders, is concerned with ‘well-being, contentment and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present)’ (Seligman and Csikszentmihalyi 2000, p. 5). The BPS intervention asks participants to imagine their future in a hopeful and optimistic way (Peters et al. 2010) and quantitative studies have shown that the BPS increases well-being and life satisfaction (Lyubomirsky et al. 2011), as well as flow and happiness (Layous et al. 2013). The BPS intervention aligns neatly with the definition of positive psychology and systematic examination of the themes described in the BPS text would complement what has been quantitatively uncovered.

Qualitative studies that have examined the content of the BPS text reveal some interesting findings. For example, the salience and elaboration of their found-self, as described

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Table 1 Characteristics and results of BPS studies categorised by type of study

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<thead>
<tr>
<th>References</th>
<th>Sample</th>
<th>Country</th>
<th>Administration</th>
<th>Random assignment</th>
<th>Overview of study</th>
<th>Dosage</th>
<th>Measures used</th>
<th>Finding/result</th>
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<tbody>
<tr>
<td>A. Correlation studies</td>
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<tr>
<td>Hill et al. (2014)</td>
<td>337</td>
<td>Students</td>
<td>USA</td>
<td>In-person</td>
<td>BPS</td>
<td>Single session</td>
<td>SWBS, SWLS</td>
<td>Intrinsic Goals positively related to religious WB ($p = .015$) and negatively related to life satisfaction ($p = .021$)</td>
</tr>
<tr>
<td>King and Raspin (2004)</td>
<td>73</td>
<td>Adults - divorced women</td>
<td>USA</td>
<td>Mailed</td>
<td>BPS before (retrospectively) and BPS after divorce</td>
<td>Single session</td>
<td>SWLS, BSI, SOC, SCT</td>
<td>Salience ($p &lt; .01$) and elaboration ($p &lt; .05$) of found-self associated with higher SWB and elaboration of found-self correlated with ED ($p &lt; .05$)</td>
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<tr>
<td>King and Smith (2004)</td>
<td>107</td>
<td>Adults—anymen and lesbian women</td>
<td>USA</td>
<td>Mailed</td>
<td>BPS gay-self and BPS straight-self</td>
<td>Single session</td>
<td>SWLS, BSI, SCT</td>
<td>Salience of gay-self positively related to life satisfaction ($p &lt; .01$) and salience of straight-self negatively related to life satisfaction ($p &lt; .01$)</td>
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<td>B. Outcome variables</td>
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<td>Peters et al. (2015)</td>
<td>56</td>
<td>Students</td>
<td>Netherlands</td>
<td>In-person</td>
<td>BFS</td>
<td>Single session</td>
<td>LOT-R, FPQ, PV AQ, FEX- POS, FEX - NEG, PANAS</td>
<td>BFS increased PA ($p &lt; .001$), increased expectancies for positive outcomes ($p &lt; .001$). Affect and expectancy results not moderated by dispositional optimism</td>
</tr>
<tr>
<td>Geschwind et al. (2015)</td>
<td>50</td>
<td>Students and paid volunteers</td>
<td>Belgium</td>
<td>In-person</td>
<td>BFS</td>
<td>Single session</td>
<td>m-DES</td>
<td>BFS increased PA ($p = .002$) and difference in PA remained 20 min later ($p = .047$)</td>
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<td>References</td>
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<td>Participants</td>
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<tr>
<td>Reiner et al. (2014)</td>
<td>40</td>
<td>Students</td>
<td>Netherlands</td>
<td>In-person</td>
<td>Yes</td>
<td>Negative mood induction BPS group</td>
<td>Single session</td>
<td>PANAS Mood DAS</td>
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<tr>
<td>Boselie et al. (2013)</td>
<td>74</td>
<td>Students</td>
<td>Netherlands</td>
<td>In-person</td>
<td>Yes</td>
<td>BPS &amp; pain BPS &amp; no pain Control—Typical day &amp; pain Control—Typical day &amp; no pain Cold pressor task Executive functioning task</td>
<td>Single session</td>
<td>LOT-R FEX-pos FEX-neg PANAS PCS</td>
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<tr>
<td>Hansen et al. (2013)</td>
<td>79</td>
<td>Students</td>
<td>Netherlands</td>
<td>In-person</td>
<td>Yes</td>
<td>BPS Control—typical day Cold pressor task</td>
<td>Single session</td>
<td>LOT-R FEX-pos FEX-neg Mood—Pos &amp; Neg PCS S-PCS</td>
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<tr>
<td>References</td>
<td>n</td>
<td>Participants</td>
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<td>Administration</td>
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<td>Peters et al. (2010)</td>
<td>82</td>
<td>Students</td>
<td>Netherlands</td>
<td>In-person</td>
<td>Yes</td>
<td>BPS Control—typical day</td>
<td>Single session</td>
<td>LOT EFQ-RSS PANAS SPT</td>
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<td>C. Trauma comparison</td>
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<td>Maddalena et al. (2014)</td>
<td>64</td>
<td>Students</td>
<td>USA</td>
<td>In-person or at home</td>
<td>Partial</td>
<td>Trauma—High EP Control (both high and low EP)—last 24 h</td>
<td>3 in one day or weekly 3 weeks</td>
<td>EAC (EE&amp;EP) SWLS BSES LOT BNSS PMS PANAS-X Physical symptoms HCV</td>
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<tr>
<td>Yego and Fujihara (2008)</td>
<td>83</td>
<td>Students</td>
<td>Japan</td>
<td>In-person</td>
<td>Yes</td>
<td>BPS Trauma Control—last 24 h</td>
<td>Weekly 6 weeks</td>
<td>WMC MMS Physical symptoms</td>
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<tr>
<td>References</td>
<td>n</td>
<td>Participants</td>
<td>Country</td>
<td>Administration</td>
<td>Random assignment</td>
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<tr>
<td>Austenfeld and Stanton (2008)</td>
<td>63</td>
<td>Students</td>
<td>USA</td>
<td>In-person</td>
<td>Yes</td>
<td>EPS</td>
<td>Trauma Control—last 24 h</td>
<td>Weekly</td>
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<tr>
<td>Austenfeld et al. (2006)</td>
<td>64</td>
<td>Medical students during 3rd year internship</td>
<td>USA</td>
<td>In-person</td>
<td>Yes</td>
<td>EPS</td>
<td>Trauma Control—last 24 h</td>
<td>Fortnightly</td>
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<tr>
<td>King (2001)</td>
<td>81</td>
<td>Students</td>
<td>USA</td>
<td>In-person</td>
<td>Yes</td>
<td>EPS</td>
<td>Trauma EPS &amp; Trauma Control—plans for day</td>
<td>Daily</td>
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D. Delivery methods

| Owens and Patterson (2013) | 62 | Elementary school children | USA | In-person | Yes | Drawings of: EPS Gratitude Control (activity from day) | Weekly | PANAS-C BMSLSS PCSC | EPS—increased self-esteem ($p = .004$). Girls more likely to draw EPS images with societal concerns-religion ($p = .013$) |
Table 1 continued

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<th>Participants</th>
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<th>Random assignment</th>
<th>Overview of study</th>
<th>Dosage</th>
<th>Measures used</th>
<th>Finding/result</th>
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<tr>
<td>Layous et al.</td>
<td>131</td>
<td>Students</td>
<td>USA</td>
<td>On-line</td>
<td>Yes</td>
<td>Online-BPS&lt;br&gt;Online-BPS &amp; testimonial&lt;br&gt;In-person-BPS&lt;br&gt;In-person- Control (last 24h)</td>
<td>Weekly 4 weeks</td>
<td>AAS&lt;br&gt;NSS&lt;br&gt;Flow</td>
<td>BPS increased FA&lt;br&gt;(p = .03), increased flow&lt;br&gt;(p = .03), No significant difference between the on-line and in-person groups</td>
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<td>(2013)</td>
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<td>In-person</td>
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<tr>
<td>Harrist et al.</td>
<td>75</td>
<td>Students</td>
<td>USA</td>
<td>In-person</td>
<td>Yes</td>
<td>BPS-write&lt;br&gt;BPS-speak&lt;br&gt;Control-write (daily schedule)&lt;br&gt;Control-speak (daily schedule)</td>
<td>Daily 4 days</td>
<td>Mood&lt;br&gt;HCY&lt;br&gt;LOT-R</td>
<td>BPS fever health centre visits (p &lt; .023), increased positive mood (p &lt; .003) and decreased negative mood (p &lt; .025)</td>
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<td>(2007)</td>
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<td>E. Portfolio studies</td>
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<tr>
<td>D'raven et al.</td>
<td>75</td>
<td>Adults-depressed</td>
<td>Canada</td>
<td>In-person</td>
<td>No</td>
<td>BPS, Mindfulness, Time control, Goal-setting, Reducing over-thinking, Three good deeds, Self talk, Optimism, Positive experiences, Savoring, Gratitude letter and visit, Planning a date, Counting blessings, Three good things</td>
<td>Weekly 6 weeks</td>
<td>Physical Mental health SF12x2</td>
<td>Enhanced Role physical (p = .047), General Health (p = .044), Vitality (p = .022), Role emotional (p &lt; .001), Mental health (p = .010), Mental health summary (p = .001)</td>
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<td>(2015)</td>
<td>36</td>
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<td>Mueser et al. (2015)</td>
<td>435</td>
<td>General population</td>
<td>Germany</td>
<td>Online</td>
<td>Yes</td>
<td>EBS, Gratitude control—tasks in week ahead</td>
<td>Weekly 8 weeks</td>
<td>SWLS, SPANE, STADI, Interest and enjoyment</td>
<td>Treatments groups increased SWLS (p = .011) and PA (p = .003) and decreased NA (p = .007) and DEP (p = .046). Fit strongly related to increased PA (p = .001)</td>
</tr>
<tr>
<td>Huffman et al. (2014)</td>
<td>52</td>
<td>Suicidal inpatients</td>
<td>USA</td>
<td>In-person</td>
<td>Random presentation of interventions</td>
<td>EBS—accomplishments, EBS—social relationships, Gratitude letter, Personal strength, Acts of kindness, Enjoyable important meaningful activities, Counting blessings, Forgiveness letter, Behaviour on values</td>
<td>Daily 9 days</td>
<td>BHS, LOT-R</td>
<td>Treatments groups decreased depression (p = .003) and increased Optimism (p = .002), BPS (social) decreased Hopelessness (p = .002) and increased Optimism (p = .047)</td>
</tr>
<tr>
<td>Parks et al. (2012) (study 2)</td>
<td>327</td>
<td>Live Happy app users</td>
<td>USA</td>
<td>Online</td>
<td>No</td>
<td>Participant choice</td>
<td>Revised PANAS, SHS, SWLS</td>
<td>Mood improvement (p &lt; .001) and Happiness improvement (p &lt; .001)</td>
<td></td>
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<tr>
<td>Pietrowsky and Mikutta (2012)</td>
<td>17</td>
<td>Depressive patients</td>
<td>Germany</td>
<td>In-person</td>
<td>Yes</td>
<td>Intervention group—BPS then TGT Control—future and early memory</td>
<td>Daily 3 weeks</td>
<td>BDI, SWLS, PANAS, LOT-R, RS-II</td>
<td>Treatment group—decreased depression (p &lt; .05), higher PA (p &lt; .05) higher resilience (p &lt; .05)</td>
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Table 1 continued

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<th>References</th>
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<th>Country</th>
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<th>Measures used</th>
<th>Finding/result</th>
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<tr>
<td>Lyubomirsky et al. (2011)</td>
<td>330</td>
<td>Students</td>
<td>USA</td>
<td>On-line after initial F2F</td>
<td>Yes</td>
<td>Intervention group—Gratitude letter or BPS Control—previous week</td>
<td>Weekly 8 weeks</td>
<td>F&amp;U SWLS SHS</td>
<td>Higher WB for self-select (p = 0.02) and more likely to continue (p = 0.01), effort predicts WB at follow-up (p = 0.03), more effort into activities in treatment group (p = 0.004)</td>
</tr>
<tr>
<td>Ng (2016) Study 2</td>
<td>216</td>
<td>Students</td>
<td>Singapore</td>
<td>On-line</td>
<td>Yes</td>
<td>BPS Control—layout location</td>
<td>Weekly 3 weeks</td>
<td>Affect scale PANAS IPP SHS</td>
<td>BPS (high neuroticism) increased happiness (p = 0.024). No difference for participants with low neuroticism</td>
</tr>
<tr>
<td>Odoe and Vella-Brodrick (2013)</td>
<td>210</td>
<td>Adults</td>
<td>Australia</td>
<td>On-line</td>
<td>Yes</td>
<td>BPS three good things Control—wait list</td>
<td>Daily 7 days</td>
<td>WEMWBS PANAS SQMI TVIC THS GQ-6</td>
<td>Lower NA at T2 for intervention groups (p = 0.02). Submitted responses increased well-being at T3 (p = 0.01)</td>
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<tr>
<td>Seear and Vella-Brodrick (2013)</td>
<td>211</td>
<td>Adults</td>
<td>Australia</td>
<td>On-line</td>
<td>Yes</td>
<td>BPS three good things Control—wait list</td>
<td>Daily 7 days</td>
<td>WEMWBS PANAS MAAS THS GQ-6 IPP</td>
<td>BPS decreased NA (p = 0.032) and BPS (low mindfulness) increased PA (p = 0.046). Motivation to perform highly correlated with frequency of performance (p &lt; 0.01), increase in WB (p &lt; 0.01) and increase in PA (p &lt; 0.01)</td>
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<td>References</td>
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<td>Peters et al. (2013)</td>
<td>90</td>
<td>Students</td>
<td>Netherlands</td>
<td>Imperson and</td>
<td>Yes</td>
<td>BPS Gratitude Control typical day</td>
<td>Daily</td>
<td>SWLS</td>
<td>BPS increased life satisfaction ($p = .01$), improved ASQ ($p = .024$), optimism increase persisted ($p &lt; .001$)</td>
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<td>82</td>
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<td>at home for</td>
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<td>7 days</td>
<td>LOT-R</td>
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<td>repeats</td>
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<td>Meervissen et al. (2011)</td>
<td>54</td>
<td>Students</td>
<td>Netherlands</td>
<td>In-person,</td>
<td>Yes</td>
<td>BPS Control—daily activities</td>
<td>Daily</td>
<td>LOT</td>
<td>BPS increased SPT-0.05s ($p &lt; .01$), WB and PA ($p &lt; .01$) and decreased SPT neg ($p &lt; .01$) and WB ($p &lt; .01$), practised more frequently ($p &lt; .01$) and regarded as less difficult ($p = .03$)</td>
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<td>51</td>
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<td>repeats in home</td>
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<td>14 days</td>
<td>SPT ASQ</td>
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<td>Boehm et al. (2011)</td>
<td>220</td>
<td>Adults</td>
<td>USA</td>
<td>On-line</td>
<td>Yes</td>
<td>BPS Gratitude Control—past week</td>
<td>Weekly</td>
<td>SWLS</td>
<td>BPS increased life satisfaction ($p &lt; .05$), Asian-americans in treatment conditions no change in life satisfaction compared with Anglo-Americans ($p = .02$)</td>
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<td>Shapira and Mongrain (2010)</td>
<td>1902</td>
<td>Adults</td>
<td>USA</td>
<td>On-line</td>
<td>Yes</td>
<td>BPS Self-compassion letter Control—early memory</td>
<td>Daily</td>
<td>DSQ</td>
<td>BPS lower depression at 1 month ($p &lt; .001$) and 3 months ($p &lt; .001$), BPS increased happiness at 1 week ($p = .01$), 3 months ($p &lt; .001$) and 6 months ($p = .02$)</td>
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<td>7 days</td>
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<td>Overview of study</td>
<td>Dosage</td>
<td>Measures used</td>
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<td>Sheldon and Lyubomirsky (2006)</td>
<td>67</td>
<td>Students</td>
<td>USA</td>
<td>In-person initially, home for repeats</td>
<td>Yes</td>
<td>BPS Gratitude Control—typical day</td>
<td>Daily</td>
<td>PANAS SCM</td>
<td>BPS increased PA (p &lt; .01) and greater SCM (p &lt; .01), SCM predicted continued performance of activities (p &lt; .02), SCM and exercise performance predicted decreased NA (p &lt; .05) but not PA</td>
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by a sample of divorced women during the BPS exercise, was associated with higher self-assessment of well-being 2 years later (King and Raspin 2004). For a sample of gay men and lesbian women, the salience of their gay-self was positively related to life satisfaction whereas the salience of their straight-self was negatively related to life satisfaction (King and Smith 2004). In a study where children were asked to draw a picture of their BPS, girls were more likely than boys, to draw realistic images and images associated with societal concerns (Owens and Patterson 2013). Finally, contrary to what was hypothesised, in the BPS writing of a sample of first-year college students, spiritual goals and general intrinsic goals were found to be negatively correlated with life satisfaction (Hill et al. 2014). Further analysis of the BPS text may offer researchers an insight into what individuals envision when they write about their idea of the “good life”.

3.2 Outcome Variables

Research over the last 5 years has explored the question of whether the BPS can be used to induce specific positive outcomes. The first such study in this area, which was a catalyst for at least five other studies, was an experiment conducted by Peters et al. (2010). The researchers administered the BPS activity to participants in a deliberate attempt to increase expectancies for positive future outcomes (optimism) and positive affect (Peters et al. 2010). The experiment was successful in achieving its goal as participants in the BPS group had increased state optimism ($p = .004$) and increased immediate positive affect ($p < .001$) compared with participants in the control group (Peters et al. 2010). The increase in optimism was not moderated by the change in positive affect, suggesting that the BPS activity can be used to induce optimism irrespective of whether participants experience increased positive affect (Peters et al. 2010).

The value of the BPS activity as an optimism induction has been established in further studies where it was used to demonstrate the links between optimism and decreased pain in cold pressor tasks (Boselie et al. 2013; Hanssen et al. 2013) and between optimism and attention to positive visual stimuli in an eye-tracker experiment (Peters et al. 2015). Given the optimistic instructions provided with the BPS activity and the evidence that the BPS exercise is an effective tool for inducing optimism, the role of dispositional optimism as a moderator for efficacy has been investigated. Many studies show that dispositional optimism does not moderate increases in state optimism observed following completion of the BPS activity (Harrist et al. 2007; Meevisen et al. 2011; Peters et al. 2010, 2015).

The specificity of the BPS as a positive mood induction (rather than an optimism induction) has been tested in two experiments: one in which the BPS activity was shown to increase positive mood after a sad mood induction (Renner et al. 2014) and another where positive mood persisted after participants were exposed to a pain condition (Geschwind et al. 2015). In other BPS studies, where induction of positive mood was not the primary focus, the results are mixed. In some instances, positive affect is increased (Sheldon and Lyubomirsky 2006) and in others there was no difference in positive affect (Odo and Vella-Brodrick 2013). These apparently contradictory results can be explained by the choice of differing populations and the use of different delivery methods and dosage regimes. The induction research described here has explored the induction of two specific states: optimism and positive mood. Future research may discover that the BPS activity has the potential to induce other positive states.
3.3 Trauma Comparison

The BPS intervention has its origins in the experimental disclosure field where extensive research had shown that writing about traumatic events can have beneficial effects for some individuals (Frattaroli 2006). Originally, catharsis was proffered as the explanation for the beneficial outcome, however the catharsis explanation was called into question when an experiment found that writing about another person's trauma, one that the individual had not actually experienced, was found to be beneficial (Greenberg et al. 1996). Self-regulation was offered as an alternative explanation and King (2001) speculated that writing, whether about traumatic experiences or about a personally meaningful task such as one's BPS, would aid an individual's self-regulation and that this may explain the beneficial effects of writing activities.

Austenfeld et al. (2006) conducted a study with students in their third-year medical internship (considered to be a potentially traumatic time) who were randomly assigned to write about the challenges they were experiencing (trauma-writing condition) or their BPS (Austenfeld et al. 2006). The focus of the study was emotional expression (one's efforts to communicate emotional experiences) and emotional processing (one's efforts to understand emotions) (Austenfeld et al. 2006). Results showed that the BPS activity does not work equally well for all types of individuals (Austenfeld et al. 2006). Participants who were assigned to the BPS group and who were low in emotional processing experienced the greatest benefit in the experiment with fewer health centre visits and fewer depressive symptoms compared with those assigned to the trauma group (Austenfeld et al. 2006). This suggests that emotional processing is a factor that should be considered when assigning the BPS activity, it may be particularly beneficial for individuals low in emotional processing. Austenfeld and Stanton (2008) followed up the initial experiment with a student sample and reported similar outcomes: participants assigned to the BPS group who were low in emotional processing had fewer health centre visits and lower hostility (Austenfeld and Stanton 2008).

A recent study, using a factorial experimental design utilised the above findings regarding emotional processing and emotional expression and deliberately assigned writing activity (either trauma or BPS) based on the emotional processing and emotion expression levels of participants (Maddalena et al. 2014). In the follow-up to this study, participants who had been assigned to activities that aligned with their preferences had fewer health centre visits and physical illness symptoms (Maddalena et al. 2014). The results of these experiments suggest that the BPS is not a one-size-fits-all intervention and that it may not be a beneficial activity for certain individuals especially those high in emotional processing.

3.4 Delivery Method

In the original BPS experiment, participants completed the BPS activity in person, independently and submitted a handwritten response to the researcher (King 2001). Since that time the BPS has also been found to be effective if participants speak rather than write their responses. In a $2 \times 2$ factorial design, participants were randomly allocated to either write or talk to the researcher about their BPS (Harrist et al. 2007). Participants in both groups had increased positive mood, decreased negative mood and fewer health-centre visits than the control groups (Harrist et al. 2007). Although both delivery methods were shown to be effective and feasible, the spoken delivery method was not adopted in subsequent research.
In an experiment investigating the administration of positive psychological interventions to children, Owens and Patterson (2013) asked elementary school-aged children to use drawings to respond to the BPS instructions. Children in the BPS group had increased self-esteem compared with the control group and manipulation checks confirmed that children were able to effectively complete the BPS intervention using the drawing methodology (Owens and Patterson 2013). There have been no studies to assess whether drawing would be a suitable method for adult participants.

Extending the line of enquiry regarding administration of the BPS activity, Layous et al. (2013) randomly assigned participants to complete the BPS activity either on-line or in-person. Participants in the BPS groups had increased positive affect and flow compared with the control groups and there was no significant difference between the on-line and in-person groups (Layous et al. 2013). On-line administration is now standard practice in BPS experiments (Ng 2016; Shapiro and Mongrain 2010) unless the BPS activity is used as part of an experiment that requires participants to be present such as an eye-tracker task (e.g. Peters et al. 2015). The studies described here concerning delivery method suggest that the BPS is a robust tool in the sense that positive outcomes are achieved whilst using a variety of delivery methods.

3.5 Portfolio Studies

In addition to investigating the BPS as a stand-alone intervention, researchers have conducted portfolio studies in which the BPS is one of a number of interventions provided to participants. In one study, using the Live Happy iPhone app (Live Happy LLC 2015), participants were free to choose any number of the eight positive psychology exercises including the BPS (Parks et al. 2012, study3). Results showed that both mood and happiness scores improved for users of the iPhone app and that gains could be predicted based on frequency of use and number of different activities chosen (Parks et al. 2012). Mood and happiness scores were not provided for each individual activity, however the BPS was assessed as mid-range in terms of popularity i.e. not as popular as activities such as ‘goal tracking’ and ‘savouring’ and not as unpopular as activities such as ‘expressing gratitude personally’ and ‘acts of kindness journal’ (Parks et al. 2012).

Other studies have included the BPS as one of a number of interventions, however participants have not been offered choice regarding which activity they undertake. For example, in a non-choice, quasi experiment, a range of nine positive psychological interventions was randomly administered to suicidal inpatients and results in this exploratory study showed that positive interventions were feasible and useful for this population (Huffman et al. 2014). Results for each of the interventions were reported separately and the BPS was shown to result in increased optimism and decreased hopelessness (Huffman et al. 2014). The BPS however, had lower efficacy scores compared with most other interventions including the ‘gratitude letter’, ‘counting your blessings’ and ‘personal strengths’ (Huffman et al. 2014), although the BPS did have higher efficacy scores than the ‘forgiveness letter’ (Huffman et al. 2014). In another quasi-experiment, the BPS was offered as one of 13 interventions in a program for depressed adults (D’raven et al. 2015). The overall program of 13 interventions was shown to be effective in enhancing general, mental and emotional health, however, results for the BPS were not reported separately and cannot be evaluated (D’raven et al. 2015).

Additionally, the BPS activity has been used, in conjunction with a gratitude intervention, as a treatment condition in an experiment to ascertain whether well-being enhancement varies depending on whether or not participants self-select into a happiness
study (Lyubomirsky et al. 2011). In this large on-line study, participants selected a study advertised as a ‘happiness’ study or a ‘cognitive’ study and were then (regardless of their choice) randomly allocated to a treatment group (BPS or gratitude) or a control group (Lyubomirsky et al. 2011). Results for the BPS were not reported separately however, self-selection into a happiness study, predicted effort and continuation of the activity and participants in the treatment condition had higher well-being post intervention and at follow-up 8 weeks later (Lyubomirsky et al. 2011). These findings suggest that motivation to increase happiness plays a part in the efficacy of positive activities such as the BPS activity. A replication of the Lyubomirsky et al. (2011) experiment which included video instructions for participants, showed similar results (Manthey et al. 2015).

The results reported here indicate that when the BPS is included as one of a portfolio of interventions it can be used effectively with a variety of populations including on-line happiness seekers (Parks et al. 2012), depressed individuals (D’raven et al. 2015) and suicidal inpatients (Huffman et al. 2014). Because results are not generally reported for individual activities, it is premature to state that the BPS would be effective as a stand-alone intervention for these populations.

3.6 Moderating Variables

Research into positive activities, such as the BPS, has demonstrated that the extent to which a positive activity increases well-being is moderated by: (a) activity-features, (b) person-features, and (c) the degree of ‘fit’ between the person and the activity (Lyubomirsky and Layous 2013). The longer-term experiments described in this section have all investigated an aspect of moderation.

The most frequently-cited paper in this review relates to a study conducted by Sheldon and Lyubomirsky (2006) who were the first to investigate a person-feature which moderates the efficacy of the BPS. Using self-determination theory and the sustainable happiness model as their foundation, the researchers hypothesised that motivation to perform the BPS activity and the frequency of performance would moderate efficacy (Sheldon and Lyubomirsky 2006). In the initial session, participants in the BPS group had increased positive affect relative to participants in the gratitude or control conditions ($p < .01$ and greater self-concordant motivation ($p < .01$) to continue with the BPS activity even though continued practice was not a requirement of the study. Four weeks later participants in the BPS condition were found to be more likely to continue to practice the BPS activity and have reduced negative affect ($p < .05$).

Additional person features have been considered in subsequent studies to determine person-activity fit for the BPS. The BPS has been shown to be effective for increasing happiness levels in individuals high in neuroticism (Ng 2016). Depressed individuals who completed a version of the BPS with modified wording, reported lower depression levels and increased happiness up to 6 months later (Shapira and Mongrain 2010). Culture may also be an important factor with Anglo-Americans reporting increased life satisfaction after the BPS compared with Asian-Americans (Boehm et al. 2011). This finding suggests that the self-focused wording of the BPS activity may be less effective for individuals from cultural traditions that place more value on family and community. Further research is needed to investigate targeting particular positive activities to different cultural groups (Boehm et al. 2011).

Because the BPS activity involves an element of mental imagery, researchers have hypothesised that individuals with higher mental imagery ability would have superior results in terms of well-being improvement, compared with those with lower mental

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imagery ability (Odou and Vella-Brodrick 2013). However, in an on-line study this hypothesis was not supported, suggesting that the BPS can be an effective intervention irrespective of mental imagery ability (Odou and Vella-Brodrick 2013). In the same study, mindfulness was proposed as an additional person-feature and results suggested that mindfulness levels do make a difference with participants low in mindfulness attention having greater positive affect after the BPS activity (Seear and Vella-Brodrick 2013). In this experiment, there were observed increases in mindfulness levels for participants in the BPS group perhaps indicating the potential of the BPS as a mindfulness tool (Seear and Vella-Brodrick 2013).

In addition to person-features, activity-features of the BPS intervention need to be investigated. For example, the longitudinal experiments described in this review require (or request) participants to repeat the BPS activity. There does not, however, appear to be strong justification for repeat schedules with some studies using a daily administration (King 2001; Peters et al. 2013) and others weekly administration (Austenfeld et al. 2006; Boehm et al. 2011). With the exception of Maddalena et al. (2014) where weekly dosage was shown to be more beneficial than daily; experimental manipulation of this variable has not been carried out i.e. all participants in BPS studies have been given identical dosages. Further studies are needed before it can be determined whether weekly or daily dosage of the BPS would achieve superior results.

A related activity-feature concerns the provision of themes or life-domains to guide participants’ writing during repeat dosages. In examining the BPS research there is no justification provided for the choice of themes given to participants who repeat the activity, rather researchers simply state the themes that they used. This is problematic for comparison purposes as there is a variety of themes provided in studies both in terms of number and breadth. Some researchers provide three themes: personal, professional, relationship (Meevissen et al. 2011; Peters et al. 2013). Others provide four themes: social, health, academic and career (Layous et al. 2013) and others eight themes: romantic, hobbies, family, friendship, community, health, career and free topic (Manthey et al. 2015).

Although researchers have given considerable attention to the factors that may moderate the efficacy of the BPS activity, this has perhaps been at the expense of investigating mediating variables. Relatively little is known about the underlying mechanisms that explain why and how the BPS works.

4 Future Research Directions

Before making recommendations regarding future research questions, we examine the research directions envisaged by King (2001) and compare her suggestions with what has been investigated and reported over the last 15 years. The initial recommendation was that the study should be replicated and the 30 studies reviewed here show that researchers have heeded this call. King (2001) also suggested exploration of the underlying mechanisms that could explain the efficacy of the BPS intervention. Included in her suggestions were the hypotheses that writing about goals enables individuals to more effectively pursue them and that possible drivers would include: visualising, increased self-awareness and self-regulation. BPS research has only considered these mediating variables indirectly. King (2001) recommended that future studies include a goal measure to ascertain if the BPS exercise generates clearer goals and less goal conflict, however studies have not included a goal measure. Finally, King (2001) noted as a limitation in her study that her sample was
young students in an advantaged position and suggested that future research should use more diverse populations. The BPS literature examined here has achieved this diversification of populations with the exception of investigating relative levels of advantage.

We now make recommendations for future research based on the findings from the research reviewed here. To address the dearth of qualitative research in the BPS field, future studies should provide thematic analysis of the content of the BPS writing with the aim of documenting common and important themes regarding the ‘good life’. Furthermore, it is recommended that coding protocols used in qualitative research should have a theoretically-sound basis, for example coding using the six aspects of psychological well-being (Ryff 2014).

The BPS exercise has been found to be effective in inducing optimism and positive affect, however other outcome measures remain to be studied with possible candidates including hope and appreciation. Hope, as it is most commonly measured is a goals-based construct (Snyder et al. 1991) and the BPS activity is a means by which participants document their life goals. Therefore, the BPS activity may have potential as a hope induction. Additionally, given the focus of the BPS exercise on the positive aspects of life, it may have utility as a gratitude/appreciation intervention (Wood et al. 2010). Table 1 shows that hope, gratitude and appreciation have not been included as outcome measures in BPS studies. Furthermore, although many outcome measures have been considered in BPS research, the measurement of subjective well-being (affect and life satisfaction) have been over-emphasised at the expense of broader measures of well-being such as psychological well-being (Ryff 2014) and social well-being (Keyes 2002).

We conclude that the BPS may not be an activity that has universal applicability and research into individual person-features that moderate efficacy should be systematically investigated. A recent study (Ng 2016) examining personality should be extended to include a full investigation of the Big Five personality traits to determine which types would benefit most from the BPS activity. Additional studies that target interventions based on empirically established person-features such as emotional processing levels (Maddalena et al. 2014) will enhance our understanding of the applicability of the BPS intervention.

The majority of BPS studies have used writing as the medium by which participants capture what they imagine during the BPS activity. However, individuals will differ in their preferred method of completing the BPS activity and future research should investigate alternative completion methods such as using pictures, drawings, photographs or voice recordings. Another consideration is extending the BPS beyond the western context. Table 1 shows that research has been conducted predominantly in the west. Although BPS studies are now conducted on-line and use features such as video instructions, there has been little scientifically-tested, technological advancement in terms of interactivity. The BPS activity provides scope for smart-phone apps that enable individuals to save and add to their BPS as new thoughts arise and perhaps share these thoughts through social networks. Empirical testing of commercially-available smart-phone apps such as Bliss—a positive psychology app (De Mott 2016) is recommended.

This review has shown that researchers use a variety of dosage regimes however there are no comparison studies examining different BPS repeat schedules and their effectiveness. Researchers commenting on the broader intervention field are now calling for studies that test varied timing and frequency of activities specifically asking whether the BPS is best performed weekly, daily or ‘only when one is feeling low’ (Nelson and Lyubomirsky 2014, p. 279).

Although enhancing the BPS activity has not been a primary goal of the studies reviewed here, a number of researchers have in fact ‘enhanced’ the BPS. For example,
wording of the script for the BPS activity has been modified from the original (King 2001) and most researchers now use a longer version of the script that includes the words "best possible self" (Sheldon and Lyubomirsky 2006). In some studies, in addition to completing the BPS, participants are asked to describe how they would overcome an obstacle to achieve their goals (Austenfeld et al. 2006) or how they would take a small step towards a particular goal (Layous et al. 2013). In other studies, participants engage in 5 min of vivid, detailed imagery activity after they have completed the written component of the BPS activity (Peters et al. 2010). There are no studies that have compared the original BPS with these modified versions. Additionally, if the BPS activity is shown to be enhanced with a supplementary activity it raises the question of whether the BPS activity could be made more effective if it was preceded with an activity such as a positive mood induction. Future research should address this matter. The broaden-and-build theory of positive emotions (Fredrickson 2001) has been posited as a potential mediator for the BPS activity (Mevissen et al. 2011) however, this has not been empirically tested. Investigations into this theory and others as potential mediators would advance BPS research.

Finally, the title of the BPS activity and the wording of scripts used with participants shows that the tool is designed to focus on the self. An open research question is whether there are advantages in extending the initial self-focus of the BPS to a subsequent imagining of a best possible self for another. Gratitude interventions, by way of contrast, have been configured in two ways: (a) self-focused in which one writes a list of things for which one is grateful, and (b) as an other-focused activity in which one writes a gratitude letter to another person or conducts a gratitude visit to another person (Wood et al. 2010). Some BPS researchers have included the topic of relationships during repeats of the BPS activity (Layous et al. 2013; Peters et al. 2013), however the focus has remained on the self in relation to others, rather than on the ‘other’. The notion of introducing an ‘other’ focus to the BPS activity i.e. making it a Best-Possible-Other (BPO) activity, is a departure from the common administration. The BPO, where one imagines the best possible future for someone else may be as radical an idea as King’s initial speculation that, by writing about positive self-topics, the gains from expressive writing could be achieved without the negative emotions.

5 Summary and Conclusions

In examining the literature, we found that there is much to recommend the BPS intervention. The BPS is flexible with regard to delivery method and can be efficacious whether it is delivered in-person or on-line. Participant responses to the BPS can be handwritten, typed, spoken or drawn. The BPS can also be used as intervention with students, adults and children and depressed and suicidal individuals. Participants in BPS experiments report that their motivation to complete, and continue with the BPS activity is high and when researchers read the BPS text, interesting insights can be gained. As an alternative to a trauma-writing intervention, the BPS is most effective for individuals low in emotional processing and as an optimism-induction activity, the BPS is reliable and can be used as a component of pain experiments. Finally, the BPS can be recommended as one of a portfolio of interventions and when used alone and repeated over time can result in a significant increase in well-being, which can persist over time.

There remains much that can be learned from investigations into the BPS activity. Future qualitative BPS research will give us further insight into the components of the

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good life and future experimental work will indicate the optimal dosage of the BPS and those individuals most likely to benefit. Finally, the efficacy of the BPS intervention will be increased through investigating the underlying mechanisms, developing a BPO configuration and enhancing the BPS activity to induce specific, desired well-being outcomes such as hope and appreciation.

References


Chapter 3: Participant Experience (Under Review)

3.1 Overview of Paper 2

Paper 2 responds to three gaps in the BPS literature that were identified in Paper 1 as requiring a quantitative approach: (a) Hope and Mental Health as outcome variables, (b) priming the BPS, and (c) the broaden-and-build theory of positive emotions as an explanation for the efficacy of the BPS. Additionally, Paper 2 explores the participant experience involved with being part of an online experiment using the BPS intervention.

3.2 Research Questions

The following research questions were addressed in Paper 2:

- RQ4: In what ways did the cognitions and emotions of participants change during the experiment? (to assess the potential of the BPS as a hope intervention, and whether priming improves efficacy)
- RQ5: What did participants say they wanted to do after the intervention? (to test the broaden-and-build theory of positive emotions as an explanation for the way the BPS operates)
- RQ6: Were there condition differences in terms of interest, difficulty, and enjoyment?
- RQ7: How do participants describe the experience of being in an online positive psychology intervention study?

3.3 Findings

Findings regarding Hope as an outcome measure, priming of the BPS, and broadened thought-action repertoires included: (a) participants experienced significantly decreased Negative Affect, significantly increased Hope and Psychological well-being, and there were no condition differences on any of the measures; (b) significantly increased Hope persisted until follow-up for participants in the primed-BPS condition, and this reduced to levels comparable to the other two conditions by the end of the follow-up stage; (c) on average
participants referenced 11 thought-statements, and there were no significant differences between conditions for the number of thought statements; and (d) there were significant differences between conditions for emphasis on hedonic well-being (primed-BPS condition), and emphasis on physical well-being (Control condition). It was concluded that, given that thoughts were broadened in the absence of positive emotions, further research is needed to assess the role of the broaden-hypothesis in the efficacy of the BPS.

Findings regarding the participant experience included: (a) the BPS and primed-BPS interventions were significantly more enjoyable, and interesting, and no more difficult than the control activity; (b) enjoyment was significantly correlated with changes in Positive Affect and Hope; (c) interest was significantly positively correlated with changes in Positive Affect; and (d) difficulty was significantly negatively correlated with Hope and Negative Affect. Content analysis of participant comments revealed that 39% of participants described their experience in the experiment, 25% reflected on their emotional state, 20% critiqued the survey, and 16% used the opportunity to espouse their personal view of happiness.

Additionally, it appeared that the control intervention was treated by participants as a positive rather than neutral intervention, and that items in the Hope scale may have prompted all participants to experience increased Hope. Finally, the retention rate at follow-up (almost 50%), and appreciative comments, led to the conclusion that, for those participants who continued to the follow-up stage, participating in the study was a positive experience.

3.4 Author Contribution

PL: conceptualisation and development of research questions, development of methods, statistical analysis, development of codes, coding, content analysis, drafting, writing, editing, final draft
CJ: principal supervisor for PhD, development of research questions, editing, final draft
GL: second supervisor for PhD, statistical analysis, inter-rater coding, editing, final draft
The Participant Experience in an Online Positive Psychological Intervention Experiment

3.5 Abstract

Positive psychological interventions, delivered online, provide a cost-effective means for enhancing well-being. A mixed-methods study was carried out to address the lack of information concerning the participant experience in intervention research. Data collection was via an online Hope and Happiness experiment conducted with 141 (122 female), self-selecting participants from the general population who were randomly assigned to one of three conditions: (a) Control, (b) Best Possible Selves (BPS), and (c) Primed-BPS. The BPS is a writing intervention in which the individual imagines and writes about their ideal future. Pre-post measures for Hope, Optimism, Mental Health, and Affect were used. Content analysis was carried out on: 1,585 thought-statements, the text written by participants in the Control condition, and participant comments at the conclusion of the experiment. Participants experienced significant decreases in Negative Affect \( p < .001 \), and significant increases in Hope \( p = .046 \), and Mental Health \( p = .031 \). Significant differences were observed between conditions for references to hedonic \( p = .001 \), and physical well-being \( p = .002 \).

Thoughts were broadened without positive emotions, and enjoyment of interventions was significantly associated with increased Hope \( p < .001 \). The lack of differences between conditions on outcome measures, along with content analysis, indicated that the control intervention was treated as a positive intervention, and items in the Hope and Mental Health scales primed participants. The motivation for enhanced Hope, and enjoyment of the activity, was more important for well-being than the intervention itself which has implications for intervention research.

Keywords: Best possible self, intervention research, Online Positive Psychology Interventions (OPPIs), participant experience
Positive psychological interventions, delivered in an online environment, can provide a cost-effective means for the general public to enhance their well-being. It has been suggested that the “accessibility” and “sustainability” of Online Positive Psychology Interventions (OPPIs), as part of a program of well-being promotion, should be investigated (Mitchell, Vella-Brodrick, & Klein, 2010). Many studies have used statistical analysis and found that positive psychology interventions are effective as a means of enhancing well-being. Meta analyses have summarised these studies (Bolier et al., 2013; Sin & Lyubomirsky, 2009). Few studies report an in-depth understanding of the participant experience, although research has begun into the characteristics and behaviours of the users in an online context (Parks, Della Porta, Pierce, Zilca, & Lyubomirsky, 2012).

Little is known regarding whether participants find completing the interventions to be an enjoyable experience (which has implications for continued practise); whether the interventions broaden participant’s thought-action repertoires (which has implications for the type of actions participants want, and may indeed take, post-intervention); and whether participants use the intervention as a means of increasing self-awareness and their knowledge of how to increase their own sense of well-being (which has implications for efficacy).

The current research investigated the Best Possible Selves (BPS) intervention. The BPS intervention is a positive writing activity in which participants imagine their life has worked out in the best possible way, and then write what they have imagined (King, 2001). BPS studies have shown that the intervention elicits significantly increased Positive Affect (Renner, Schwarz, Peters, & Huibers, 2014), significantly decreased Negative Affect (Odou & Vella-Brodrick, 2013), and significantly increased Optimism (Peters, Flink, Boersma, & Linton, 2010). Furthermore, the BPS intervention can be delivered effectively in an online environment (Layous, Katherine Nelson, & Lyubomirsky, 2013). Despite over 30 BPS studies having been carried out, few studies have used qualitative analysis to explore, from
the participant’s point of view, the experience of participating in the study (Loveday et al., 2016) (chapter 2).

In a recent review of the BPS literature (Loveday et al., 2016) (chapter 2), it was recommended that future BPS research should examine additional outcome variables such as Hope, and aspects of well-being beyond Subjective well-being, such as Psychological well-being and Social well-being. In addition to measures of Optimism, and Positive and Negative Affect, which have been used in previous studies, the current study used measures for Hope and Mental Health.

Given the increases in positive emotions associated with completing the BPS, the broaden-and-build theory of positive emotions has been posited as a possible explanation for the efficacy of the BPS as an optimism intervention (Meevissen, Peters, & Alberts, 2011); however, this has not been tested. The broaden-hypothesis is the first component of the broaden-and-build theory of positive emotions (Fredrickson, 1998). The broaden-hypothesis states that “positive emotions, relative to negative emotions and neutral states, widen the array of thoughts, action urges, and percepts that spontaneously come to mind” (Fredrickson, 2013, p. 17). The current study included a measure for Positive Affect and a measure for thought-action-repertoires (TAR) to test whether the broaden hypothesis offers an explanation for the efficacy of the BPS. In addition, the current study included questions regarding difficulty, interest, and enjoyment associated with the interventions (Sheldon & Lyubomirsky, 2006). Finally, distinct from previous research, the current study invited and analysed participant comments that were provided at the conclusion of the study.

The aim of the current research was to gain an in-depth understanding of the participant experience in an online positive psychology experiment. Specific questions under investigation were: (a) in what ways did the cognitions and emotions of participants change during the experiment; (b) what did participants say they wanted to do after the intervention;
(c) were there differences between experimental conditions in terms of the degree of difficulty, interest, or enjoyment; and (d) how did participants describe the experience of being in the study. To address the research aim, an experiment was conducted using an online survey, carried out using SurveyMonkey, in which participants completed the Best Possible Selves intervention.

3.6 Method

3.6.1 Design and procedure

The study was conducted in two stages. Stage 1 was an initial experiment with pre-intervention measures (T1), and post-intervention measures (T2). Stage 2 was a follow-up, four weeks later, with pre-intervention measures (T3) and post-intervention measures (T4). Participants initially expressed interest in the study and, after randomisation, were emailed a link to the relevant survey for their condition. Table 3.1 provides an overview of the experiment.

Table 3.1
Overview of Study

<table>
<thead>
<tr>
<th>Stage</th>
<th>Measures and Interventions</th>
<th>Control</th>
<th>BPS</th>
<th>Primed-BPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>Pre-test measures: Optimism, hope, positive and negative affect, mental health Priming</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Intervention</td>
<td>No</td>
<td>No</td>
<td>Positive event for self in last 12 months</td>
</tr>
<tr>
<td></td>
<td>Control: Describe last 24 hours in non-emotional way</td>
<td></td>
<td>BPS</td>
<td>BPS</td>
</tr>
<tr>
<td>T2</td>
<td>Post-test measures: Experience: enjoyment, difficulty, interest</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Optimism, hope, positive and negative affect, mental health Thought-action repertoires</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Demographic questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(T1 + 20 mins)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage</td>
<td>Measures and Interventions</td>
<td>Control</td>
<td>BPS</td>
<td>Primed-BPS</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------</td>
<td>---------</td>
<td>-----</td>
<td>------------</td>
</tr>
<tr>
<td>T3 (T1 + 4 weeks)</td>
<td>Pre-test measures: Mental health, hope</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Priming</td>
<td>No</td>
<td>No</td>
<td>Positive event for loved one in last 12 months</td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td>BPS</td>
<td>BPO</td>
<td>BPO</td>
<td></td>
</tr>
<tr>
<td>T4 (T3 + 15 mins)</td>
<td>Post-test measure: Hope Final comment</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

BPS = Best Possible Selves  
BPO = Best Possible Other

In the initial experiment participants spent up to 25 minutes completing the entire survey. T1 pre-intervention measures for the outcome variables were completed in the following order: Optimism, Hope, Affect, and Mental Health (see Table 3.2). The pre-intervention measures were followed immediately by the relevant activity for the condition. Immediately after the intervention activity, participants completed experience questions (difficulty, interest, and enjoyment), then the T2 post-intervention items which consisted of Optimism, Hope, Affect, and Mental Health, followed by the Twenty Statements Test (see Table 3.2) and, finally demographic details (gender, education, age, living with partner, children, household income).

Participants in the Control condition (n = 50) completed a control activity used in previous BPS studies which was to write about the past 24 hours in a non-emotional way (Austenfeld & Stanton, 2008; Layous et al., 2013; Maddalena, Saxey-Reese, & Barnes, 2014). The BPS condition (n = 42) completed the BPS intervention. The primed-BPS condition (n = 49) completed a positive-mood priming activity, which was to write about a very positive event from the past 12 months (Ng, 2015). The priming activity was followed by completion of the BPS intervention.
Four weeks later, participants were invited to participate in the follow-up stage. Three emails were sent to remind participants to complete the follow-up and 49% chose to do so. In the follow-up stage, participants spent up to 15 minutes completing measures of Hope and Mental Health (T3), followed by either the BPS or a newly developed intervention, the Best Possible Other (BPO). The BPO intervention involved the participant writing about a loved one’s life working out in the best possible way. In the follow-up stage, the BPS ($n = 27$) was completed by participants who at T1 had been randomised to the Control condition. The BPO ($n = 24$) and primed-BPO ($n = 18$) were completed by participants who had been initially randomised to the BPS condition, and primed-BPS condition respectively. After completion of the BPS, BPO or primed-BPO, participants completed the Hope scale (T4). At the conclusion of the follow-up survey, participants were invited to write a final comment. Table 3.2 provides details of scales used. Table 3.3 describes the interventions.
<table>
<thead>
<tr>
<th>Instrument</th>
<th>Measures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Life Orientation Test-Revised (LOT-R)</td>
<td>Dispositional optimism (modified to measure state optimism)</td>
<td>10 items, 5-point scale, anchors: Agree a lot and Disagree a lot. 3 optimism items, 3 pessimism items, 4 filler items. Sample items: In uncertain times I usually expect the best (optimism), I hardly ever expect things to go my way (pessimism) Cronbach’s $\alpha = .783$</td>
</tr>
<tr>
<td>The Adult State Hope Scale</td>
<td>State-hope, two subscales: pathways thinking and agency thinking.</td>
<td>Six items, 8-point scale, anchors: Definitely false and Definitely true. Pathways-thinking (3 items) sample item: If I should find myself in a jam, I could think of many ways to get out of it; Agency-thinking (3 items) sample item: At the present time, I am energetically pursuing my goals. Cronbach’s $\alpha = .899$</td>
</tr>
<tr>
<td>Positive and Negative Affect Scale (PANAS)</td>
<td>Positive Affect</td>
<td>20 items, 5-point scale, anchors: Very slightly or not at all and Extremely. 10 positive items, 10 negative items. Sample items: interested, excited, enthusiastic (positive affect) and distressed, upset, guilty (negative affect) Cronbach’s $\alpha$ (positive) = .920, Cronbach’s $\alpha$ (negative) = .887</td>
</tr>
<tr>
<td>The Mental Health Continuum - Short Form (MHC-SF)</td>
<td>Mental health, three subscales: subjective well-being, social well-being, and psychological well-being</td>
<td>14 items, 6-point scale, anchors Never and Everyday. Subjective well-being (3 items) sample item: satisfied with life; Social well-being (5 items) sample item: that people are basically good; Psychological well-being (6 items) sample item: good at managing the responsibilities of your daily life. Cronbach’s $\alpha = .923$</td>
</tr>
<tr>
<td>Twenty Statements Test</td>
<td>Thought-action repertoires (TARs)</td>
<td>Think about how you are feeling right now. Given this feeling, please list all the things you would like to do. Prompts were provided with 20 lines each headed with the statement: I would like to….</td>
</tr>
</tbody>
</table>
### Table 3.3

**Intervention Instructions and Open-Ended Questions**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BPS condition</strong></td>
<td><strong>Adapted from (Sheldon &amp; Lyubomirsky, 2006)</strong> Here is the tool that we think might increase happiness. Please spend 5-15 minutes writing in the box below. Create a picture in your mind about your life in the future. Imagine in this picture that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all of your life goals. Think of this picture as the realisation of your life dreams - this is your “best possible self”. In this ‘best possible self’ exercise, you are developing a picture of the best possible way that things might turn out in your life. Now, write for 5-15 minutes describing yourself in your best possible future.</td>
</tr>
<tr>
<td><strong>Control condition</strong></td>
<td>Here is the tool that we think might increase happiness. Please spend 5-15 minutes writing in the box below. Think about what you did in the last 24 hours. List all the things you did in as much detail as you can but try to leave out emotions, feelings or opinions. Focus on exactly what you did. After that pick one activity and write about it in even more detail, break the activity into smaller pieces and describe exactly what you did. Write for 5-15 minutes.</td>
</tr>
<tr>
<td><strong>Primed-BPS condition:</strong></td>
<td><strong>positive-mood induction and manipulation checks</strong> Recall a VERY POSITIVE event in your life from the last 12 months. Remember the event as vividly as you can. In the box below write what happened, what you felt and what you thought. Write for up to 5 minutes. How would you rate the event? 1-6 scale, anchors Extremely negative to Extremely positive. How do you feel now? 1-6 scale, anchors Extremely negative to Extremely positive.</td>
</tr>
<tr>
<td>Self-created scale to measure:</td>
<td>Difficulty, Interest, and Enjoyment Three items, one item for each dimension, 5-point scale, anchors: Very slightly or not at all and Extremely. Sample item: How difficult did you find the exercise?</td>
</tr>
<tr>
<td>Manipulation check conducted on Control activity to measure:</td>
<td>Use of emotional words – Yes/No. Description of day. One item, 5-point scale, 1 = very unpleasant, 2 = unpleasant, 3 = neutral, 4 = pleasant, and 5 = very pleasant. Sample response, coded as Neutral (3): ‘Walked dogs. Cooked large amount of special diet food for dogs. Started brick edging. Collected travel documents. Easter shopping. Attended to things at daughter’s home during her absence. Sorted issue with security system at daughter’s later in the evening. Met friend for cuppa. Visited dentist to fix broken tooth. Went to gym but it was unexpectedly closed.’ Sample response, coded as Pleasant (4): ‘Walked my old dogs early in the day for 20 minutes and ran some of the way with them at their pace. Trimmed plants in my front yard with electric trimmer and filled the bin. Went to 2 movies and discussed them with fellow movie goers over lunch between each movie. Caught the bus to the city. Long but fast walk to theatre. Visited friends X 2 at their home close to my home and had cuppa. Talked to friends on the phone for 30 minutes. Attended the gym for 45 minutes. Bought fish and chips and had dinner with a friend at her home. Talked to Travel agent about trip to Darwin to sort out Mum’s possessions with sister and brother. Did some computer work for social group’</td>
</tr>
<tr>
<td>Optional final-comment text</td>
<td>This is the final question in the follow-up survey. Do you have any final comments you would like to make? Please write them in the box below.</td>
</tr>
</tbody>
</table>

Institutional ethics approval was granted by the Human Research Ethics Committee at the University of blinded for review (S/16/879) and participants gave their informed consent
prior to commencing the study. Confidentiality and anonymity were ensured with the use of a unique three-letter, three-digit code. Recruitment of participants was through Facebook, personal contacts of the first author, and local media. Participants were not incentivised for participation and could exit the study at any time. Data reported here were from a larger study investigating the BPS intervention. The focus of the current chapter is the BPS. The BPO is examined in chapter 6.

3.6.2 Participants

The study was advertised as an online intervention study to increase Hope/Happiness and used a naturalistic design whereby participants completed the survey in their own setting, rather than in a laboratory. The complete-at-home study design was used to ensure participants had the characteristics and motivations of our interest group which was “online happiness-seekers”, defined as individuals who search the internet for tools to improve happiness (Parks, 2014). Participants were recruited via Facebook, local media, and personal contacts of the first author.

Participants (n = 141, female = 122) completed the initial experiment and were drawn from the general population. The median age was 45 years (range 18 to >75 years, interquartile range 40-60 years); median household income was A$64,000 p.a. (interquartile range A$45,000-$120,000). Sixty-nine participants (female = 61) completed the follow-up stage. The median age in the follow-up was approximately 44 years (interquartile range = 40 - 56), and median household income was approximately $62,500 per annum (interquartile range = $30,000 - $120,000). The study originated in the Sunshine Coast region of south east Queensland, Australia. It is likely that the majority of participants reside in Australia, however as the study was conducted online some participants may be based elsewhere.

3.6.3 Analysis

Statistical analyses were carried out in SPSS (Version 22) with an alpha level of .05
for statistical significance. To assess changes in Positive Affect, Negative Affect, Optimism, Hope, and Mental Health, 2 (time: pre and post) x 3 (condition: Control, BPS, and primed-BPS) mixed-design ANOVAs were performed for each of the dependent variables. To test the neutrality of the Control condition, a manipulation check using a binary yes/no coding system was used to assess the presence/absence of emotional words to determine whether participants had written in a non-emotional way (as per the activity instruction). Following this, content analysis using a 5-point scale was used to denote the ‘pleasantness’ of the 24 hours described by the participant.

Breadth of thought-action repertoires (TAR) was measured in two ways: (a) numerically through the number of thought-statements written (a higher number indicating greater breadth of TAR), and (b) variety of statements (greater reference to well-being components indicating greater breadth of TAR) (Fredrickson & Branigan, 2005). Content analysis of the thought-action statements was completed using the single thought-statement as the unit of analysis (Krippendorff, 2012). A deductive approach was used and each thought-statement, for each participant, was assigned to one of five, mutually-exclusive components of well-being: hedonic, eudaimonic, psychological, social, and physical (Feeney & Collins, 2015). The five-component model was based on the conceptual model of well-being developed by Feeney and Collins (2015) which represented their summary of the well-being literature. The number of thought-statements coded to each component of well-being was calculated for each participant. The number of thought-statements was then tallied at the condition level resulting in each condition having a score for the number of thought-statements in each well-being category. One-way ANOVA was used to assess condition differences. Inter-rater agreement for allocation to well-being categories was conducted with the second author and was very high (97%). Table 3.4 provides definitions of well-being themes, and examples of thought-statements drawn from participants’ texts.
Table 3.4
Well-Being Codes, Definitions and Sample Items From Participants’ Responses

<table>
<thead>
<tr>
<th>Well-being code</th>
<th>Definition*</th>
<th>Sample items from participants’ texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedonic</td>
<td>happiness, life satisfaction, subjective well-being</td>
<td>feel happier; enjoy every day; go for a walk and look at the sunset; go on holiday; work less and play more; spend more time in nature; watch movies; have more down time</td>
</tr>
<tr>
<td>Eudaimonic</td>
<td>having purpose and meaning in life, having and progressing towards meaningful goals, mastery/efficacy, control, autonomy/self-determination, personal growth, movement towards full potential</td>
<td>be financially stable; write a book; finish my house; run a marathon; change my job; play the piano; play better golf; make an educational computer game</td>
</tr>
<tr>
<td>Psychological</td>
<td>positive self-regard, self-acceptance, resilience/hardiness, optimism, absence (or reduced incidence) of mental health symptoms or disorders</td>
<td>be more secure at work; trust myself; continue improving where I am at emotionally; not get frustrated by small things; improve my willpower; heal from grief</td>
</tr>
<tr>
<td>Social</td>
<td>deep and meaningful human connections, positive interpersonal expectancies (including perceived available support), prosocial orientation, faith in others/humanity</td>
<td>catch up with old friends; spend time with family; meet new people; have more intimate relationship with my partner; connect with others; meet my future husband</td>
</tr>
<tr>
<td>Physical</td>
<td>physical fitness (healthy weight and activity levels), absence (or reduced incidence) or illness and disease, health status above expected baselines, longevity</td>
<td>get fitter; swim every day; reduce my weight; be more active; have more energy; have the chronic back pain go away; maintain my health; go to a health retreat</td>
</tr>
</tbody>
</table>

*Definitions: Feeney and Collins (2015)

To assess the role of interest, enjoyment, and difficulty associated with the interventions, a one-way MANOVA was conducted between the three conditions (Control, BPS, and primed-BPS) on the dependent variables of difficulty, enjoyment, and interest. Additionally, a Pearson Correlation was carried out to determine whether there was a correlation between changes in any of the dependent variables (Hope, Affect, Optimism, Mental Health) and the participant experience with the interventions (interest, enjoyment, and difficulty). On inspection of the distribution of the dependent variables, Shapiro-Wilkes tests suggested a number were not normal, however despite transformations to attempt to improve normality these transformations did not substantially change the distributions. As visual investigation indicated that they were approximately normal, and that MANOVA is accepted
as a robust test of differences, it was concluded that parametric analysis was justified.

Content analysis of participant comments, written at the conclusion of the study, was conducted using an inductive approach which identified the main themes raised in the texts. Comments were initially read for familiarity and to identify overall themes. Comments were then coded by the first author to four categories: happiness, emotions, experience, survey/questionnaire. Tallies were made of the number of comments in each category. The second author reviewed coding decisions and agreement level was high (95%).

3.7 Results

3.7.1 Outcome measures

Results of the mixed-design ANOVA, between T1 and T2, showed significant decreases in Negative Affect \( (F(1,139) = 21.01, p < .001, n_r^2 = .131, \text{power} = .995) \), and significant increases in Hope \( (F(1,137) = 4.06, p = .046, n_r^2 = .029, \text{power} = .516) \), and Mental Health \( (F(1,139) = 4.75, p = .031, n_r^2 = .033, \text{power} = .581) \). Further investigation revealed that the significant increases in Hope occurred within the pathways subscale \( (F(1,137) = 6.81, p = .010, n_r^2 = .044, \text{power} = .699) \), and not the agency subscale. Significant increases in Mental Health occurred within the Psychological well-being subscale \( (F(1,139) = 4.974, p = .027, n_r^2 = .035, \text{power} = .601) \), and not the subjective well-being, or social well-being subscales. There were no significant condition, nor condition x time, differences for Negative Affect, Hope, or Mental Health. There were no significant changes between T1 and T2 for the dependent variables of Positive Affect, or Optimism.

Hope and Mental health were the two dependent variables that were measured in the follow-up stage. For the dependent variable of Hope, there were significant increases in Hope from T1 to T3 \( (F(1,66) = 7.20, p = .009) \) and significant condition x time differences \( (F(2,66) = 5.47, p = .006) \). Least Squares Differences (LSD) revealed that the increase in Hope
for participants in the Primed-BPS condition was significantly different from both the Control condition \( (p = .009) \) and the BPS condition \( (p = .027) \), and there were no significant differences between the Control and BPS conditions. Further analysis using the same design showed significant changes in the dependent variable of Hope from T3 to T4 \( (F (1,66) = 6.75, p = .012) \), and a significant effect for condition by time \( (F (2,66) = 6.77, p = .002) \). Participants who completed the primed-BPO condition experienced a decrease in Hope levels, although a one-way ANOVA showed that pre-intervention Hope scores (at T3) for those in the primed-BPS condition were significantly higher than those in the other two conditions \( (F (2,68) = 3.77, p = .028) \). There were no significant differences between T1 and T3 for Mental Health.

Content analysis of the text written by participants during the control intervention showed that participants had successfully followed the instruction to recollect the past 24 hours. Contrary to the instruction to write in a non-emotional way, 16 participants (31%) used emotional words in their description, for example: ‘I was very pleased with the outcome’ and ‘I felt upset because he was saying he didn't have a problem and I was feeling angry because of this’. Additionally, content analysis of texts to assess ‘pleasantness of day’ on a 1-5 scale revealed that participants in the Control condition described a neutral-to-pleasant past 24 hours \( (M = 3.65; SD = 0.6; \text{range } = 1-4) \).

3.7.2 Broadened TAR

A total of 1,585 thought-statements were generated by participants in the study \( (M = 11.19, SD = 5.9) \). Regarding the number of thought-statements, results of a one-way ANOVA revealed that there were no significant differences between conditions for the number of thought-statements generated \( (F (2,137) = 1.20, p = .305) \). Although not part of the planned tests for broadened TAR, it should be noted that only 17% of participants in the BPS condition referenced the maximum number of 20 thought-statements, whereas 24% in the
Control condition, and 24% in the primed-BPS condition, did so. The greater reference to the maximum number of possible thought-statements may indicate that thoughts were broadened for participants in the Control and primed-BPS conditions, compared with the BPS condition.

Regarding variety of thought-statements, results of an ANOVA revealed significant differences between conditions for the number of statements allocated to both hedonic ($F(2,140) = 7.08, p = .001$), and physical well-being components ($F(2,140) = 6.27, p = .002$). LSD tests revealed that participants in the primed-BPS condition placed significantly greater emphasis on hedonic well-being compared with the BPS condition ($p = .016$) and the Control condition ($p < .001$). LSD also revealed that physical well-being received significantly greater emphasis from participants in the Control condition compared with the BPS condition ($p = .001$), and also compared with the primed-BPS condition ($p = .013$). There were no significant differences between conditions for the well-being components of eudaimonic, psychological, or social well-being. Note that only 15% of participants in the BPS condition referenced the maximum number of five well-being components, compared with the Control condition (26%), and the primed-BPS condition (27%). Once again referencing of the maximum number of well-being components was not a planned test for broadened TAR; however, this result may also suggest that thoughts were broadened for participants in the Control and primed-BPS conditions, and not the BPS condition.
Table 3.5 provides more detail.
Table 3.5
*Thought-Statements Referenced Per Well-Being Component*

<table>
<thead>
<tr>
<th>Components</th>
<th>Control Mean (SD)</th>
<th>BPS Mean (SD)</th>
<th>Primed-BPS Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedonic</td>
<td>1.63*** (1.69)</td>
<td>2.15* (2.45)</td>
<td>3.37 (2.84)</td>
</tr>
<tr>
<td>Eudaimonic</td>
<td>4.29 (3.28)</td>
<td>4.17 (3.50)</td>
<td>3.37 (2.96)</td>
</tr>
<tr>
<td>Psychological</td>
<td>1.43 (1.64)</td>
<td>1.24 (1.71)</td>
<td>1.59 (2.55)</td>
</tr>
<tr>
<td>Social</td>
<td>2.59 (2.50)</td>
<td>1.88 (1.54)</td>
<td>2.30 (1.75)</td>
</tr>
<tr>
<td>Physical</td>
<td>1.82 (1.96)</td>
<td>0.76** (.92)</td>
<td>1.06** (1.36)</td>
</tr>
</tbody>
</table>

*p < .05
**p < .01
***p < .001

3.7.3 Participant Experience

Following results from the MANOVA which revealed a significant condition effect for interest, enjoyment, and difficulty (F (6,278) = 2.80, p = .012), subsequent ANOVAs demonstrated that participants found the BPS and primed-BPS activities to be significantly more interesting (F (2,140) = 3.93, p = .022), and enjoyable (F (2,140) = 6.31, p = .002), and no more difficult (F (2,140) = 1.80, p = .342) than the Control condition. Table 3.6 provides more detail.

Table 3.6
*Means (SD) for Difficulty, Interest, and Enjoyment*

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>Control Mean (SD)</th>
<th>BPS Mean (SD)</th>
<th>Primed-BPS Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty</td>
<td>1.89 (1.19)</td>
<td>1.94 (1.27)</td>
<td>1.67 (1.12)</td>
<td>2.02 (1.17)</td>
</tr>
<tr>
<td>Enjoyment</td>
<td>3.21 (1.29)</td>
<td>2.75 (1.34)</td>
<td>3.64 (1.25) **</td>
<td>3.32 (1.13) **</td>
</tr>
<tr>
<td>Interest</td>
<td>3.36 (1.24)</td>
<td>2.98 (1.35)</td>
<td>3.57 (1.19) *</td>
<td>3.58 (1.09) *</td>
</tr>
</tbody>
</table>

Range: 1-5
*significantly different from Control condition at p < .05
**significantly different from Control condition at p < .01
Furthermore, results from a Pearson Correlation demonstrated that: (a) difficulty was significantly negatively correlated with change in Hope ($\beta = -.357, p < .01$), and significantly positively correlated with change in Negative Affect ($\beta = .172 (p < .05)$; (b) enjoyment of the activity was significantly positively correlated with change in Hope score ($\beta = .224, p < .01$), and change in Positive Affect ($\beta = .240, p < .01$); and (c) interest was significantly positively correlated with change in Positive Affect ($\beta = .213, p < .05$). Table 3.7 provides more detail.

### Table 3.7

**Correlation: Experience and Change in Dependent Variables**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Difficulty</td>
<td>-</td>
<td>-.42**</td>
<td>.210*</td>
<td>-.357**</td>
<td>-.090</td>
<td>.172*</td>
<td>-.07</td>
<td>-.082</td>
</tr>
<tr>
<td>2. Enjoyment</td>
<td>-</td>
<td>.810**</td>
<td>.224**</td>
<td>.240**</td>
<td>-.162</td>
<td>-.014</td>
<td>.075</td>
<td></td>
</tr>
<tr>
<td>3. Interest</td>
<td>-</td>
<td>.148</td>
<td>.213*</td>
<td>-.151</td>
<td>-.016</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Change Hope</td>
<td>-</td>
<td>.452**</td>
<td>.285**</td>
<td>.163</td>
<td>.339**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Change PA</td>
<td>-</td>
<td>.266**</td>
<td>.231**</td>
<td>.259**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Change NA</td>
<td>-</td>
<td>-.198*</td>
<td>.221**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Change Opt</td>
<td>-</td>
<td>.233**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Change MH</td>
<td></td>
<td></td>
<td></td>
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</table>

PA = Positive Affect, NA = Negative Affect, Opt = Optimism, MH = Mental Health

*significant at .05 level (2-tailed)

**significant at .01 level (2-tailed)

The retention rate was 49%, indicating almost half of the initial participants completed the follow-up stage and, of those, more than half (52%) provided a comment at the conclusion of the study. Note that participants were not incentivised for participating in the study or the follow-up stage. Content analysis showed that 21% of those who made a comment thanked the researchers for the opportunity to participate in the study. Thematic analysis of participant responses resulted in four themes which indicated the way in which
participants responded to the final opportunity to contribute to the study: (a) 39% described their experience as a participant, (b) 25% reflected on their own emotional state, (c) 20% critiqued the survey questions and instruments, and (d) 16% espoused their personal view on happiness.

3.8 Discussion

The aim of this study was to understand the participant experience in research which investigates online positive psychological interventions. Participants in the study experienced significantly decreased Negative Affect, a significant reappraisal of their Psychological well-being, and significantly increased Hope which, for participants in the primed-BPS condition, was sustained for four weeks.

Participants who were randomly assigned to reflect on the past 24 hours in a non-emotional way were significantly more likely to think of ways to improve their physical well-being, and those who recalled a positive event from the past 12 months were significantly more likely to focus on activities to enhance their hedonic well-being. The study demonstrated that thoughts can be broadened with no change in positive emotions. Changes in Hope, Positive, and Negative Affect were associated with the participant experience in terms of difficulty, interest, and enjoyment. Furthermore, despite a lack of condition differences on the outcome measures, participants found the BPS and primed-BPS interventions significantly more interesting and enjoyable than the Control intervention.

Content analysis of participant comments showed that participants used the study as an opportunity to reflect on their current emotional state, and espouse their personal view of happiness. Many participants found the study to be a positive experience, appreciated the opportunity to participate in the study, and found it to be a worthwhile use of their time; however, content analysis revealed that a positive experience was not universal.
Statistical analysis showed that participants in the experiment experienced significantly decreased Negative Affect which is consistent with previous BPS research (Seear & Vella-Brodrick, 2013). The current study is the first BPS study to include Hope as a dependent variable. Results showed significant increases in the pathways thinking subscale, suggesting that all interventions may have prompted participants to generate paths to achieving their goals. It is further suggested that items in the Hope scale itself may have prompted participants to experience increased pathways thinking, as indicated by the following participant comment which referenced the wording of a particular item in the Hope scale: ‘The question about there being more than one way to reach goals is a good one to get the mind open and exploring possibilities as there really is more than one way to skin a cat!!’.

Participation in the study also led to improved Mental Health, specifically in Psychological well-being. It should be noted that the MHC-SF asks participants to reflect on various aspects of their well-being over the past month, and participants in the study completed the MHC-SF at the commencement of the experiment (T1) and again approximately 20 minutes later (T2). The significant increase in Psychological well-being should therefore be seen as a reappraisal of, rather than an actual increase in, Psychological well-being. It is posited that all writing activities provided participants with an opportunity to reappraise their Psychological well-being, including how much they ‘liked most parts of their personality’, and whether their ‘life had a sense of meaning and direction’ as prompted by the Psychological well-being questions on the MHC-SF. Two comments from participants illustrate how the study may have assisted the reframing of Psychological well-being: ‘I am very pleased to discover how happy I am’ and ‘The survey required of me a level of introspection that is rare for me’.
Participants in the primed-BPS condition had higher Hope levels at follow-up (T3), compared with the Control, and BPS conditions, despite there being no condition differences in Hope levels initially (T1) or post-intervention (T2). In the initial stage, prior to completing the BPS, participants in the Primed-BPS condition completed a positive-mood induction activity which was to reflect on a positive event from the past. The positive-mood induction was the sole difference between the BPS and primed-BPS conditions. If the priming activity functioned in this way it appears that this was more likely to have been via enhanced agency-thinking ($p = .058$), rather than pathways-thinking ($p = .738$).

Previous BPS studies have shown significant differences between conditions for Optimism (Peters et al., 2010), and Positive Affect (Geschwind, Meulders, Peters, Vlaeyen, & Meulders, 2015). The lack of differences between conditions on measures such as Hope, Optimism, Affect, and Mental Health in the current study warranted further investigation into the effectiveness of the Control intervention. Content analysis of the text written revealed that participants in the Control condition focused on the positive aspects of their lives and/or that they have relatively pleasant lives. It is suggested that the control intervention in the current study performed as a positive intervention and that the awareness that the intention of the study was to promote Hope and Happiness meant that participants wrote about the positive aspects of their lives – a placebo effect.

Consistent with previous research measuring breadth of TAR (Fredrickson & Branigan, 2005; Jäger & Rüsseler, 2016), the current study used the Twenty Statements Test (TST) to measure TAR. In the previous TAR studies (where participants were randomised to watch short films designed to elicit positive, negative, and no emotion), results showed that positive emotions were associated with broadened TARs. Participants in the current study did not experience increases in positive emotions and yet content of thoughts differed between groups. It is argued that the autobiographical, past-focused activities in the Control, and
primed-BPS conditions may have primed participants’ cognitions in particular directions: towards actions to improve physical well-being (Control condition) and hedonic well-being (primed-BPS condition). This finding highlights that researchers need to carefully consider the impact that autobiographical interventions may have on broadened TAR and it is suggested that this offers an alternative explanation for results in previous studies such as those of Fredrickson and Branigan (2005) and Jäger and Rüsseler (2016). Results revealed no significant changes in positive emotions, however there were significant differences between groups in variety of content of TAR. The contention of Meevissen et al. (2011) that the broaden hypothesis (Fredrickson, 2001) is the underlying mechanism for the efficacy of the BPS activity as an optimism intervention remains to be explored.

Intervention research has shown that person-activity fit (Layous & Lyubomirsky, 2014) is important for both intervention effectiveness, and sustained use of the intervention. Despite there being no condition differences on the dependent variable measures, participants found the BPS and primed-BPS significantly more interesting and enjoyable, which has implications for continued practise. A significant association was also revealed between participant experience (interest, enjoyment, difficulty) and changes in Hope, and Positive and Negative Affect. Future research should explore these relationships.

Online studies typically have a high attrition rate (Parks, 2014). It is suggested that the use of reminder emails may have mitigated attrition in the current study. It is argued that the relatively high level of participation in the follow-up (given the lack of incentivisation) provides preliminary evidence for the suggestion that participants found the experience of being in the study to be a worthwhile use of their time. Participant comments, such as the following, support this conclusion: ‘It is an interesting exercise writing about the future and how we would like it to be, very positive feelings in doing so. We all do not do this enough.’ The argument for a positive experience was further evidenced by participants explicitly
thanking the researchers for participation, for example: ‘Thanks for setting up these questions. It made me think and be thankful for my life and loved ones’. It should be noted that the participant experience was not universally positive, as evidenced by comments such as these from a small number of participants: ‘I'm exhausted...’ and ‘So should I feel happier from now on and is someone going to make my dreams come true?’

Some participants took the opportunity to reflect on their current emotional state and, in cases such as this example, to reach an awareness of their part in their own situation: ‘This Happiness Survey has come at a time when I am experiencing a lot of professional challenges and some disappointments. I have found it profoundly difficult to reflect on my degree of happiness; realising that I am not as happy as I can be. I understand I need to take personal action.’ Furthermore, comments regarding goal-related questions in the Hope scale suggest that participants perceived goals in a particular way: ‘I'm not much of a goal setter so questions about meeting my current goals were difficult’ and ‘I've achieved a lot in my life completed study, worked in a variety of settings etc but I've never said I'll achieve this by this date! So, on the questions about achieving my goals the lesser answer was given more because I don't have goals, than because I don't think I can achieve something that I set my mind to.’

There are a number of strengths associated with the current study: attrition rates were relatively low (given the lack of incentivisation); a theory-based well-being model was used for content analysis of TARs; a realistic sample, drawn from the general population was used; and an active, rather than wait-list Control condition, was employed (Parks, 2014). Further, it is suggested that there was a reduction in demand effects in participant responses regarding their experience in the study because, in the additional comments text-box, participants were not specifically asked to describe their experience.
A number of limitations should be recognised, for example, the TST was a required question and a maximum of 20 responses was permitted. Therefore, the range for the number of thought-statements was 1-20, and it is noted that this created artificial floor and ceiling levels for this measure. The sample, although drawn from the general population, was not representative of the general population. Participants were aware of the purpose of the study, which was required to attract the target group which was online happiness seekers. However, it is thought that this led to the Control activity being treated as a positive, rather than neutral, condition. Participants entered the study with relatively high levels on the measures of the dependent variables and it is suggested that ceiling effects may have prevented the observation of increases in the outcome measures.

3.9 Conclusion

The current study demonstrated that, through the addition of questions that requested written answers from participants, intervention researchers were able to gain an understanding of the variety of ways in which participants experienced the phenomenon of taking part in a happiness study. Systematic analysis of qualitative answers complemented, enhanced, and helped explain the results that were generated through the analysis of quantitative data. It is recommended that future intervention research employs both qualitative and quantitative methods to further understand the way in which online positive psychology interventions can, cost effectively, enhance the well-being of large numbers of individuals.
3.10 References for Paper 2


Chapter 4: The Good Life (under review)

4.1 Overview of Paper 3

In both Papers 2 and 3, a mixed-methods approach is used. Paper 2 commenced with quantitative analysis with a qualitative overlay. Paper 3 now turns to research questions that benefit from an initial qualitative analysis, followed by a quantitative overlay. Paper 3 uses content and thematic analysis of the BPS texts as was recommended as a direction for future research in Paper 1 (chapter 2). By doing this, Paper 3 also addresses the lack of qualitative research in the field of positive psychology. The paper begins by critiquing and summarising existing research methods used to determine a layperson’s view of the good life. Paper 3 then offers a novel way of exploring the layperson’s view of the good life, through examination of the BPS texts using a five-component (hedonic, eudaimonic, psychological, social, physical) well-being framework (Feeney & Collins, 2015).

4.2 Research Questions

Paper 3 addresses the following research questions:

- RQ8: How well do the BPS texts represent the layperson’s view of the good life?
- RQ9: What is the relative importance of the five components of well-being in the layperson’s view of the good life?
- RQ10: How do relationships with others contribute to personal thriving?

4.3 Findings

Findings include: (a) the BPS provided a useful representation of the layperson’s view of the good life - each component was referenced by >58% of participants, and 71% of participants referenced at least four of the five components; (b) social well-being was found to be the most important component of well-being as it was referenced (unprompted) by 100% of participants; and (c) thematic analysis demonstrated that relationships with others
enhanced well-being through four psychological mechanisms - competence, relatedness, autonomy, and other-interest.

In addition to these findings, qualitative analysis also confirmed that there are many interesting things to be learnt by systematically analysing the BPS texts. For example, thematic analysis revealed that leisure was a significant aspect of the good life and Paper 4 (Loveday, Lovell, & Jones, 2017) (chapter 5) explored this in greater detail. Further, the finding in Paper 3 that 56% of participants referenced the well-being of others in their BPS led to the development and use (in the follow-up stage) of an other-oriented version of the BPS which was titled the Best Possible Other (BPO). The BPO was explored in Paper 5.

4.4 Author Contribution

PL: conceptualisation and development of research questions, development of methods, selection of coding framework, coding, content analysis, thematic analysis, drafting, writing, editing, final draft

CJ: principal supervisor for PhD, analysis method, development of research questions, editing, final draft

GL: second supervisor for PhD, inter-rater coding, editing, final draft
People matter: The link between social well-being and thriving

4.5 Abstract

An online survey of the general population \((n = 112)\) was conducted to investigate the layperson’s understanding of the ‘good life’. Content analysis was applied to the texts written during the Best Possible Selves (BPS) intervention. Using a five-component, well-being model it was found that the BPS texts met the criteria to be considered representative of a layperson’s view of the good life. Social well-being was universally referenced by participants, despite being unprompted. An investigation of the underlying ways in which social well-being promoted thriving revealed that the following were in play: competence, autonomy, and relatedness as predicted by self-determination theory. Other-interest is proposed as a further means. Finally, the Best Possible Other (BPO) intervention is offered as a potential intervention to promote other-interest and well-being.

Keywords:
best possible selves, best possible other, social well-being, good life, relationships, other-interest

Public Significance Statement:

This study found that, when writing about their vision of a ‘good life’ during the Best Possible Selves intervention, participants referenced hopes for the well-being of others. For optimal well-being, individuals need an appropriate balance between self-interest and other-interest. The Best Possible Other (BPO) intervention was developed and is proposed as an intervention to promote other-interest. The BPO asks individuals to write about someone else’s life unfolding in the best possible way.
Research has explored the layperson’s concept of the good life and identified areas of convergence between ‘everyday and scientific theorising’ on what it means to live a life worth living (Wirtz, Stalls, Scollon, & Wuensch, 2016, p. 1). A quantitative approach that has been used in prior research is to develop a persona (or ‘target’ person), manipulate aspects of this character’s life, and then randomly assign participants to different conditions based on the manipulations (King & Napa, 1998). Participants in the experiment then answer questions regarding their view of the life quality of the target person. Using this methodology, research has found that relationships are significant to living a good life (Twenge & King, 2005), and there are cross-cultural differences associated with the importance of material success (Wirtz & Scollon, 2012). All participants consider the same target person, which is important in experimental research design; however, what is missing from this approach is the individual’s own view of what they would consider a good life for themselves.

An alternative to the target-person approach is the self-narrative approach. In a four-nation study, students were asked to imagine themselves at age 85 and to list six criteria by which they would assess their own life as being worthy, good, and successful (Tafarodi et al., 2012). Responses were summarised into 30 categories and, of these, 12 categories were referenced by 25% of participants across the four nations. Aggregation of a worthy life, summarised in these 12 categories, included: five categories which referred to social relationships, three to material concerns, two to emotional life, and two to character traits. The strength of the self-narrative approach is that individuals are providing researchers with their own view of a good life, however the use of value-laden words such as ‘good’ and ‘worthy’ in the assessment criteria may prompt participants to be less than honest in their answers.

To overcome limitations in the direct, self- narrative methodology, an indirect
approach. In one study, international students were asked to describe their early university experiences and it was argued that the most significant elements of a good life could be implicitly gleaned by interrogating their responses (Bonn, 2012). The research design used semi-structured interviews in which students described their experiences in the time since they had commenced university in the new country. Although the research highlighted important cultural differences in the components of the good life, the author identified a number of inconsistencies in the results and it may be that the nature of the task which focused on the recent-past meant that day-to-day concerns were overemphasised at the expense of longer-term concepts of the good life.

To overcome limitations identified with the target-person, self-narrative and short-term indirect approach, the current research analysed a long-term, future-focused intervention in attempt to collect layperson’s implied notions of the good life whilst reducing demand effects. The current research extends the extant literature on the layperson’s concept of the good life by asking participants to imagine their own good life through completing the BPS activity. The BPS is a positive psychological intervention, using the writing paradigm, developed in 2001 (King, 2001). In the BPS intervention, participants write about their future, imagining that it has worked out in the best possible way.

In reviewing the BPS literature (Loveday, Lovell, & Jones, 2016) recommended that future BPS studies analyse the content of the BPS texts to systematically document the layperson’s view of the good life (chapter 2). In Loveday et al. (2017), the BPS texts were used to explore the way in which leisure enhances well-being (chapter 5). It was assumed in that study that the BPS texts represented the layperson’s view of the good life, however, this was not empirically tested. In the current paper, this limitation is addressed, and the BPS texts are analysed with the aim of assessing their strengths as a lay representation of the good life.

There is a lack of qualitative analysis of the BPS texts. Over 30 studies have been
published using the BPS intervention, however less than 20% have reported qualitative analysis of what the participants wrote during the BPS intervention (Loveday et al., 2016) (chapter 2). The type of research questions that have been addressed using a quantitative approach have been important and yet limited in scope. The findings generated by quantitative research have included: the successful use of the BPS as an optimism induction (Peters, Flink, Boersma, & Linton, 2010); the reduction of negative affect after daily practice of the BPS for seven days (Seear & Vella-Brodrick, 2013); and that the BPS activity can be successfully administered both in-person and online (Layous, Nelson, & Lyubomirsky, 2013). It is argued that the quantitative emphasis in the BPS literature has ignored a potentially rich source of data that can be used to further the understanding of the ‘conditions and processes that contribute to optimal functioning’ which is a goal of positive psychology (Gable & Haidt, 2005, p. 103).

The current investigation examines the BPS texts so as to add to the understanding of the layperson’s view of optimal well-being, and to explore the relative importance of each aspect of well-being. Early reading of the texts informed the understanding of the many different ways in which individuals described thriving, including: physical health, career satisfaction, close relationships, mental wellness, and positive feelings. It is argued that a systematic content analysis of the texts would indicate the relative importance of various aspects of well-being. It is suggested that researchers interested in optimum human flourishing should be interested in how individuals imagine their ideal life and that the lack of qualitative inquiry is likely to be due to the quantitative bias within the discipline of positive psychology. A recent review of the positive psychology literature revealed that of the 771 empirical papers published in the field, “11.5% used a qualitative-only methodology, and 10.5% employed a mixed-methods approach” (Donaldson, Dollwet, & Rao, 2015, p. 189). It may be the case that researchers have, singularly or in conjunction with quantitative analysis,
conducted qualitative analysis of the BPS texts and found that there was little of note within them. The lack of published results would therefore reflect a lack of notable discoveries to be made, rather than bias in the field. The current research examines the BPS texts to determine whether these texts would be of interest to researchers of the good life.

A conceptual model of thriving was sought as a framework for the content analysis process. The chosen model was the five-component, thriving framework developed by Feeney and Collins (2015). The model covers the core components of thriving and was developed as a foundation for their work which explores the link between relationships and thriving. The five components of thriving in Feeney and Collins’ model were drawn from multiple perspectives in the well-being literature and are: (a) hedonic well-being; (b) eudaimonic well-being; (c) psychological well-being; (d) social well-being; and (e) physical well-being (Feeney & Collins, 2015). Table 4.1 provides definitions of each component and sample items from participants’ texts in the dataset.
Table 4.1
Well-being codes, definitions, and sample items

<table>
<thead>
<tr>
<th>Well-being code</th>
<th>Definition*</th>
<th>Sample items from participants’ texts</th>
</tr>
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<tbody>
<tr>
<td>Hedonic</td>
<td>Happiness, life satisfaction, subjective well-being</td>
<td><em>I laugh a lot; I have time to enjoy life; my best possible future is happy; I am personally comfortable and satisfied; content and happy.</em></td>
</tr>
<tr>
<td>Eudaimonic</td>
<td>Having purpose and meaning in life, having and progressing towards meaningful goals, mastery/efficacy, control, autonomy/self-determination, personal growth, movement towards full potential</td>
<td><em>I am writing and painting; having a job that is challenging, inspiring; I choose my daily routines and activities; run a guest house with workshops and art classes; travel overseas or within Australia at least twice a year; I write and illustrate a book, which I have dreamed of since a child; I have finished my masters in speech pathology and am working as a speech pathologist.</em></td>
</tr>
<tr>
<td>Psychological</td>
<td>Positive self-regard, self-acceptance, resilience/hardiness, optimism, absence (or reduced incidence) of mental health symptoms or disorders</td>
<td><em>I embrace my own quirkiness; my self-esteem and my prestige all come from within; I am confident and motivated and able to pursue my interests without feeling constrained by my own inhibitions and demons; good mental health; I have weathered all challenges, learned lessons of ‘acceptance’ &amp; ‘letting go’.</em></td>
</tr>
<tr>
<td>Social</td>
<td>Deep and meaningful human connections, positive interpersonal expectancies (including perceived available support), prosocial orientation, faith in others/humanity</td>
<td><em>Ideally, I would be involved with grandchildren, but otherwise I would be volunteering in an organisation; my children and family are happy, all living together in our home; my husband and I holiday to places and just love our getaways and love coming home to ‘our paradise’; we spend quality time together doing things that we value such as being active outdoors and cuddling on the couch reading books.</em></td>
</tr>
<tr>
<td>Physical</td>
<td>Physical fitness (healthy weight and activity levels), absence (or reduced incidence) of illness and disease, health status above expected baselines, longevity</td>
<td><em>I am healthy, exercising most days in a steady fashion; I am slim and healthy and enjoy an energetic way of life; I will nourish my body with the right foods and eat less sugar; I am at my goal weight; I’m not smoking and I am not drinking much; I am free of chronic pain, asthma, COPD and various other ailments.</em></td>
</tr>
</tbody>
</table>

* (Feeney & Collins, 2015, p. 3)

The first line of enquiry in the current research provides insights into the ways in which relationships with others are important to individual thriving. The link between relationships and well-being has to date focused primarily on social support in times of adversity. Additionally, there is a need for research that explores the link between relationships and well-being in the promotion of thriving (Feeney & Collins, 2014).

It was noted in the current BPS study that participants wrote about other individuals,
rather than solely about themselves. Given the task instruction which was to ‘write about your best possible future’, it was expected that when individuals described their ideal future they would write a great deal about themselves. What was not anticipated was the extent to which they would also write about other individuals. The second line of enquiry was developed in response to this finding. It is argued that, contained within the BPS texts is an opportunity to examine the relationship between the ‘self’ and the ‘other’ as it pertains to future thriving. The current research can therefore contribute to the literature concerning relationships and well-being by providing an in-depth understanding of the components involved in this process.

To assess whether the BPS texts were a useful data source for understanding the layperson’s view of the good life, a benchmark was set that each component of thriving would need to be mentioned by at least half of all participants. Regarding the relative importance of the five components of thriving, it was expected that due to the wording of the BPS prompt which asks participants to describe their goals and dreams, the majority of participants would reference eudaimonic well-being, which includes the pursuit of meaningful goals. It was also anticipated that a large number of participants would emphasise hedonic well-being because participants had self-selected into a happiness study and were told that the researchers anticipated that the BPS might increase happiness. The instruction for the BPS intervention did not prompt participants to describe psychological, physical or social well-being, and thus it was expected that fewer participants would mention these components.

In investigating the ways in which relationships with others enhance personal thriving, it was anticipated that participants would place greater emphasis on themselves in relation to others as the wording of the BPS instruction is self-focused, for example, ‘your life dreams’ and ‘your best possible self’ rather than other-focused. In addition to the category of
self in relation to others, it was anticipated that there would be a variety of other ways to explain how relationships with others enhances personal thriving. The same benchmark of reference of the component by at least 50% of participants was used to assess whether an identified component added explanatory value.

4.6 Method

4.6.1 Data collection

An online survey was conducted using SurveyMonkey (surveymonkey.com), to test the efficacy of the BPS intervention. The data reported here were part of a larger BPS study which included quantitative analysis (see chapter 3 for full details of the study). Ethics approval was granted by the University of (blinded for review) (Ethics Approval No. S/16/879). A unique three-letter, three-digit code was used to ensure anonymity. Consent to participate was indicated by clicking a radio button on the first question of the survey. Participants were recruited via Facebook, local media (blinded for review) and personal contacts of the first author, and volunteered to participate in a study advertised as promoting hope and happiness. Completion of the survey was in the participants’ own time and venue. Participants were not incentivised for participation and could withdraw from the study at any time during the approximately 25 minutes that was needed to complete the BPS and a series of pre and post psychological instruments as well as demographic questions.
The specific instruction used for the BPS intervention in the study was:

“Here is the tool that we think might increase happiness. Please spend 5-15 minutes writing in the box below. Create a picture in your mind about your life in the future. Imagine in this picture that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all of your life goals. Think of this picture as the realisation of your life dream - this is your ‘best possible self’. In this ‘best possible self’ exercise, you are developing a picture of the best possible way that things might turn out in your life. Now, write for 5-15 minutes describing yourself in your best possible future” (adapted from Sheldon & Lyubomirsky, 2006).

A post-positivist, reality-oriented, qualitative approach (Patton, 2005) was used for data collection. It is argued that in asking individuals to write about their best possible future they would provide information that would enable the addressing of questions about what thriving would look like at the individual level.

4.6.2 Participants

The final sample consisted of 112 participants (female = 97) who had completed the BPS and provided full demographic details. Demographically the cohort was characterised as middle-aged, middle-class, educated females which is a reflection of the demographic characteristics of the first author (see Table 4.2). Participants in this study were randomly assigned to three conditions. Participants assigned to the first condition completed the BPS. Those in the primed-BPS condition also completed the BPS; however, this was preceded by a positive-mood induction which was to write about a positive event from the last 12 months. Participants in the third condition initially wrote in a non-emotional way about what they did in the last 24 hours (daily activity). Four weeks later, during a follow-up to the initial experiment, participants in the daily-activity condition completed the BPS activity. Given the lag in data collection, it is possible that there were differences between the three conditions and that combining the texts into a single dataset was not justified. It is advised that there
were no significant differences between the three conditions on any of the pre-intervention measures for hope, mental health, optimism, affect, or demographic characteristics and that it was methodologically appropriate to combine the texts from each of the three conditions to create a larger database of responses.
Table 4.2  
Demographic Details for Sample

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Demographic Categories</th>
<th>Prefer not to say</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>97</td>
<td>Male</td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Living with Partner</td>
<td>74</td>
<td>35</td>
</tr>
<tr>
<td>Median</td>
<td>Range</td>
<td>IQR</td>
</tr>
<tr>
<td>Age</td>
<td>45</td>
<td>18 to &gt;75 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 to 60 years</td>
</tr>
<tr>
<td>Household Income</td>
<td>A$68,750 p.a.</td>
<td>&lt;$25,000 to &gt;$150,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$50,000 to $130,000</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than high school</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor Degree</td>
<td>28</td>
<td>47</td>
</tr>
<tr>
<td>Graduate Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of children</td>
<td>11</td>
<td>21</td>
</tr>
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<td></td>
<td></td>
<td>20</td>
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<td>30</td>
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</table>

\( A$ = \text{Australian dollars} \)

### 4.6.3 Data analysis

Data analysis proceeded in two stages. In stage one, a deductive approach was used and the BPS texts were coded to a five-component conceptual model of thriving (Feeney & Collins, 2015). The deductive approach allowed an assessment of the relative importance of each aspect of well-being. In stage two, an inductive approach was used to investigate the ways in which relationships with others are important to personal thriving. Krippendorff’s
(2012) method of content analysis was selected as the method of data analysis as it would enable the reduction of the qualitative data in such a way as to be able to assess the significance of specific well-being dimensions as they contribute to optimal well-being.

In stage one, the BPS text of each participant was colour-coded to each of the five components of thriving: hedonic, eudaimonic, psychological, social, and physical (Feeney & Collins, 2015). Excel (2016, MSO, 16.0.7030.1021) was used as the data-analysis tool for two reasons: (a) texts were short - amounting to around one paragraph per participant, and (b) Excel was able to perform calculations for the total number of components referenced and corresponding percentages which was necessary for the content analysis. A binary yes/no coding system was used for the analysis, that is, the component was referenced, or it was not. Participants who used one or more words/phrases that could be coded to a well-being component were allocated a ‘1’ for that component. If the participant made no mention of the well-being component they were allocated a ‘0’. The possible range for scores was therefore 0-5.

Initially, the coding of the BPS texts was carried out using the sentence as the unit of analysis; however, a large number of sentences pertained to multiple components and by force-coding a sentence to a single component, the number of components of well-being covered by each participant was underestimated. Therefore, the unit of analysis was shifted to the ‘phrase’ or ‘word’ level. For example: “I am energetic and proud of my home and family” was coded to three components, that is, physical, psychological and social well-being as follows: physical well-being - I am energetic; psychological well-being - proud, and social well-being - home and family. Sentences that referred to a single component were coded to that component, for example, this sentence that was coded as physical: “I am healthier than I am now”.

In stage two of the analysis, a more detailed examination of the social well-being
component of the BPS texts was conducted. This was done to gain a more nuanced understanding of the importance of relationships with others. The content analysis in this stage used an inductive approach to identify themes, and the unit of analysis was the sentence as most sentences referenced a single theme. Following the identification of themes, the percentage of participants referencing each theme was calculated. Additionally, all the sentences coded to each social well-being theme was collated and the percentage of sentences for each theme was calculated. This allowed for the removal of any anomalies between participants in terms of number of sentences written.

4.7 Results

4.7.1 Overview of BPS texts

The average number of sentences written across the BPS dataset was 9.8 sentences ($SD = 6.3$). An independent samples t-test showed a significant gender difference in the number of sentences written: males ($M = 7.2$, $SD = 3.9$), females ($M = 10.2$, $SD = 6.5$); $t(27.82) = 2.492$, $p = .019$. The text of the majority of participants was positive or very positive and referenced multiple components of well-being. For example, one participant wrote: “I will be happy and satisfied in my life, job and my family. My health will improve, and I'll have a lot more energy. I will have more holidays as my children get older. We will have less debt and more money and time to spend on ourselves. I look forward to less stress and more free time” (Female, bachelor degree, 25-34, partner-yes, children 7-12 and 13-18, income-prefer not to say). The initial reading for familiarity, of the BPS texts revealed that participants did not imagine particularly grand futures; for the cohort, most responses seemed ‘possible’.

4.7.2 Components of thriving

All participants referenced at least two components of thriving, 40% referenced four components, and 31% referenced all five components. Consistent with expectations, the
majority of participants made reference to eudaimonic well-being (96% of participants) and
hedonic well-being (80% of participants). Psychological well-being (58% of participants) and
physical well-being (63% of participants) had a lower representation which was also
consistent with anticipation, given the lack of prompting in the BPS task instructions. An
unexpected result was observed for social well-being which was referenced by 100% of
participants. The next section provides a sense of the richness and variety of these short texts
along with examples of wording used by participants.

4.7.3 Descriptive elements of components of well-being

4.7.4 Hedonic well-being

Hedonic well-being (referenced by 80% of participants) was described as: enjoyment
of work and leisure, listed along with work-life balance and activities such as films, books,
outings, hobbies, and travel. There was also reference to satisfaction, contentment and a sense
of gratitude and appreciation for their life. Many participants mentioned laughter, and some
ended their BPS text with statements such as: “life is magical and fun” and “life is good!”

4.7.5 Eudaimonic well-being

The goals and dreams described in the BPS texts, and coded as eudaimonic well-being
(referenced by 96% of participants), were many and varied across the dataset and within
individual texts. Success and challenge in career and work were common topics, as were the
completion of qualifications. Associated with this were frequent travel goals as well as
retirement. Autonomy of time and money peppered many texts, and participants were also
interested in positively impacting the world, achieving spiritual goals and/or living in a
manner that reflected their values.

4.7.6 Psychological well-being

Although many participants did not reference psychological well-being in their text,
those who did (referenced by 58% of participants) wrote of “knowing who I am” and loving themselves. Participants’ best-possible, psychological version of self was reported as: confident, whole, smart, accepting of self, capable, and not overly-responsible. This “grandest version” of self had also overcome anxiety, inhibitions, demons, was stress-free, and at peace.

4.7.7 Social well-being

In addition to being mentioned by all participants (100% of participants), social well-being was also the component for which participants wrote the greatest number of sentences and used the greatest detail in their descriptions. Most participants referred to close, fun and meaningful relationships with friends, family, partners, husbands, wives, children, grandchildren, and parents. The importance of shared activities and constructive, loving communication was noted in these close relationships. Many participants referred to contributing, volunteering, and impacting humans more distant than family and friends. Social well-being also included the wish and hope for the well-being of others.

4.7.8 Physical well-being

Finally, when participants mentioned their physical health (63% of participants), many simply stated that they were “healthy”. Those who provided greater detail included the overcoming of specific illnesses and diseases as well as addictions such as smoking. Particular forms of exercise such as walking, cycling, and yoga were listed along with nutritious foods and ways of growing and preparing food. Participants described their best physical-self as: strong, fit, active, energetic, disciplined and slim.

4.7.9 The importance of others

Given the discovery above concerning the importance of social well-being to thriving, further analysis was conducted of the text for the social well-being component and four main themes were observed: (a) ‘Me’, (b) ‘We’, (c) ‘He/She’, and (d) ‘They’. The ‘Me’ theme was
identified when participants wrote about themselves in relation to the other, for example: “I will have positive and fulfilling relationships with my friends and family” (Female, 35-44, partner, children, $100,000-$150,000). For the ‘We’ theme, participants wrote about themselves with others, for example: “We share a close family relationship and have regular visitors from other parts of Australia and the world” (Male, 35-44, not living with partner, $75,000-$100,000). Text that was classified as belonging to the ‘He/She’ category was text in which a participant had written of their hopes and wishes for the future of another: “That the kids have all gone on to find happiness and success in whatever fields they choose to pursue” (Female, 45-54, partner, children, $75,000-$100,000). Finally, in the ‘They’ category, participants wrote about a wider world beyond family and friends, for example: “I have a volunteering role that is satisfying and beneficial to others’ (Female, 65-74, no partner, children over 27, $25,000-$50,000).

It was anticipated that, due to the self-focused wording of the BPS prompt, the largest percentage of participants would refer to the self in relation to others, that is, the ‘Me’ theme (referenced by 60% of participants); however, the highest percentage was observed in the ‘We’ theme (referenced by 64% of participants). Table 3 provides further details of distributions. In an attempt to overcome individual differences that may have existed at the participant level, further analysis was conducted of the social well-being text at the sentence level, across the BPS dataset, rather than at the participant level. A total of 499 sentences written by participants had been coded to the social well-being component of thriving. The distribution of sentences was very close to equal across all four social well-being themes (‘Me’, ‘We’, ‘He/She’, ‘They’) indicating that all four components of social well-being are important to thriving. Table 4.3 provides details.
Table 4.3
Social Well-Being Themes, Percentage of Participants, Distribution of Sentences

<table>
<thead>
<tr>
<th>Social well-being themes</th>
<th>Participants referencing theme (%) ((n = 112 \text{ participants}))</th>
<th>Distribution of sentences (%) ((n = 499 \text{ sentences}))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Me</td>
<td>60</td>
<td>26</td>
</tr>
<tr>
<td>We</td>
<td>64</td>
<td>25</td>
</tr>
<tr>
<td>He/She</td>
<td>56</td>
<td>25</td>
</tr>
<tr>
<td>They</td>
<td>56</td>
<td>24</td>
</tr>
</tbody>
</table>

4.8 Discussion

The current study examined the layperson’s view of thriving, that is, what would be involved in the living of the ‘good life’, as it is described by the individuals who imagine themselves living it. The research used a mixed-methods approach and had two main aims: (a) to interrogate the Best Possible Selves (BPS) (King, 2001) texts to assess their potential as a data source for the investigation of the good life, including reporting the relative importance of particular aspects of well-being as they pertain to thriving, and (b) deepen the understanding of the ways in which relationships with others contribute to personal thriving. To achieve these aims content analysis was applied to the BPS texts using a five-component thriving model as the framework for analysis (Feeney & Collins, 2015). Further, the social well-being component of the texts was analysed, and four explanatory themes were derived.

The results presented here indicated that the BPS texts are a useful data source for understanding the layperson’s view of the good life. Application of a five-component model of thriving demonstrated that 71% of participants referenced at least four of the five components of thriving, and that each component was referenced by at least 58% of participants. Social well-being was the only aspect of thriving mentioned by 100% of participants. Given that neither the experimental design nor the wording of the BPS instruction would lead participants to include reference to social well-being, it is concluded
that this result was not due to demand effects. Confidence can therefore be attached to the assertion that connection with others plays an important and perhaps underestimated role, in thriving. The ways in which relationships with others enhanced well-being were explored through the identification of four themes: ‘Me’, ‘We’, ‘He/She’, and ‘They’. An even distribution of sentences across these four themes showed that future thriving is dependent on: having successful relationships with others, pursuing goals in common with others, maintaining hopes of thriving for others, and the altruistic desire to help others.

Based on the results obtained during stage one of the analysis, it was concluded that the BPS texts were a useful data source for understanding the layperson’s view of thriving. Thirty-one percent of participants referenced all five components of well-being, and each component was referenced by at least 50% of participants. The relatively high rate of references for hedonic (80%) and eudaimonic (96%) well-being may in part be explained by: demand effects associated with the participants being aware of the purpose of the study, and priming contained within the BPS intervention instruction, respectively. The lower rates associated with psychological (58%) and physical (63%) well-being was also anticipated as these two components were not prompted. The greater emphasis on physical, compared with psychological, well-being may be that it was easier for participants to imagine, without prompting, their physical future-self, rather than their psychological future-self.

Social well-being was the only universally-mentioned component of thriving. Relationships and connection with others is not only important to leading a good life, it is, based on the views of participants in this study, an essential component. A strength of the study is that the BPS instruction did not prompt participants to write about their relationships with others and this adds weight to the assertion regarding the important role that others play in personal thriving.

The results regarding the importance of social well-being are consistent with the
findings in previous research which used a scenario-based approach with student and adult participants, and compared relationship fulfillment with work fulfillment (Twenge & King, 2005). Relationship fulfillment was found to be a “central determinant of the judgment of a life as desirable and morally good”, whereas the effect of work fulfillment was “weak in comparison” (Twenge & King, 2005, p. 349). The current results are also consistent with research using student participants from four culturally-divergent groups which found that ‘close and enduring relationships are central to a good life, for all four groups studied’ (Bonn, 2012, p. 59). Given the evidence regarding the importance of relationships, an exploration is now conducted into the way in which relationships enhance well-being. The next section considers the underlying mechanisms and seeks to explain why others matter to individual thriving.

Sixty percent of participants (‘Me’ theme) focused on the self in relationship to others using phrases such as: ‘my relationships with others are easy’; ‘I would like to be a better husband’; ‘I have a loving relationship with my niece’; ‘I will be in a better place with my husband and be able to communicate better’; and ‘I have strong relationships based on open communication and an open heart’. These self-focused ‘Me’ references described the way an individual portrayed themselves, in relation to others, rather than with others, which was in contrast with the more ‘We’ focused comments below. In times of thriving, relationships with others enable one to feel a sense of achievement, a feeling of competency in relationships in addition to the other aspects of a good life, which is consistent with self-determination theory (SDT) (Ryan & Deci, 2000). Interestingly, BPS texts in this category did not mention comparison with others or competition with others. The sense of accomplishment appeared to be self-referential, that is, in comparison to their own personal best rather than the best of another individual.

Sixty-four percent of participants used words that indicated that the link between self
and others was part of their view of the future (‘We’ theme). For example, there was frequent use of the following: ‘my husband and I’; ‘we’, ‘my partner and I’; ‘my daughter and I’; and ‘my family and I’. The linking of the self and an identified other, particularly in activities to be pursued in their ideal future, showed that individuals envision their well-being as being intimately connected with close others. In the ‘We’ theme, participants described love, friendship, and companionship with others. A sense of relatedness, which is a core psychological mechanism in SDT (Ryan & Deci, 2000), is being expressed here. Note that 33% of participants had at least one sentence coded to both the ‘Me’ and ‘We’ themes. It is argued that this demonstrated the existence of two distinct themes rather than a single theme expressed in two different ways.

The reference to helping others, which was captured in the ‘They’ category (56%), demonstrated the various ways in which a sense of purpose or meaning, achieved through assistance to others, contributes to a good life. For example: ‘I will feel like I am making a difference in the lives of clients’; ‘I have created and sold many games that enable others to experience greater well-being’; and ‘I volunteer at a not-for-profit organisation and am a respected and well-known community member’. Living a good life is associated with a sense of contribution to others, of extending the self beyond one’s own needs and the needs of close others, to consider the wider world and make a positive difference. Over half of participants imagined that their own personal well-being would be enhanced by adopting an altruistic attitude to others. The texts in this category reflected a sense of autonomy, of control of one’s own life which would result in the capacity to assist others. This result is consistent with research which demonstrated that an autonomous (compared with controlled) motivation towards prosocial behaviour, such as helping others, was associated with enhanced well-being (Weinstein & Ryan, 2010). Note: autonomy, had greater representation within the eudaimonic category which is expected given the definition of eudaimonia used in this study;
however, it was also observed in the ‘They’ category.

The three core psychological mechanisms described by SDT, that is, competence, relatedness, and autonomy, were all found within particular sub-themes in the social well-being category (‘Me’, ‘We’, and ‘They’ respectively). The BPS instruction is entirely self-focused and the finding that 56% of participants wrote about a best possible future for others (‘He/She’ theme) was surprising. A pattern was observed regarding the order in which participants constructed their BPS texts. Most participants began with items that focused on themselves, followed by sentences referencing themselves with others, and if the best possible future for close others was raised, it came towards the end of the texts. Examples of sentences coded to the ‘He/She’ category included: ‘My daughter is happy and blossoming’; ‘My husband and kids are fit, strong and healthy’; and ‘I would like my children also to be happily settled with loving spouses and raising their children lovingly, intelligently, and godly’. For the participants who referenced the future of others it appeared that the detailed awareness of their own positive future led to a desire to extend this understanding to those close to them, must usually children.

4.9 Limitations and Future research

Limitations of this research include that participants in this study self-selected into a happiness study and future research is needed to determine whether the emphasis placed on hedonic well-being would be observed in studies where participants did not know the purpose of the study. The sample is not representative of the general population and research is needed to assess whether results are generalisable to other populations. Given the high proportion of female participants in the study, caution is particularly recommended regarding the generalisability of conclusions as they would apply to male participants, and samples with a more even gender balance. Member check was not part of the research design and it cannot be determined whether items that the researchers coded to the various components and
themes were what the participants themselves would have determined.

A very high proportion of participants referenced eudaimonic well-being and three possible explanations are offered. Firstly, the wording of the BPS instruction is highly goal-focused and appeared to prime participants to focus on eudaimonic well-being, perhaps at the expense of other elements of well-being. Future studies should experiment with two types of prompts: one that is general with no mention of goals, stating only that one’s future works out in the best possible way and a second that is more specific, that is, participants would be prompted to write on each of the five aspects of well-being. Secondly, eudaimonic well-being, as defined by Feeney and Collins (2015), includes the pursuit of meaningful goals and in the coding process, goals that did not pertain to social, psychological, or physical well-being were, by default, coded to the eudaimonic category thus making it a ‘catch-all’ category. Future research should consider other coding strategies to determine if the eudaimonic emphasis persists. Finally, the definition used for the eudaimonic well-being category is extensive and wide-ranging and it is therefore predictable that it would be referenced by the majority of participants.

The text within the ‘He/She’ category did not clearly indicate either competence, relatedness, or autonomy, and it is suggested that the mechanism involved may pertain more closely to the concept of ‘other-interest’. Other-interest is the ‘pursuit of gains for others in socially-valued domains, including material goods, social status, recognition, academic or occupational achievement, and happiness’ (Gerbasi & Prentice, 2013, p. 497). Researchers have identified that the Self-and-Other-Interest Inventory would be a useful tool to assess the effectiveness of interventions designed to increase the ‘level and salience of other-interest’ (Gerbasi & Prentice, 2013, p. 510). It is argued that the ‘He/She’ theme in the current study depicted a focus on other-interest. Based on the high percentage (56%) of participants providing an unprompted description of the best possible future for close others in their BPS
texts, it is suggested that a version of the BPS that focuses on another, that is, a Best Possible Other (BPO) intervention, may have potential as an intervention to enhance other-interest and well-being.

4.10 Conclusion

Overall, it was demonstrated that there was much to be learnt by systematic analysis of the BPS texts. It is argued that a mixed-methods approach, using content analysis of the BPS texts enabled the addressing of questions that were not possible in quantitative analysis, thus adding to the understanding of the layperson’s view of thriving. The important role others play in an individual’s thriving has been shown, providing evidence for what is intuitively obvious, but is yet to be thoroughly explored empirically. Overall, it is concluded: one does not flourish alone - others matter. The degree to which, and the way in which others matter, warrants further research effort.
4.11 References for Paper 3


Chapter 5: Leisure (published in the Journal of Positive Psychology)

5.1 Overview of Paper 4

Paper 4 was written in response to the observation made while conducting qualitative analysis that leisure was a key component of a good life as referenced by participants in their BPS texts. Paper 4 also addresses the lack of qualitative research in the field of positive psychology, and was published in a special issue - Leisure and well-being of the Journal of Positive Psychology. Paper 4 applies content and thematic analysis to a subset of the BPS texts that pertained to leisure. A five-component, leisure and well-being model (Detachment-Recovery, Autonomy, Master, Meaning, Affiliation (DRAMMA)) was used as the framework for analysis (Newman et al., 2014).

5.2 Research Questions

Paper 4 addressed the following research questions:

- RQ10: What is the proportion of leisure to non-leisure in an ideal life?
- RQ11: How useful is the DRAMMA framework (Newman et al., 2014) for understanding the psychological mechanisms linking leisure and well-being?
- RQ12: Does identification of sub-themes give a more nuanced understanding of the psychological mechanisms?
- RQ13: Does the proportion of leisure/non-leisure, and psychological mechanisms, differ based on individual differences?

5.3 Findings

Findings included: (a) leisure was an important component of the good life - 41% of 1,097 sentences referenced leisure; (b) the DRAMMA model (Newman et al., 2014) provided a useful framework for analysis - each component of the model was referenced by at least 10% of sentences; (c) affiliation with others was the most important way in which leisure
contributed to well-being - 33% of sentences; and (d) leisure promoted well-being through - pleasure and escape, work-leisure balance, autonomy of time and money, learning and improvement of skill, service to others, religious and spiritual endeavours, and close relationships with others.

The importance of close relationships with others is highlighted in Paper 4 through the lens of leisure. This finding is consistent with the finding in Paper 3 that 100% of participants referenced social well-being in their version of the good life. Paper 4 therefore further illuminates the way in which individual well-being is inextricably linked to the well-being of others.

5.4 Author Contribution

PL: conceptualisation and development of research questions, development of methods, statistical analysis, selection of coding framework, coding, content analysis, thematic analysis, drafting, writing, editing, final draft

CJ: primary supervisor for PhD, analysis method, development of research questions, editing, final draft

GL: second supervisor for PhD, statistical analysis, inter-rater coding, editing, final draft
The importance of leisure and the psychological mechanisms involved in living a good life: A content analysis of best-possible-selves texts

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The importance of leisure and the psychological mechanisms involved in living a good life: A content analysis of best-possible-selves texts

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ABSTRACT

This paper explored the psychological mechanisms by which leisure enhances well-being by using sentence-by-sentence coding of the best-possible-selves text produced by 112 participants. Of the 1097 sentences, 41% were coded as leisure indicating that leisure is an important component of optimal well-being. The data showed that Australians have significantly less leisure in their daily lives than our sample desired; older and wealthier individuals placed a greater emphasis on leisure but there were no significant differences based on gender. Application of the Detachment-Recovery, Autonomy, Mastery, Meaning, Affiliation (DRAMMA) framework showed the following allocation of sentences to psychological mechanisms: Detachment-Recovery: 21%, Autonomy: 23%, Mastery: 12%, Meaning: 11% and Affiliation: 22%. In their ideal future, participants imagined that they have the time and money to do what they want, particularly to travel. We showed leisure is not solely associated with having fun; 59% of participants wanted to use their leisure time to learn, improve, or contribute to society.

This research investigated the psychological mechanisms by which leisure enhances well-being. The aims of the study were fourfold: (a) investigate the balance between leisure and non-leisure in the layperson’s view of the good life; (b) test the ‘Detachment-Recovery, Autonomy, Mastery, Meaning, Affiliation (DRAMMA)’ model (Newman, Toy, & Diener, 2014, p. 555); (c) gain a fuller understanding of the way psychological mechanisms enhance well-being through identification of sub-themes; and (d) explore individual differences in leisure emphasis and psychological mechanisms. Leisure, as both a predictor and a key domain of well-being, has been examined in many studies and summarised in recent meta-analysis which reported that leisure engagement and subjective well-being were found to be ‘moderately associated (inverse-variance weighted r = 0.26) across 37 effect sizes with over 11,000 individuals (Kuykendall, Toy, & Ng, 2015, p. 333). Explorations as to how and why leisure may enhance well-being have been advanced in a variety of theories. A summation of these theories was compiled by Newman et al. (2014) in which 363 research articles were analysed and used to construct a conceptual framework that proposed the psychological mechanisms that leisure may trigger in enhancing well-being. The five core psychological mechanisms identified by Newman et al. (2014, p. 555) were: ‘Detachment-Recovery, Autonomy, Mastery, Meaning and Affiliation’ (collectively abbreviated as DRAMMA). Detachment-recovery refers to disconnection from work and other life pressures to allow rest and recuperation (Newman et al., 2014). Autonomy is a sense of self-determination in ones life and is an essential component of overall well-being (Ryan & Deci, 2000). Mastery refers to the overcoming of challenges and the betterment of skills’ (Newman et al., 2014, p. 566). Meaning is a sense of purpose and value in life and can include connection with a higher level of being or consciousness (Newman et al., 2014). Affiliation is the feeling of well-being achieved through social connection with others (Newman et al., 2014). Newman et al. (2014) suggested that research is necessary to test their theoretical DRAMMA model to: (a) provide new insights into the balance between work and leisure; and (b) examine individual differences for their moderating effects on how leisure enhances well-being. In the current study, we tested the DRAMMA model (Newman et al., 2014) by analysing the text generated by participants in a Best Possible Selves (BPS) experiment.

The BPS activism is a positive writing intervention developed by King (2001) in which participants write about themselves in the future, imagining that everything has worked out in the best possible way. The majority of BPS
research has been experimental in nature and we propose that the text generated during BPS experiments has the potential to reveal insights into the layperson's perception of the good life (Loveday, Lovell, & Jones, 2016). We reason that when participants complete the BPS task they are describing their own view of optimal well-being and that the text can be used, in conjunction with scholarly research into the good life, to better understand and define what constitutes a life worth living. In a recent exploration of the role of self-control in lay theories of the good life, the authors identified that their outcome measures for the good life were limited and that there are 'undoubtedly additional factors that constitute the good life' (Wirtz, Stalla, Scollon, & Wunensch, 2016, p. 9). It is our contention that leisure is one of the most important of these additional factors.

The purpose of the current study was to use the DRAMMA framework (Newman et al., 2014) to analyse the BPS texts with the aim of further understanding the psychological mechanisms linking leisure and well-being. The specific research questions addressed were: (a) What is the proportion of leisure to non-leisure sentences described by participants in their view of an ideal life? (b) How useful is the DRAMMA framework for understanding the psychological mechanisms linking leisure and well-being in an ideal life? (c) Does identification of sub-themes within the psychological mechanisms provide a more nuanced understanding of these mechanisms? (d) Does the proportion of leisure/non leisure emphasis, and the importance of psychological mechanisms differ based on individual differences?

We hypothesised that leisure would be an important component of an ideal life, and although we did not have an a priori assumption for the ratio of leisure to non-leisure, we argued that this would differ based on individual differences such as age, gender, and household income. We expected that the DRAMMA framework (Newman et al., 2014) would prove to be a useful framework for analysis of the BPS text; that is, each psychological mechanism would account for at least 10% of responses. Finally, we anticipated that, within each mechanism at least one sub-theme would be identified giving a better understanding of the way the psychological mechanisms operate.

Method

The study used a mixed-methods methodology with a 'reality-oriented' lens (Patton, 2002, p. 91). The method used was content analysis which is a research technique for making replicable and valid inferences from text to the context of their use (Krippendorff, 2012, p. 24). Content analysis, using the sentence as the 'unit' for analysis (Duriau, Rogar, & Pfarror, 2007, p. 19), was appropriate for addressing our research questions that required answers presented as proportions. This was particularly the case for the question concerning individual differences where we conducted statistical analyses. When assessing the utility of the DRAMMA framework, content analysis allowed us to assign values to indicate usefulness. Finally, content analysis assisted us in confirming sub-themes within the psychological mechanisms as we observed the percentage of sentences assigned to particular sub-themes.

Data collection

The data for this study were collected in 2016, during a wider investigation into the positive emotions elicited by the BPS activity. In an online survey, conducted using Survey Monkey (surveymonkey.com), 141 adult participants responded to a modified version of the BPS prompt: 'Here is the tool that we think might increase happiness. Please spend 5-15 min writing in the box below. Create a picture in your mind about your life in the future. Imagine in this picture that everything has gone as well as it possibly could. You have worked hard and succeeded at accomplishing all of your life goals. Think of this picture as the realisation of your life dreams - this is your best possible self. In this best possible self exercise, you are developing a picture of the best possible way that things might turn out in your life. Now, write for 5-15 min describing yourself in your best possible future. (BPS text adapted from Sheldon & Lyubomirsky, 2005, p. 70)

Participants

Ethics approval was granted by the University of the Sunshine Coast (Ethics Approval No. 16/879). Confidentiality of participants' responses was assured by the use of a unique three-letter, three-digit code and participants consented to participate in the study by clicking a radio button on the first question of the survey. Our study originated in Australia and adult participants were recruited from the general population via local media (Sunshine Coast), Facebook and personal contacts of the first author.

Usable responses, including demographic details, were available for 112 participants (97 female, 15 male). An overview of the demographic distribution of the sample is provided in Table 1. Household income is reported in Australian dollars. The most recent data (2013–14), indicated that the mean equivalised household income in Australia was $51,896 per annum (Australian Bureau of Statistics, 2013–14). Our sample was skewed to the higher income levels with an approximate median of $58,750 p.a. The median age in Australia at 30 June 2014 was 37.3 years (Australian Bureau of Statistics, 2014). The median age of our sample was approximately 45 years.
Table 1. Demographic distribution and average number of sentences.

<table>
<thead>
<tr>
<th>Age</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;25</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>25-34</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>35-44</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>45-54</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>55-64</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>&gt;65</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11</td>
<td>11</td>
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<table>
<thead>
<tr>
<th>Household Income (€/000)</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;2500</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2500-5000</td>
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</tr>
<tr>
<td>5000-7500</td>
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<td>4</td>
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<td>7500-10000</td>
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<tr>
<td><strong>Total</strong></td>
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<table>
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<th>Gender</th>
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<th>Age</th>
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<tbody>
<tr>
<td>Female</td>
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<td>&lt;2500</td>
<td>18-24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2500-5000</td>
<td>25-34</td>
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<tr>
<td></td>
<td></td>
<td>5000-7500</td>
<td>35-44</td>
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<tr>
<td></td>
<td></td>
<td>7500-10000</td>
<td>45-54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;10000</td>
<td>55-64</td>
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<tr>
<td></td>
<td></td>
<td>&gt;10000</td>
<td>&gt;65</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Sentences</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>9.8</td>
<td>10.2</td>
</tr>
<tr>
<td>(SD)</td>
<td>0.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Data analysis

The data were analysed in four stages. In stage 1, we addressed the research question concerning the impact of...
painting (F, $55–64, $50,000–$75,000). Other sentences required more rater-judgment, for example: My business is so successful that I only actively work in 2 days a week (F, $45–54, $75,000–$100,000). Although this sentence mentions the success of the business, the specification of ‘2 days a week’ implies a sense of not being at work and the importance of leisure in relation to work. Therefore, this response was coded as leisure.

Coding the non-leisure category consisted of two main considerations. Firstly, sentences that pertained entirely to work were coded as non-leisure. Examples of sentences that related to work included: Have a business involving national and international travel helping people achieve their visions (M, $55–64, $50,000–$75,000). Although this sentence expressed a sense of meaning (through helping others), it is one of the psychological mechanisms under investigation here, the main focus of the sentence was work and it was thus coded as non-leisure. Secondly, sentences that concerned other non-work matters, that could not be reasonably interpreted as leisure, were coded as non-leisure. Two examples of sentences relating to other matters and coded as non-leisure were: I assist others to reach and achieve their highest dreams and realise they are possible and so much easier to attain than they thought (F, $55–64, $100,000–$150,000) and I am fit, strong and healthy (F, $45–54, $50,000–$75,000). Although these two examples do not reference work, they do not meet our leisure definition above and were therefore coded as non-leisure.

In stage 2 of the analysis, all leisure-coded sentences were then assessed as referencing one (and one only) of the five psychological mechanisms and coded accordingly (Table 2). Coding to a single mechanism was chosen as it would allow us to perform statistical analysis using the Chi-square test of association which requires that each subject can contribute to only one cell (Field, 2013, p. 735). Most participants referenced only one psychological mechanism in each sentence. There were 42 leisure-coded sentences (9%) that mentioned more than one mechanism. For these sentences, the decision regarding coding was made based on which mechanism received the greatest emphasis. For example, the following sentence which was ultimately coded as autonomy also referred to affiliation: I would like to have no financial difficulty and be able to travel to visit friends and family and enjoy discovering wonders both in my own backyard and abroad in this country and the world (F, $55–64, $75,000–$50,000). In this case, the autonomy coding was based on the opening phrase of the sentence where the participant refers to a lack of financial difficulty; it is this autonomous stance that would enable the desired affiliation. Note: the statistical analysis was repeated with the 42 multi-mechanism sentences being broken at a suitable point and coded to two mechanisms (74%) of these additional codes were to the Affiliation mechanism. Results were not changed by this additional step and it was not continued.

There were only five sentences that were not easily coded to any particular psychological mechanism. An example of these was: As someone who enjoys the great outdoors and knows the importance of daily Vitamin D (sun) it would be terrific to spend lots more time in harmony with what has been created for us (M, $55–64, $75,000–$100,000). The decision to code this as detachment-recovery was based on the overall focus which is ‘removal from the everyday’.

In stage 3 of the analysis, sentences coded to each psychological mechanism were read and re-read to identify categories resulting in sub-themes. Generally sub-themes accounted for a minimum of 20% of sentences within the specific mechanism. A sub-theme was said to be present if it added sufficient gradation of understanding to the mechanism, irrespective of the proportion of sentences allocated to the sub-theme. Analysis of the Affiliation mechanism identified that many sentences referenced more than one sub-theme and the results are, therefore, presented at the participant level rather than the sentence level. In stage 4, statistical testing was conducted on the data collected in stages 1 and 2 to determine whether there were individual differences in the leisure/non-leisure balance and the apportioning to psychological mechanisms.

**Results**

**The importance of leisure**

The proportion of time spent on leisure activities varies across the world (Cutting, Veal, & Zuzanek, 2005). Our analysis of 1097 sentences resulted in 447 sentences (41%) coded as leisure and 650 sentences (59%) coded as non-leisure. To further understand the role of leisure in the perception of future well-being, BPS responses were examined to determine whether there were participants who either did not mention leisure at all or mentioned leisure exclusively. Ten participants (9%) made no mention of leisure in their response regarding their best possible future. For example, this complete response from one participant described a positive future but with no specific reference that could be coded as leisure:

In my possible life all of our children would know what they wanted to do with their lives and be working happily towards their goals. That my wider family are all happy and they are being challenged to be their best possible self. That I continue to love what I do and connect with children in a positive and happy way. That I continue to challenge as well as nurture the children I work with. That my husband finds a job that challenges him more than his job does now (F, $35–44, more than $150,000).
Table 2. Coding protocols used in allocation to psychological mechanisms

<table>
<thead>
<tr>
<th>Psychological mechanisms</th>
<th>Definitions used in codebook (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detachment-recovery</td>
<td>Leisure mentioned in relation to work; description of work as being less than full-time; work-life balance; list of leisure activities; resting, relaxing, reference to nature; leisure activities such as sport without a mastery component; enjoyment, fun, laughter</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Travelling alone; making own decisions about leisure; choice; self-determination; freedom; having time; having money; having enough and more than enough opportunity</td>
</tr>
<tr>
<td>Mastery</td>
<td>Learning; achieving; studying; improving; new experiences; adventure; discovery; challenge; stretching current skill level; developing</td>
</tr>
<tr>
<td>Meaning</td>
<td>Seeking something deeper; meaning through meditation, spiritual, yoga; church; mention of soul and/or spirit; vol-unteering; helping others; helping those less fortunate; giving back; contributing; living sustainably; environmental activities; purpose; sharing experiences</td>
</tr>
<tr>
<td>Affiliation</td>
<td>Reference to other people; leisure with family; friends; grandchildren; travel with others; holidays; visitors; pets; fun with others; homes to accommodate visitors; mention of social element of leisure activity</td>
</tr>
</tbody>
</table>

Developed from Newman et al. (2014).

There were four participants whose entire BPS response was coded to the leisure domain. One response referenced leisure solely and described a variety of psychological mechanisms:

The house is now finished and the garden producing fresh seasonal produce and there is time for entertaining and music. I have been to and stayed at a number of island resorts and surfed some amazing places and travelled with my partner to a number of ancient megalithic sites and met some knowledgeable people who have helped explain some of the technologies and learnt a number of alternative health modalities to help stay as healthy as possible for longer. (M, 55–64, 550,000–575,000)

Results for our sample reveal a relatively high emphasis on leisure as part of an ideal future, compared with the general population’s current leisure emphasis. The most recent survey of how Australians spend their time, the Australian Time Use Study (Australian Bureau of Statistics, 2006), showed that 24% of time was spent on leisure activities and 76% on non-leisure activities. Chi square results show a statistically significant difference between the ratio of leisure to non-leisure in the general population of 24:76 and the ratio in our study of 41.59 (χ²(1) = 168.69, p < .001).

We conclude that leisure is an important part of the layperson’s vision of the good life, although caution must be used in comparing our results with the Australian Time Use Study (2006) as our sample, although drawn from the general population, is not a representative sample of the Australian population (Table 3).

Applying the DRAMMA framework

The DRAMMA framework (Newman et al., 2014) proved to be useful for coding the qualitative data. Allocating each sentence to a single psychological mechanism allowed us to simplify the BPS responses and to evaluate the relative importance of each mechanism. Coding to the DRAMMA framework (Newman et al., 2014) resulted in an uneven distribution of leisure sentences across the five psychological mechanisms: Detachment-Recovery (21%), Autonomy (23%), Mastery (12%), Meaning (11%) and Affiliation (33%).

We did not have an a priori expectation regarding the specific proportion of sentences that would be allocated to each mechanism, however Chi square tests show that the distribution differed significantly from an even distribution χ²(4) = 68.81, p < .001.

Leisure activities that fulfill multiple psychological needs are more likely to promote subjective well-being than those that fulfill only a single need” (Newman et al., 2014, p. 571). In addition to examining the BPS text at the sentence level, we also analysed the BPS text at the participant level by considering the entire response from each participant. The majority (83%) of the 102 participants who referred to leisure, described more than one psychological mechanism in their response: one mechanism n = 17; two mechanisms n = 32; three mechanisms n = 31; four mechanisms n = 18; five mechanisms n = 3 (M = 2.6, SD = 1.1). We speculate that when individuals are given the opportunity to imagine their ideal future, they draw on the understanding that the attainment of a good life includes satisfaction being derived from a variety of sources and life domains (Table 4).

Sub-themes

In addition to categorising according to the five psychological mechanisms, applying the DRAMMA framework also allowed us to identify sub-themes within each psychological mechanism. The identification of sub-themes increases understanding of the means by which these mechanisms may operate to enhance well-being.

Detachment-recovery: work-leisure balance; pleasure and escape

A simplistic definition of leisure is anything that is not work. In the detachment-recovery category, this ‘not work’ definition was identified as a sub-theme when participants described work-leisure balance (23% of Detachment-recovery sentences). The expression ‘work-life balance’ was
used by some participants, for example: I have a very good work-life balance and I make the decision as to what that looks like for me (F, 35–44, $100,000–$150,000). More subtle references to the work-leisure balance sub-theme included mentions of part-time work and time being available for other activities, for example: I will have an extra two days a week to spend time with my family (F, 35–44, more than $150,000). Within the psychological mechanism of detachment-recovery, participants regarded management of their leisure as part of a balanced life with a sense of detachment coming from freedom regarding the amount of work being carried out. In terms of the good life, the well-known expression 'work-life balance' would more accurately be described as 'work-leisure-balance'.

The second sub-theme identified in the detachment-recovery category was of pleasure and escape (52% of Detachment-recovery sentences). Participants describe their ideal future as a time of pleasure, for example: We can think deeply and discuss the changes in the world, but also enjoy the simple pleasures of gardening or enjoying a cool drink and a hammock in the shade (M, 45–54, more than $150,000) and a time of escape, for example: I take 2 holidays a year to exotic locations and I take at least 2 weeks a year to be quiet at a health retreat or similar (G, 45–54, $75,000–$100,000).

**Autonomy: time and money**

Within the autonomy category the desire for freedom to do what you want was strongly expressed within two sub-themes: freedom of time (37% of Autonomy sentences) and freedom of money (28% of Autonomy sentences). The time sub-theme was mentioned by participants specifically in reference to leisure activities, for example: I make time to write and create (F, 25–34, $50,000–$75,000) and more generally: We also have more time to explore any new interests which cross our paths, either together or individually (F, 35–44, $75,000–$100,000). Money as a means of autonomy in leisure was a strong sub-theme, described generally and specifically. For example, generally: We are financially stable and can travel freely (F, 45–54, $50,000–$75,000) and specifically: I have enough money to travel to international theatre festivals several times each year (G, 55–64, $100,000–$150,000). Finally, some participants linked time and money (10% of Autonomy sentences), for example: I spend more time travelling and less time paying off a mortgage (F, 45–54, $100,000–$150,000).

**Mastery: learning; improvement in skill**

The two sub-themes identified within the mastery category were leisure activities that have a learning element (33% of Mastery sentences) and those that involve improving a skill (28% of Mastery sentences). Learning was described by some participants in a formal way, for example: I attend study groups and painting classes (F, 45–54, $75,000–$100,000) and informally: I will have enriched my life with continual learning which I am excited about discovering more and more of (F, 35–44, $50,000–$75,000). Improvement in skill was also seen as an important part of mastery in leisure: I have a really good dance partner and we go ballroom dancing three times a week. I do dance lessons once a week (F, 55–64, $50,000–$75,000) and I continue to develop my love of woodwork (M, 65–74, $75,000–$100,000).

**Meaning: service to others: religious or spiritual**

Leisure that has deeper meaning and altruistic purpose was a lesser-mentioned psychological mechanism (11% of Leisure sentences), however, the way in which participants

---

**Table 3. Distribution of sentences – leisure/non-leisure and psychological mechanisms for total sample, and by age group.**

<table>
<thead>
<tr>
<th></th>
<th>Total 10–24</th>
<th>25–34</th>
<th>35–44</th>
<th>45–54</th>
<th>55–64</th>
<th>65–74</th>
<th>Over 75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leisure</td>
<td></td>
<td>447</td>
<td>550</td>
<td>474</td>
<td>460</td>
<td>417</td>
<td>325</td>
</tr>
<tr>
<td>Non-leisure</td>
<td>59%</td>
<td>79%</td>
<td>66%</td>
<td>58%</td>
<td>54%</td>
<td>37%</td>
<td>32%</td>
</tr>
<tr>
<td>Leisure</td>
<td>41%</td>
<td>21%</td>
<td>34%</td>
<td>42%</td>
<td>46%</td>
<td>63%</td>
<td>68%</td>
</tr>
<tr>
<td>Detachment-recovery</td>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td></td>
<td>149</td>
<td>170</td>
<td>135</td>
<td>126</td>
<td>108</td>
<td>87</td>
</tr>
<tr>
<td>Freedom of time</td>
<td>27%</td>
<td>29%</td>
<td>31%</td>
<td>30%</td>
<td>33%</td>
<td>38%</td>
<td>39%</td>
</tr>
<tr>
<td>Freedom of money</td>
<td>21%</td>
<td>18%</td>
<td>18%</td>
<td>20%</td>
<td>19%</td>
<td>27%</td>
<td>25%</td>
</tr>
<tr>
<td>Mastery</td>
<td></td>
<td>160</td>
<td>191</td>
<td>146</td>
<td>141</td>
<td>128</td>
<td>106</td>
</tr>
<tr>
<td>Learning</td>
<td>26%</td>
<td>23%</td>
<td>22%</td>
<td>23%</td>
<td>24%</td>
<td>29%</td>
<td>25%</td>
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<tr>
<td>Service to others</td>
<td></td>
<td>186</td>
<td>225</td>
<td>193</td>
<td>165</td>
<td>141</td>
<td>113</td>
</tr>
<tr>
<td>Religious/spiritual</td>
<td>23%</td>
<td>27%</td>
<td>26%</td>
<td>25%</td>
<td>23%</td>
<td>21%</td>
<td>23%</td>
</tr>
</tbody>
</table>

Note. Each subscript letter denotes a subset of age categories whose column proportions do not differ significantly from each other at the .05 level. *Significantly different from ratio of 76.24 in the Australian Time Use Study (2006) (p < 0.001). †Significantly different from equal distribution (p < 0.001).
describe this mechanism showed that it is an important part of their perceived future. Participants described a desire to contribute to society and to live lives that contain more than simple hedonistic pleasures. Within this sense of meaning dimension, two sub-themes were present: service to others (55% of Meaning sentences) and religious or spiritual connection (18% of Meaning sentences). Although the instructions for the BPS intervention do not give a specific time frame, it appeared that many participants were imagining a time wall into the future when they hoped to have the capacity, both in time and money, to fulfill their altruistic and devotional aspirations. Participants mentioned adopting these activities in the future rather than continuing to do them, perhaps indicating that there is not the capacity in their current life to engage in these activities.

Acts of service and the contribution of skills to those less fortunate was an important sub-theme, for example: We are doing some active work in the community. We love helping people using our skills. I am helping people to learn to manage their money and to improve their lives by getting some basic financial skills (F, 45–54, more than $150,000) and we travel to Fiji once a year to support the village we fell in love with in 2015 with development and education activities (F, 45–54, more than $150,000). The second sub-theme in the meaning category concerned the spiritual and religious and a more active and regular engagement with this aspect of life, for example: I am spending time connecting with my spiritual energy and the energy of the universe (F, 25–34, $50,000–$75,000) and I have found a pathway to pursue my purpose and grow as a spiritual being, reaching a level of insight and balance (F, 45–54, more than $150,000).

Affiliation: Friends, pets, grandchildren; people rather than activity; close relationships

Affiliation, as a psychological mechanism, was the most frequently mentioned mechanism (33% of Leisure sentences) and the one that was the most straightforward with regard to coding. In examining the words that participants used in the affiliation domain, we observed that the words ‘friends’ (68% of participants), ‘grandchildren’ (12% of participants), and ‘pets’ (10% of participants) seemed to imply leisure. For example: We spend weekends with friends and have friends over for dinner often. (M, 35–44, $75,000–$100,000) and Our daughter has decided to start a family and we have grandchildren to help take care of! (M, 45–54, more than $150,000) and We have a dog who enjoys walking on the beach with us. (F, 45–54, more than $150,000). Although the linking of the word ‘family’ with leisure did occur, it was more frequently mentioned in a non-leisure context: My future is a happy family with my husband and family that we are creating. (F, 25–34, more than $150,000).

The second sub-theme identified within this domain was a sense that affiliation was the object of the leisure activity rather than the activity itself (55% of participants). It seemed that being with others was the motivation for the leisure, intrinsic unto itself. This was stated explicitly: I love bushwalking, have no one to do this with so will join a walking group (F, 45–54, $125,000–$50,000) and implicitly: My husband and I are contented with our life of walking on the beach daily and enjoying each other’s company—laughing and enjoying a calmer life as now retired. (F, 25–44, $75,000–$100,000).

The third affiliation sub-theme was the sense of belonging derived from close relationships with other individuals rather than within a community. The majority of participants (89%) who had a response coded to the affiliation mechanism, described affiliation with family and friends with only 11% mentioning affiliation with larger groups, such as clubs or sporting groups. One of those who mentioned affiliation in a broader context wrote: I know people in my community and can wave and say hello to them (F, 45–54, $50,000–$75,000). Connection with others, leisure with friends and family, knowing others in deep and having fun in groups were all described by participants in
our study. Although not all participants expressed affiliation needs in their leisure responses, for those who did, the use of emotional words in their descriptions reveal just how important they regard these relationships to their optimal well-being, for example: We spend quality time with both family and friends, learning, laughing, supporting (F, 45–54, $25,000–$50,000).

**Individual differences**

There is a need for research to examine individual differences between demographic characteristics and leisure and well-being (Braja Zganec, Merklin & Sverko, 2011). Our study addressed income, age, and gender. There was a significant association between household income and leisure emphasis, $X^2 (5) = 14.2, p = 0.014$ with participants in the lowest income bracket (< $25,000) describing significantly less leisure content than those in the higher income brackets (ten participants who did not provide income details were excluded from this analysis). There was also a significant association between age and leisure emphasis $X^2 (4) = 14.85, p = 0.005$ (six participants – in age groups 18–25, over 75, and no-age-stated – were excluded from the analysis due to insufficient numbers). Participants in the three older age groups (45–54, 55–64, 65–74 years) had a significantly greater leisure emphasis than those in the younger age groups (25–34, 35–44 years). There was no association between gender and leisure emphasis $X^2 (1) = 0.17, p = 0.681$ (Table 4).

Individual differences that were present at the leisure/non-leisure level were not present at the DRAMMA mechanism level, that is, there was no association between the DRAMMA mechanisms and income $X^2 (20) = 17.86, p = 0.597$; DRAMMA mechanisms and age, $X^2 (16) = 17.67, p = 0.344$; and DRAMMA mechanisms and gender $X^2 (4) = 0.76, p = 0.944$.

**Discussion**

A strength of our study was that participants were not asked specifically to write about leisure thus reducing demand effects. When participants referred to leisure in their BPS response we concluded that this unprompted response indicated an unbiased, naturalistic view of the role of leisure in the layperson’s concept of the good life. It is important to note that the prompt for the BPS task asked participants to describe a possible future for themselves, that is, an ideal future but not an idealised future. Thus, when participants referred to leisure they were describing leisure that they could imagine in their lives, albeit in the best possible version of their lives.

Our application of the Newman et al. (2014) DRAMMA model of psychological mechanisms demonstrated that it provided a useful framework for analysis, and that each mechanism accounted for at least 10% of responses. We found that the mechanisms were not referenced evenly by the participants in our study indicating that certain psychological mechanisms, for example, affiliation, may play a greater role in the relationship between leisure and well-being, than others such as mastery and meaning. Most individuals referenced more than one psychological mechanism reflecting an understanding of the manifold ways in which the mechanisms would operate together to create an ideal life.

Affiliation is the psychological mechanism that, according to Newman et al. (2014, p. 569), has the greatest support from 'multiple theoretical perspectives'; our results confirm this observation. One third of all leisure responses were coded to the affiliation mechanism and 70% of participants made at least one reference to affiliation. The need for 'love and belonging', as identified by Maslow in the third rung of his hierarchy (after 'physiological and safety needs') (Fager, Fadiman, McReynolds, & Cox, 1997, p. 57) was, in our research, expressed at the level of belonging in close relationships with family and friends, rather than in a group or community. The relationship between 'family leisure and positive family outcomes' has been established in a cross-national study of which Australia was one of five countries under investigation (Hodge, Zabriskie, Townsend, Eppert, & Poff, 2016, p. 16) and our study confirms the importance of this relationship. Care of grandchildren in our study was perceived by grandparents as a leisure activity, although regular grandchild care responsibilities are likely to lead to 'reduced leisure if grandparents have regular care responsibilities for grandchildren while parents are in paid work, as reported in a recent Australian study (Craig & Jenkins, 2016, p. 298).

The importance of autonomy as a psychological mechanism for attaining an ideal future is identified in our research with the second highest allocation of responses (23%) of Leisure sentences. Based on the number of theories supporting the link between affiliation and well-being, we would have anticipated that affiliation would be a predominant mechanism; however, we did not form hypotheses regarding the proportions for the remaining psychological mechanisms. To achieve a clearer indication of the importance of autonomy, relative to the remaining mechanisms, we removed affiliation references from the analysis. This revealed the following proportions: Autonomy 35%; Detachment-Recovery 21%; Mastery 18% and Meaning 17%. Autonomy accounted for more than one third of responses indicating clarity in its importance in well-being. Participants referenced autonomy in relation to money and time in almost equal measure. Paradoxically, work provides money but decreases the time available for leisure whereas retirement gives individuals more
time and yet their leisure may be restricted through lack of money. In the ideal future, participants described freedom from restraints on their time and having sufficient funds to pursue the types of activities they desired. The importance of autonomy which is described as an innate psychological need; along with relatedness and competence in self-determination theory (Ryan & Deci, 2000, p. 68), is a key component of optimal well-being.

Mastery (12% of Leisure sentences) and meaning (11% of Leisure sentences) were the two psychological mechanisms with the lowest responses at the sentence level. At the participant level however, 60 participants (59%) mentioned either one or both mechanisms, indicating that although they may not write a great deal about these aspects, many find them of importance. Mastery in participants’ responses was evidenced by a drive towards achievement and improvement which suggests continual growth and forward movement. In the mastery mechanism, the description of the good life was not one in which the individual rested on his or her laurels; rather a state of recognising and overcoming new challenges. This was also the case for the meaning mechanism. In the recipe for the good life, as described by our participants, the psychological mechanism of meaning was of vital importance, despite being referenced in a relatively low proportion of the total sentences. Our participants described wanting to contribute to society, develop deeper, more spiritual natures and to live lives that reflected the higher moral and social values to which they aspired.

We investigated gender in relation to the proportion of time spent per day on leisure and recreation which for men is 19% and women 16% (Australian Bureau of Statistics, 2006). A recent Australian study shows that women, compared with men, have less ‘pure’ leisure (i.e. leisure as the solo activity and not combined with other activities such as child care) and feel more rushed or pressed for time (Craig & Brown, 2016, p. 5). There was not a significant gender difference in our sample and this may reflect women being able to imagine an ideal future when more of their time is available for pure leisure. The significant individual difference in leisure emphasis associated with age in our study ($\chi^2 (4) = 14.85, p = 0.005$) is consistent with the proportion of time spent on leisure which increases through an individual’s life cycle (Australian Bureau of Statistics, 2006).

There was only one specifically-mentioned leisure activity that was described in all five of the psychological mechanisms: travel. Travel is the ultimate international leisure activity (Cushman et al., 2005, p. 12) and our sample reflected this view with 53 sentences referencing travel in the leisure responses. Travel was described as a form of detachment-recovery (10 sentences) and the autonomy of time and money available for travel was frequently mentioned (20 sentences). Participants described travel as the building of knowledge (9 sentences); a feeling of a sense of purpose in life through travel within a meaningful context (5 sentences); and the delight of sharing new adventures with others (9 sentences). The charter of the United Nations’ World Tourism Organisation is to ‘promote sustainable and universally accessible tourism’ (United Nations’ World Tourism Organisation, 2016a) and this, along with initiatives such as Happiness 360°, a conference advertised as creating ultimate happiness through the integration of tourism and culture in destinations (United Nations’ World Tourism Organisation, 2016b) demonstrates the importance of travel in both an economic and well-being context (United Nations’ World Tourism Organisation, 2016). This was endorsed by the importance given to travel by participants in our research.

Limitations and future directions

There are limitations inherent in our sampling method. Our sample self-selected into a hope and happiness study and there are likely to be characteristics of the wider Australian population and their view of leisure that would not be present in our sample. Our convenience sample was, in the main, comprised of middle-class, middle-aged, educated females, and although we believe our study provided a detailed understanding of this group’s views on leisure and the good life, it may not be representative of the broader Australian population, or other countries and cultures. Further, although our intra and inter-rater reliability tests showed a high level of agreement, we did not conduct member checks and thus it is not possible to know for certain that what we coded as leisure, or to a particular psychological mechanism, was intended as such by the participant. We contended that the BPS text represents a layperson’s view of the good life, that is, a description of ultimate well-being but this was not empirically tested in the study. Finally, it is important when interpreting our results to consider the cultural context. The majority of our participants reside in Australia which is a relatively safe, wealthy, and democratic country. The description of the ‘good life’ as it is understood by this Australian sample is likely to be quite different in less advantaged environments.

Future research with other demographic groups, and in other cultures, should be conducted to assess the generalisability of the results. Previous BPS experimental research which engaged student samples would provide data sets of younger participants, and participants from other countries (Ng, 2016; Peters, Flinn, Boersma, & Linton, 2010; Sheldon & Lyubomirsky, 2006). Future studies should target a larger number of male participants to assess whether our identified lack of gender difference in leisure emphasis persists. Additionally, it would be useful to include a
variable for working hours and examine whether leisure emphasis varies for those in part-time work, full-time work, and those retired from paid work. Investigation of these differences will aid the understanding of the relationship between well-being, work and leisure throughout the life cycle.

Conclusion

Leisure and its role in well-being has been investigated at the highest of levels and our study contributes to its understanding at the layperson level. Many authors quote Article 24 of the United Nation’s Universal Declaration of Human Rights which states that everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay (The United Nations, 1948, art.24). In our study, we examined the written responses of laypeople and showed that leisure played a crucial role in their view of their future well-being. In addition, we found that the psychological mechanisms that leisure triggers were not equally distributed across the analysed text, although all mechanisms accounted for at least 10% of responses.

Our sub-theme analysis provided a more graduated understanding of the many ways in which leisure enhances well-being. These included: in an ideal life, there is an appropriate balance between leisure and work, enabling pleasure and escape, which is dependent on there being sufficient time and money for leisure pursuits. Leisure time would be used for learning, improving skills, helping others, travelling, engaging with the religious and spiritual sides of life, and spending time with close friends, family and pets.

We recommend that our approach be replicated across other demographic groups in order to further test the DRAMMA framework, and to assess whether the findings from our study apply to other social and demographic populations. A better understanding of the importance of leisure in optimal well being will be of benefit to both positive psychology scholars and leisure scholars.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Chapter 6: Best Possible Other (under review)

6.1 Overview of Paper 5

Paper 5 responds to the finding in Paper 3 that when writing about their best possible future, 56% of participants wrote about the best possible future for others. Paper 5 introduces an other-oriented version of the BPS intervention, which was developed and named as the Best Possible Other (BPO) intervention. The BPO was completed by participants \( n = 43 \) in the follow-up stage of the experiment. By using content analysis to explore an other-focused intervention, Paper 5 also addressed the criticisms of positive psychology as being overly-focused on quantitative analysis, and on the individual.

6.2 Research Questions

Paper 5 addresses the following research questions:

- **RQ15**: What are the components of a good life as imagined for a loved one?
- **RQ16**: What cognitions and emotions are expressed in the BPO texts?
- **RQ17**: What is the participant's experience in completing the BPO?

Findings include: (a) participants’ views of the good life for a loved one included social, financial, psychological, and physical well-being, along with leisure and meaning; (b) the BPO texts provided evidence of other-oriented hope, other-interest, closeness, and compassion, and (c) feelings of joy, love, contentment, happiness, and warmth were described by participants who completed the BPO.

6.3 Author Contribution

PL: conceptualisation and development of research questions, development of methods, selection of coding framework, coding, content analysis, thematic analysis, drafting, writing, editing, final draft

CJ: principal supervisor for PhD, development of research questions, editing, final draft

GL: second supervisor for PhD, inter-rater coding, editing, final draft
The Best Possible Other intervention:

Supporting Individual Wellbeing by Focusing on Others

6.4 Abstract

In this online study, adults (n = 47) had the opportunity to complete a newly developed intervention, the Best Possible Other (BPO) intervention. The BPO is an other-focused extension of the Best Possible Self (BPS) intervention, during which participants write about a loved one’s life working out in the best possible way. The aim of the research was to explore other-oriented cognitions and emotions, and investigate the participant experience with the BPO intervention. Thematic and content analysis were used to identify themes in the texts, as well as other-oriented cognitions and emotions. Participants identified a variety of components of well-being that they desired for their loved ones including: social, financial, psychological, and physical well-being. The overarching cognition/emotion expressed in the BPO texts was other-oriented hope. Three subthemes were identified that expressed: other-interest, closeness, and compassion. Given the potential benefits of relationship-based interventions, future research should investigate the BPO in comparison with, and as companion to, the loving-kindness-meditation intervention.

Keywords: Best Possible Other, relationship-based interventions, other-interest, other-oriented hope
In the foreword to her novel, *Song of Solomon*, Morrison (2014) wrote of her father:

> He had a flattering view of me as someone interesting, capable, witty, smart, high-spirited. I did not share that view of myself, and wondered why he held it. But it was the death of that girl – the one who lived in his head – that I mourned when he died. Even more than I mourned him, I suffered the loss of the person he thought I was. (p. x).

Toni Morrison won the Nobel Prize for Literature in 1993. Her father held a favourable view of his author daughter, and although she states that she did not hold this view herself, it is clear that she felt his positive gaze upon her. In this paper, it is argued that the way one thinks about a loved one and their future is important, both to one’s own well-being and perhaps, as was the case for Toni Morrison, to the well-being of the other. To assist individuals to create a positive view of their loved ones, this paper presents a newly-developed intervention, the Best Possible Other (BPO), which is an other-oriented version of the Best Possible Selves (BPS) intervention (King, 2001).

When individuals complete the self-oriented BPS intervention, they imagine and write about their life working out in the best possible way (King, 2001). Research has shown that the BPS has the potential to significantly enhance well-being and researchers have called for an other-oriented extension to the BPS (Loveday et al., 2016) (chapter 2). The BPO intervention investigated here is an other-oriented version of the BPS in which participants imagine and write about a loved one’s life working out in the best possible way. The BPO is cost effective in that it can be delivered online and, like the BPS, is easy for participants to complete. Hoping for, and writing about, the well-being of others appears to be an action that some individuals undertake without prompting, as evidenced by a study that found that 38% of individual hope stories described altruistic hopes, which are hopes for another person, usually a loved one (Bruininks & Malle, 2005). The BPO provides a means for participants to
directly and deliberately express hopes for others, rather than indirectly through an expression of hope for themselves.

The inspiration for the BPO intervention originated from three sources: content analysis of BPS texts in a previous study (see chapter 4) which found that in writing their BPS 56% of participants wrote about their hopes for a loved one (Loveday, Lovell, & Jones, 2017, under review); academic research into loving-kindness-meditation (LKM); and positive psychology intervention research which has explored self-focused, and other-focused versions of interventions. LKM is a positive psychological intervention which research has shown has the capacity to increase positive emotions (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008), compassion (Seppala, Hutcherson, Nguyen, Doty, & Gross, 2014), and feelings of social connection (Hutcherson, Seppala, & Gross, 2008). During LKM practice, meditators deliberately turn their minds to positive outcomes for ‘the other’ by, for example, stating silently: “May they have mental happiness. May they have ease of well-being” (Salzberg, 2002, p. 125). During LKM, individuals initially focus their attention on themselves, then a close loved one and then this focus is broadened to include individuals with whom they have increasingly “less association or feeling” (Fredrickson et al., 2008, p. 3). The BPO investigated in the current study used a similar progression to the LKM intervention in that during the study participants had previously completed the BPS intervention. The BPO intervention, however, differed from the LKM intervention in two important ways: writing (rather than meditation) was used as the medium for the intervention, and participants were only asked to write about loved ones, and not individuals more distant in association or feeling.

The field of positive psychology has been criticised as being overly focused on the ‘self’, on individual well-being, which excludes a focus on the well-being of ‘the other’. Wong (2011) claims that “positive motivations for the well-being of others have not attracted
much attention from positive psychology researchers” (Wong, 2011, p. 72). An exception to the lack of other focus is the existence of other-oriented versions of interventions. For example a self-focused intervention the gratitude list, has been extended in two ways (the gratitude letter and the gratitude visit) to become focused on the other (Wood, Froh, & Geraghty, 2010). Admittedly, other-oriented versions of interventions have typically been used in research which investigated individual well-being, nevertheless their existence shows an understanding that others play an important role in individual well-being.

It is posited that when individuals complete the BPO, other-oriented emotions and cognitions will be expressed. The BPS research to date has focused on self-oriented emotions and cognitions including optimism, and positive and negative affect. The BPO intervention may elicit these states, however, it is the other-oriented cognitions and emotions that are of interest here. Examples of other-oriented emotions and cognitions include: other-interest, and other-oriented hope. Other-interest, as distinct from self-interest, is the “pursuit of gains for others in socially-valued domains” (Gerbasi & Prentice, 2013, p. 497). Recent studies have shown that other-interest and self-interest are independent constructs that can be measured reliably, and that both contribute to predictions regarding behaviour (Gerbasi & Prentice, 2013). Hope has been depicted as a “deeply social phenomenon” (McGeer, 2004, p. 108) and notions such as other-oriented hope (Howell & Larsen, 2015) speak to this understanding. Other-oriented hope is defined as “believing in, desiring, and behaving in accordance with the possibility that something positive, which does not presently apply to another person’s life, could still materialise” (Howell & Buro, 2017, p. 104).

It is argued here that the BPO intervention, with its focus on the other, may have characteristics of a “relationship-based” intervention that could be used to promote physical, psychological, and social well-being. The importance of investigating interventions that enhance social relationships should not be underestimated. An extensive meta-analysis
summarising research conducted with over 300,000 participants found that the effect on physical health of adequate social relationships was “comparable with quitting smoking” and “greater than obesity and lack of physical activity” (Holt-Lunstad, Smith, & Layton, 2010, p. 14). Researchers stated that social, relationship-based interventions represent a “major opportunity to enhance not only the quality of life but also survival” (Holt-Lunstad et al., 2010, p. 15).

The current research responds to a call to investigate the deliberate facilitation of a “greater degree of vicarious hopeful thinking” (Howell, Bailie, & Buro, 2015, p. 701) and has three aims: (a) identify the content themes present in the BPO texts, (b) investigate the other-oriented cognitions and emotions expressed in the BPO texts, and (c) explore the participant experience with the newly-developed BPO intervention. Identification of the themes contained in the content of the BPO texts will inform understanding regarding what individuals believe would constitute a good life for a loved one. Further interrogation of the BPO texts will provide an insight into the specific cognitions and emotions that the BPO may elicit which will inform the choice of dependent variables to be examined in future experimental testing of the BPO. An understanding the participant experience will provide researchers and practitioners with recommendations regarding implementation of the BPO intervention.

6.5 Method

6.5.1 Data collection

Data collected for this study were obtained during the follow-up stage of a larger online BPS study (see chapter 1 for study overview). Participants completed the BPO intervention, and at the conclusion of the study, were offered the opportunity to provide any final comments, via a free-text box.
The specific instruction given to participants for the BPO intervention was:

_Think of someone you love. Now, create a picture in your mind about their life in the future. Imagine in this picture that everything has gone as well as it possibly could for them. They have worked hard and succeeded at accomplishing all of their life goals. Think of this picture as the realisation of all their life dreams - this is THEIR ‘best possible self’. In this ‘best possible self’ exercise, you are developing a picture of the best possible way that things might turn out for this person you love. Now, write for 5-15 minutes describing your loved one in their best possible future. (Text adapted from (Sheldon & Lyubomirsky, 2006)._ 

6.5.2 Participants

A total of 47 participants (female = 41) completed the BPO intervention. The median age was approximately 47 years (interquartile range = 45 - 60), median household income was approximately $56,250 per annum (interquartile range = $35,000 - $90,000). The instructions for the BPO intervention specified that participants write about a loved one, and identify the relationship they have with the person. Participants mostly chose to write about a partner or spouse, or a child. The following was observed: spouses/partners (n = 16); parents writing about their children (n = 14); and adult children about mothers (n = 4). Other loved ones included: nieces, sister, and sister-in-law. The count for each of the other loved-one categories was 1 or 2.

6.5.3 Data analysis

Initially, thematic analysis was used to interrogate the BPO texts to identify cognitions, emotions, and themes present in, and underlying, the content of the BPO texts. Thematic analysis provides well-being researchers with a “robust, systematic framework for coding qualitative data and identifying patterns across the dataset” (Braun & Clarke, 2014, pp. 1-2). In addition, frequency of occurrence, through content analysis, was used to determine sub-themes (Hefferon et al., 2017), with a benchmark set of greater than 50% of
participants required for identification as a sub-theme. The average number of words written was tallied, and participant comments were reviewed to gain further understanding of the experience of completing the BPO.

Prior to investigation, it was anticipated that other-interest would be expressed in the BPO texts. Initial data analysis was therefore conducted with other-interest as the focus. The Self-Other-Interest Inventory (SOOI) (Gerbasi & Prentice, 2013) was consulted to gain a detailed understanding of the components that make up the construct of other-interest. The SOOI has nine items that measure other-interest and the emphasis is on success, money, social status, and getting ahead. A single item refers to happiness for the other, and there is no mention of social relationships, other than through social status. The SOOI was used the code the BPO texts. The conclusion was reached that although the BPO texts expressed other-interest, an additional element was being expressed that was not fully captured within the construct of other-interest. The reference to additional aspects not captured by the other-interest measure was of particular note as it could be argued that the instruction for the BPO activity has the effect of priming participants to write about a loved one’s success and therefore express other-interest as defined by Gerbasi and Prentice (2013). The fact that participants wrote of additional aspects is therefore unlikely to be due to demand effects and worthy of investigation.

Other-oriented hope has been suggested as a subset of other-interest (Howell & Buro, 2017) and it was hypothesised here that it was other-oriented hope that was being expressed in the additional aspects of the BPO texts. The other-oriented hope scale (Howell & Buro, 2017) was used to assess the degree of other-oriented hope being expressed. The other-oriented hope scale has 14 items which were summarised for coding purposes as follows: the wish for the success of another (items 1, 4, 9, 11), recognition that the goals of others are important (items 6 and 7), worry when others are not succeeding (items 14, 15, 16), a wish
for others to overcome obstacles (item 13), desire for others to achieve their potential (items 8 and 10), a desire to assist others in their goals (items 2 and 3), and knowledge of the steps another could take to achieve their goals (items 5 and 12).

Content analysis using the components of the other-oriented hope scale was undertaken. The text of each participant was examined using a binary system indicating presence or absence of the component of well-being. Following this, texts were interrogated to identify sub-themes representative of other-oriented cognitions and emotions.

6.6 Results

6.6.1 Content

Six themes were identified as constituents of a good life that participants imagined for their loved one: social, financial, psychological, physical, leisure, and meaning. Table 6.1 summarises the themes and provides examples from participant texts.

<table>
<thead>
<tr>
<th>Theme</th>
<th>Definition</th>
<th>Sample items from participant texts</th>
<th>% participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social</td>
<td>Family, friends, significant other</td>
<td>Has a compatible, loving partner, and they bring out the best in each other</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>He is spending time with friends and family;</td>
<td></td>
</tr>
<tr>
<td>Financial</td>
<td>Money, career, study, retirement</td>
<td>He has managed to exist from money he has made documenting his travels;</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has worked hard and can retire;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Qualified in a profession that he enjoys doing</td>
<td></td>
</tr>
<tr>
<td>Psychological</td>
<td>Personal growth, positive emotions</td>
<td>She is content, she is happy and she smiles and laughs most of the time;</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>He will be confident and realise it’s always best to express how he is feeling</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>Health, fitness, exercise</td>
<td>He is very healthy and he goes to the gym around the block several times a week;</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Her health would be excellent and she would do yoga and pilates and incorporate mindfulness into those practices</td>
<td></td>
</tr>
<tr>
<td>Theme</td>
<td>Definition</td>
<td>Sample items from participant texts</td>
<td>% participants</td>
</tr>
<tr>
<td>---------</td>
<td>---------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Leisure</td>
<td>Fun, recreation, travel</td>
<td>With plenty of fun and happiness thrown in; He will travel and experience many new and exciting opportunities and adventures</td>
<td>65</td>
</tr>
<tr>
<td>Meaning</td>
<td>Spiritual, contribution, community</td>
<td>Using her experiences to inspire and help others; He is sustained and inspired by his spiritual practice</td>
<td>42</td>
</tr>
</tbody>
</table>

### 6.6.2 Cognitions and emotions

Other-oriented hope was identified as the overarching theme of the BPO texts. Three sub-themes, referenced by over half of all participants, were identified as: (a) ‘Success and how to get it’, (b) ‘Unstuck’, and (c) ‘You-me-we’. The overall tone for BPO texts was, as expected, one of wanting the best for their loved one. Participants wished, hoped, and in some cases cheered, for success and a good life for the one they love.

In the first sub-theme, ‘Success and how to get it’, there was a focus on the loved one realising their potential, being successful, having and achieving goals. In most cases this achievement was accompanied by detailed descriptions of the steps or pathways involved, for example: “He is happy and content because he knows where he is going - his direction is clear. He is working hard at the job he loves - creating and innovating and implementing change and growth” (Female, graduate degree, 25-34, not living with partner, $50,000-$75,000), and “I think his future self would be happier if his energy was challenged into a variety of things without the stress of working for an organisation. He would be a consultant and choose to work as much as he liked and according to the projects that really interest him” (Female, graduate degree, 45-54, living with partner, >$150,000) The participants who did not reference the potential of their loved one had chosen loved ones who were at a life stage that was more focused on relaxation after having realised potential, for example: “They are retired and traveling through Australia in a campervan with no time limits and no demands to be anywhere, they are enjoying this adventure with me.” (Female, graduate degree, 65-74, retired, $75,000-$100,000)
In the second subtheme, ‘Unstuck’, participants explicitly or implicitly described the way in which their loved one was able to move beyond something that was holding them back, whether the obstacle was psychological or physical. A desire for psychological improvement for a loved one was indicated by this participant: “I imagine my son being free to pursue what he enjoys and not being trapped or held back by his anxiety or worry” (Male, bachelor degree, 45-54, living with partner, $75,000-$100,000). An example of desired physical improvement was: “Loses his alcohol dependence, and quits smoking” (Female, graduate degree, 65-74, living with partner, $50,000-$75,000). The ‘Unstuck’ theme was also observed when participants began the BPO task with a description of the past before going onto the description of the future, for example: “She has worked hard and had a very long road and I think she deserves to be in her own place living a quiet and happy and peaceful life” (Female, diploma, 45-54, not living with partner, $25,000-$50,000).

The third sub-theme, ‘You-me-we’, was observed when, in writing about the best possible future for a loved one, more than half of the participants (53%) made reference to themselves. Of those who mentioned themselves, more than half of these wrote specifically about the relationship that they imagined they would have with the other, for example: “We are getting older and as we get older we learn more about each other and love each other more. We understand each other and do our best to get along. We know how to talk to each other and work through conflict” (Female, graduate degree, 35-44, living with partner, $100,000-$150,000).

6.6.3 Participant experience

The BPO is a newly-developed intervention and it was therefore important that an examination was undertaken into the participants’ experiences in completing the intervention, to determine whether the instructions were clear and could be followed easily. Initial reading
of the texts demonstrated that 43 of the 47 participants had successfully completed the BPO activity by writing about the best possible future for a loved one. Four participants did not complete the BPO task and were excluded from further analysis. Responses from those who did not complete the BPO were brief and included: ‘too tired can’t think of anything’ and ‘oh dear’. The average number of words used in completion of the BPO task was 127 words. One participant concluded their response with the following comment: ‘I don’t like writing so that’s enough’.

Of those who completed the task there was variation in the way in which participants chose to complete the task. For example, two participants used a list format rather than a series of sentences, and two participants completed the BPO as a letter to their loved one. Regarding the choice of loved one, with the exception of two participants, all chose a specific loved one and, as per the instruction, named the relationship. The two exceptions were as follows: “I have so many loved ones that it is difficult for me to choose one over the other to complete this exercise so I will group them all in together and wish only the best for them all, whatever that looks like to each and every one” (Female, high school, 55-64, not living with partner, <$25,000); and “This person can be any one of many ex-wives” (Male, graduate degree, >75, living with partner, $25,000-$50,000).

When provided with the opportunity to make a final comment, three participants (all females who wrote about their male partners) made specific reference to their experience in completing the BPO intervention. The comments from the three participants are provided in full to illustrate the potential well-being benefits of the BPO.

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I was kind of surprised that my best possible self and my husband’s best possible self are merging with the present day. It was really lovely. I have been able to appreciate more in my surroundings. I saw an owl in a tree today which gave me joy. (Female, graduate degree, 45-54, living with partner, $50,000-$75,000);
Writing about a loved one made me feel happier than writing about myself. I did find that writing about myself made me happy, but in writing about my loved one I felt I was giving him a gift - by sending him good wishes for the future. This felt really good, and made me feel connected to him (we are currently separated by long distance), which made me feel very happy, warm, connected, and loving. I really enjoyed this activity. (Female, graduate degree, 25-34, not living with partner, $50,000-$75,000);

The loved one that I chose was my husband and since his future is very much connected to my future it is easy to do and there is some element of what I want but maybe he wouldn't. (Female, graduate degree, 45-54, lives with partner, >$150,000).

6.7 Discussion

This study investigated the potential of the Best Possible Other (BPO) as a positive psychological intervention. The BPO is an other-focused extension of the Best Possible Self (BPS) intervention in which participants write about a loved one’s life working out in the best possible way. In an online study (n = 47) participants expressed feelings of joy, love, happiness, contentment, and warmth in completing the BPO. The desire for social well-being for loved ones was unprompted, and was the most highly-referenced aspect of well-being. Psychological well-being, expressed as the desire for happiness and mental health for loved ones, was also unprompted and highly-referenced, which is in contrast with financial and career success which was highly-referenced, but likely to have been prompted by the BPO task instructions.

The BPO texts provided an opportunity for participants to express other-oriented hope for their loved ones. Additionally, three sub-themes were identified in the BPO texts: (a) ‘Success and how to get it’, in which participants expressed other-interest; (b) ‘Unstuck’, in which participants described their loved one overcoming difficulties, which demonstrated a sense of compassion; and (c) ‘You-me-we’, which described closeness through connection with others, indicating self-other overlap.

Social well-being was the aspect of well-being referenced by the largest percentage of
participants (95%). Social well-being was not prompted by the task instructions for the BPO intervention and is therefore particularly significant. Additionally, some participants wrote at length (in comparison with other well-being components) regarding the various aspects of social well-being, including family, friends, and positive work relationships, that they desired for their loved one. Psychological well-being, which included feelings of happiness, contentment, and personal development, was unprompted and referenced by 84% of participants. The importance of psychological well-being, particularly in comparison with physical well-being (67%), indicated that participants understand that it is not only the physical aspects of life such as money, career, and health that are important to a good life. Leisure was referenced by 65% of participants which is consistent with the association between leisure and well-being as identified in a study (chapter 5) that examined BPS texts (Loveday et al., 2017).

Other-oriented hope was expressed by 100% of participants. Although other-interest, expressed as a desire for gains in socially-desired arenas, was expressed by many participants, this was not universal. It is posited therefore, that in the case of the BPO texts, other-interest was a subset of other-oriented hope, rather than the reverse, which has been suggested previously (Howell & Buro, 2017).

In addition to the hypothesised outcomes of other-interest and other-oriented hope, two further emotions were expressed in the BPO texts - closeness and compassion. Compassion for loved ones was evidenced in the ‘Unstuck’ sub-theme. Despite there being no widely agreed-upon definition for compassion, most definitions include a wish for a reduction in suffering for another (Kirby, Tellegen, & Steindl, 2017). Compassion has been described a multidimensional construct (Jazaieri et al., 2013). Two dimensions were observed in the BPO texts, namely: awareness of the suffering (cognitive component), and a wish to see the relief of the suffering (intentional component) (Jazaieri et al., 2013). Given the
finding in a recent meta-analysis of significant associations between compassion and "physiological health, psychological health, and positive social, and interpersonal relationships" (Kirby et al., 2017, p. 1), the BPO’s potential as a compassion intervention should be investigated.

In the ‘You-me-we’ sub-theme, participants described the closeness of their relationships with their loved one. Closeness describes the degree of self-other overlap which is the "sense, or perception, of being interconnected with another" (Aron, Aron, & Smollan, 1992, p. 598). The degree of self-other overlap differed between participants with some participants devoting more than half of their text to the relationship with the other, suggesting a high degree of overlap. Others simply referenced participation in joint activities such as travel with their loved one, perhaps a lower level of overlap. It is suggested that the BPO may have potential to enhance closeness and this warrants further investigation.

A limitation of the study is that the wording used for the BPO instruction (which includes achieving important goals) may have prompted participants to emphasise the success-based elements of other-interest. Future BPO research should experiment with neutral instructions which simply state that the loved one’s life works out in the best possible way, and determine whether this impacts on the content of the texts. Note that participants who completed the BPO in the follow-up stage had completed the BPS in the initial stage of the study. Future research should examine BPO texts of participants who have completed the BPS compared with those who have not completed the BPS.

Future experimental research should include measures for dependent variables such as other-oriented hope, other-interest, compassion, and inclusion of other in self, which would enable further identification of the specific emotions and/or cognitions elicited by the BPO, and whether the BPO has the potential to enhance same. Finally, the BPO may have potential as an alternative to LKM for individuals who find it difficult to meditate, or those who are
dissuaded by the religious association with meditation, and therefore seek a more secular intervention. Research should compare the BPO and LKM, including extending the BPO so that participants write about others who are more distant in association and feeling than their loved ones.

6.8 Conclusion

Future research should use experimental design to assess the potential of the BPO as an intervention to increase other-oriented hope, other-interest, compassion, and closeness. It is also recommended that the BPO intervention be extended to include individuals more distant in association than loved ones, which could be accomplished in research that compares the BPO with the loving-kindness-meditation intervention. Given the positive emotions that participants described as being associated with completing the BPO, its potential warrants further investigation. Further research will reveal whether the BPO turns out to be a useful intervention for those amongst us who do not have the foresight and optimism of Toni Morrison’s father.
6.9 References for Paper 5


Chapter 7: Discussion and Conclusion

The final chapter of this thesis commences with the identification of three distinct research tracks evident in the research program. Each track will be discussed in turn, followed by a re-examination of the research aim, objectives, and questions so as to synthesise and summarise the findings of the five papers. The chapter closes with limitations, directions for future research, implications for positive psychology practice, and an overall conclusion.

7.1 Research Tracks

The research program commenced with a literature review that identified knowledge gaps and highlighted the direction for future research. Because the BPS is a writing intervention and textual data is generated during its completion, both qualitative and quantitative questions were proposed, along with the adoption of a mixed-methods approach.

The research pursued three distinct tracks: Quantitative track (Paper 1 → Paper 2); Qualitative track (Paper 1 → Paper 3 → Paper 4); and Extension track (Paper 1 → Paper 3 → Paper 5). Figure 7.1 provides an overview.

![Figure 7.1. Overview of research papers.](image_url)
The Quantitative track (Paper 1 → Paper 2) commenced with quantitative questions concerning efficacy. The addition of a qualitative overlay aided the understanding of the quantitative results, and allowed an exploration of the participant experience.

The Qualitative track (Paper 1 → Paper 3 → Paper 4) responded to questions that were identified in the literature review as being of a qualitative nature. After applying a quantitative overlay, these qualitative questions were addressed in Papers 3 and 4. An insight into the layperson’s view of the good life, and the important ways in which leisure enhances well-being, were possible through this approach.

The Extension track (Paper 1 → Paper 3 → Paper 5) responded to the call for an other-oriented version of the BPS, which was identified in the literature review. Additionally, the researcher responded to the finding in Paper 3 that many individuals desire a good life for others, which resulted in the BPO intervention being developed and explored in Paper 5.

7.2 Research Aim

Each of the five papers contained herein included a section in which the findings were discussed. The purpose of this final discussion is to provide a synthesis of the findings in the five papers as they relate to the research aim. Recall that the aim of the research undertaken for this thesis was to investigate the claim by Plano Clark (2017) that using a mixed-methods approach would lead to “richer insights and stronger conclusions about optimal functioning” than would be possible with a qualitative or quantitative approach alone (p. 305).

Having completed a mixed-methods study that addressed identified gaps in the BPS literature, it is concluded that a mixed-methods approach did result in richer insights and stronger conclusions than either approach alone would have achieved. The next section justifies this assertion by imagining the research as solely quantitative or qualitative. Additionally, the 17 research questions are recalled and considered in the light of the research
objectives. Figure 1.2 is reproduced here to guide the reader through the next section.

**Paper 1 (published)**

- RQ1: What type of evidence has been collected regarding the BPS, and which research questions have been addressed to date?
- RQ2: What does a synthesis of the findings in the BPS academic literature reveal about the efficacy and operation of the BPS intervention?
- RQ3: What direction should future research take?

**Paper 2**

- RQ4: In what ways did the cognitions and emotions of participants change during the experiment? (to assess the potential of the BPS as a hope intervention, and whether priming improves efficacy)
- RQ5: What did participants say they wanted to do after the intervention? (to test the broaden-and-build theory of positive emotions as an explanation for the way the BPS operates)
- RQ6: Were there condition differences in terms of interest, difficulty, and enjoyment?
- RQ7: How do participants describe the experience of being in an online positive psychology intervention study?

**Paper 3**

- RQ8: How well do the BPS texts represent the layperson’s view of the good life? (Feeney and Collins, 2015)
- RQ9: What is the relative importance of five components of well-being in the layperson’s view of the good life?
- RQ10: How do relationships with others contribute to personal thriving?

**Paper 4 (published)**

- RQ11: What is the proportion of leisure to non-leisure in an ideal life?
- RQ12: How useful is the DRAMMA framework (Newman et al, 2014) for understanding the psychological mechanisms linking leisure and well-being?
- RQ13: Does identification of sub-themes give a more nuanced understanding of the psychological mechanisms?
- RQ14: Does the proportion of leisure/non-leisure, and psychological mechanisms, differ based on individual differences?

**Paper 5**

- RQ15: What are the components of a good life as imagined for a loved one?
- RQ16: What cognitions and emotions are expressed in the BPO texts?
- RQ17: What is the participant’s experience in completing the BPO?
7.3 Research Objectives and Questions

The first research objective (Research Questions 1-3) was to synthesise the extant BPS literature and determine the direction for future research. The literature review (Paper 1) showed that the majority of BPS intervention research had focused on experimental and quasi-experimental research designs (Research Question 1). In pursuing Research Question 2 regarding research into the efficacy and operation of the BPS, the following was concluded: the BPS is flexible in terms of delivery method, efficacy of the BPS has predominantly been demonstrated via increases in optimism levels, and little is known regarding the mechanisms by which the BPS operates to enhance well-being.

In responding to Research Question 3 regarding the direction for future research, it was noted that qualitative analysis was under-represented in the BPS literature. It was therefore recommended that future research should include the collection and analysis of qualitative data, including qualitative analysis of the BPS texts. In further pursuit of Research Question 3, additional outcome variables were identified for future study including hope and mental health. Finally, the suggestion was made, and followed in the research program, for the exploration of an other-oriented extension to the BPS.

The second research objective (Research Questions 4-14), concerned the adoption of a mixed-methods approach to address the gaps in the literature. To highlight the advantages which arise from a mixed-methods approach, it is useful to imagine the research program if it had focused solely on either quantitative or qualitative data. Four examples will be given to illustrate this point.

Firstly, in response to Research Question 4, concerning changes in cognitions and emotions associated with the BPS intervention, it was found that there were significant decreases in negative affect across the experiment, rather than by condition as was hypothesised. Without access to participant comments (Research Question 7) it would be
unclear why this was so. Content analysis of participant comments demonstrated that many found the experience of being in the study to be a positive one, which allowed them to reflect on their lives, embed their personal view of happiness, and feel appreciation. As there were no condition differences in the reduction of negative affect, it is concluded that in this happiness study interventions that were autobiographical, whether past or future focused, provided participants with the opportunity to focus on the positive aspects of their lives, resulting in decreased negative feelings.

Further, it is argued that for some individuals simply participating in the study was beneficial in and of itself. Ten individuals used the final-comment textbox to thank the researcher for the opportunity to participate. This suggests a direction for future research which is to explore whether the participant’s knowledge that the researcher would be reading their comments makes a difference in terms of well-being outcomes. Odou and Vella-Brodrick (2013) found that participants in a BPS study who chose to submit their responses to researchers had significantly decreased negative affect at T2, and increased well-being at T3, compared with those who did not submit. The interaction and relationship between researchers and participants is an under-researched area of positive psychology research.

Secondly, there was a lack of significant differences between the control condition, and the intervention conditions on the dependent variables of optimism, hope, mental health, and affect (Research Questions 4 and 5). This finding would have been puzzling without content analysis of the text written during the control condition activity. Despite being instructed to write in a non-emotional way, it appeared that participants in the control condition used the opportunity to focus on the positive aspects of their lives and/or participants in the study have lives that contain many positive features. A direction for future research is suggested by this finding, which is to more fully understand the characteristics and motivations of individuals who would be attracted to online positive psychology
interventions (Parks et al., 2012). It may be that the motivation for some individuals to participate in online positive psychology interventions is to improve already high levels of happiness, building on what is already positive, rather than addressing the negative aspects of life.

The finding that participants in the study were experiencing positive lives led to the consideration that there may be ceiling effects that would limit the ability of one-off, positive activities, such as the BPS, to elicit measurable increases in positive affect, optimism, or hope. In the absence of participant-focused questions regarding interest, enjoyment, and difficulty (Research Question 6), quantitative ceiling effects would have been the end point of that line of enquiry. However, the associations that were found between enjoyment of the intervention and changes in positive affect and hope have implications for future research. Continued usage of interventions has been shown to be related to efficacy (Sheldon & Lyubomirsky, 2006), and if participants enjoy an activity they are more likely to continue to use it. It may be that autobiographical activities that are enjoyable will positively impact on well-being, irrespective of the content of the activity.

Thirdly, in determining which method to use for the qualitative analysis, the decision was made to apply content analysis. Content analysis is by its nature a mixed-methods analytical tool as it is a method to transform qualitative data into information that can be understood quantitatively. In determining whether the BPS texts represented a layperson’s view of the good life (Research Question 8), the use of content analysis allowed the conclusion to be made that these texts do offer a way for researchers to understand a layperson’s view of the good life. Understanding what is actually important to individuals has implications for intervention design. In addressing Research Question 9, concerning the relative importance of various components of well-being, content analysis revealed that social
well-being, through connection with others, plays a universally important part in individual well-being.

Furthermore, the transformation of qualitative data into quantitative meant that when addressing Research Question 10, concerning the way in which relationships contribute to individual thriving, it could be stated that the mechanisms involved were likely to be competence, autonomy, and relatedness as predicted by self-determination theory. However, content analysis also showed that another mechanism was likely to be in play, and it was speculated that this might be other-interest.

Fourthly, qualitative analysis alone would not have provided a determination of the relative importance of the leisure and non-leisure aspects of the good life (Research Question 11), nor the testing of the DRAMMA framework (Research Question 12). By applying a quantitative lens to the qualitative data through content analysis, it was possible to conclude that the importance of leisure to optimal well-being has been previously underestimated, or at least that the desired emphasis is higher than the level of leisure actually being experienced by Australians (Research Question 11). Analysing the BPS texts using the DRAMMA model as the coding framework allowed for the conclusion that affiliation with others is the most important way in which leisure enhances well-being, and that the DRAMMA framework itself is a useful representation of the link between leisure and well-being.

Further qualitative analysis of the leisure text for sub-themes (Research Question 13), which was then subjected to quantitative analysis, allowed for further understanding of the way the psychological mechanisms work. For example, the detachment-recovery mechanism provided pleasure and escape; autonomy was evidenced by having the freedom of time and money to pursue chosen, rather than prescribed activities; mastery and meaning occurred via learning and contribution respectively; and affiliation was predominantly through connection with close family and friends, rather than large groups. Finally, quantitative analysis, which
was extended into statistical analysis, revealed that older, wealthier individuals were able to imagine more leisure than their younger, poorer counterparts, and there were no gender differences found regarding the importance of leisure in a good life (Research Question 14).

In summary, the mixed-methods approach to research design, data collection, and data analysis that was pursued in research objective 2 (Research Questions 4-14) resulted in new knowledge regarding the importance of relationships to thriving, the participant experience in happiness studies, and the layperson’s view of the good life. It is argued that these fresh insights would not have been possible using quantitative or qualitative analysis alone.

Future research using a mixed-methods approach is recommended for other interventions, such as gratitude interventions, where participants are asked to provide written responses. As was the case in the current research, examination of participant responses may inform the development of additional interventions. Furthermore, providing opportunities for research participants to describe their experience after completing interventions will aid researcher’s understanding of the way in which participants respond (positively or negatively) to interventions.

The third, and final, research objective (Research Questions 15-17) was to explore the potential of the BPO intervention. One of the benefits of a mixed-methods approach is that the research program can be iterative in response to early findings. This was the case in the current research program where it was found that in writing about their own optimal future, more than half of the participants wrote about the future of other individuals. The researcher was able to respond to this finding by including the BPO as an intervention to be trialled in the follow-up stage.

Analysis of qualitative data from the pilot test of the BPO intervention showed that the good life for a loved one would consist of social, financial, psychological, and physical well-being, in a life which included elements of leisure, and a sense of meaning and purpose
(Research Question 15). Through thematic and content analysis of the BPO texts it is suggested that dependent variables for future BPO experimental work should include: other-interest, other-oriented hope, closeness, and compassion (Research Question 16). Finally, practitioners can now consider the use of the BPO intervention with clients as participants reported the BPO provided an opportunity to express joy, love, and gratitude as well as finding the BPO easy, interesting, and enjoyable (Research Question 17). The potential of the BPO remains to be fully explored and the findings contained herein offer researchers a starting point for the investigation of this new intervention.

7.4 Limitations and Future Research

Each of the five papers contained herein included a section where the limitations were discussed. The purpose of the limitations section of the discussion chapter is to suggest ways in which the limitations should be addressed in future research. Limitations covered below include: (a) sample selection; (b) the placebo effect; (c) single study; (d) coding models; and (e) prompting in task instructions.

Firstly, the sample, whilst more demographically diverse than a student sample and drawn from the general population, cannot be considered as representative of the general population. The sample was skewed towards women, particularly those with higher incomes, ages, and education. Therefore, generalising the results contained herein to other populations should be done with caution. Future research should be conducted with more diverse groups of participants. Recruiting a sample with greater representation of male participants may result in the identification of sex differences across BPS texts. Furthermore, it is likely that the way in which an individual imagines their best possible self will vary for participants with lower levels of education and income. It has been noted that databases of BPS texts are already in existence due to their compilation in previous BPS studies. As a starting point,
these BPS texts should be examined to assess their representation of the layperson’s view of the good life.

Secondly, a placebo effect, as evidenced by the lack of significant condition differences, appeared to be in operation in the study. The research was situated within the field of online positive psychology intervention (OPPI) research, and target participants were online happiness seekers. During the recruitment process, participants were advised that the purpose of the study was to promote hope and happiness. Prior communication of the purpose of the study may have skewed both recruitment, and the responses of those who participated. A limitation of the research therefore is that the control intervention did not perform as a neutral condition and was instead treated by participants as a positive intervention. Because the current research used a mixed-methods approach it was possible to examine the response of participants in the control condition and identify the positive nature of their responses. The literature review identified a lack of qualitative analysis of BPS texts and this extends to a lack of analysis of the text written by participants in the control condition in previous studies.

Although trialling a variety of control interventions is appropriate, it may be that seeking an alternative to a control condition may be a more effective approach. Future OPPI research may be better served, as has been suggested by other researchers, by using a portfolio of interventions and over time withdrawing the least effective ones, rather than utilising a control condition (Parks, 2014).

Thirdly, deductive coding of data was undertaken by utilising the conceptual models of Feeney and Collins (2015) and Newman et al. (2014). Coding to conceptual models was completed to enable inferences to be made regarding the importance of particular components of well-being to individual thriving. It is likely that alternate models, or inductive coding, would have generated different results. Future research that employs different models should
be undertaken. An iterative inductive-deductive approach is recommended, as is a preliminary thematic analysis to ensure a level of fit before commencing detailed coding. For example, many BPS texts included reference to physical well-being and the chosen model needed to include this aspect of well-being. A related limitation of the current study was that, as participants were not consulted regarding the assignment of their texts to particular categories, the researcher may not have accurately interpreted the participants’ views. Note that a second rater was used to minimise researcher bias, and agreement levels were very high, however future research should include a member check process.

Fourthly, there were at least two limitations associated with conducting a study with a single administration of the intervention. In the first instance, research questions regarding the optimal number of times the intervention should be performed were not able to be addressed. The BPS literature review identified a number of suggestions for future research that required repeated administration of the intervention. Additionally, it may be that to experience measurable benefits from the BPS, repeated administration of the intervention is necessary. There are examples of studies that have obtained results with a single administration (Peters et al., 2010); however, others have required three instances (Harrist, Carlozzi, McGovern, & Harrist, 2007). The scope of the research program did not allow pursuit of questions concerning optimal administration of the BPs intervention, and these questions are therefore recommended for future research.

Finally, the instruction used for the interventions (BPS and BPO) included specific reference to working hard, accomplishing goals, and realising dreams. Whilst these aspects of life are likely to be part of a perceived good life for many people, a limitation in the current study is that the wording of the intervention instruction seemed to prompt participants to focus on these particular aspects of life. The focus on material success may have reduced or excluded the emphasis on other domains. Future research should experiment with more
general, or neutral, rather than specific task instructions. Alternatively, if using specific prompts these should be evenly distributed across well-being domains.

**7.5 Implications for Positive Psychology Practice**

Practitioners such as coaches, psychologists, and educators can use the findings from the current research program to aid their selection and administration of the interventions they use with clients. The research program provided a deep dive into the BPS intervention and practitioners can now understand the place of the BPS in the literature and likely directions for its future investigation. Given the benefits shown here of using a mixed-methods approach for intervention evaluation, practitioners may find it useful to assess the interventions they prescribe using a mixed-methods approach. Furthermore, when offering interventions, efficacy of the intervention should incorporate a consideration regarding the participant experience including ease and enjoyment of the activity. Further testing may show that autobiographical interventions that are not difficult to complete, and that the client enjoys, may prove be of greatest benefit. Further, for interventions that use the writing paradigm, practitioners may find improved results if the client believes that practitioner will read their response. Finally, it may prove beneficial if the client is aware of the purpose and outcome to be derived from the intervention.

The research program resulted in significant findings regarding the importance of others, and of leisure, in considering one’s best self. Interventions that allow clients to reflect on, and appreciate, the important role of others in their lives may be efficacious and could be extended to include the sharing of these insights with important others. The practitioner’s goal for relationship-based, intervention practice should be that the client is able to strike an appropriate balance between self-interest and other-interest that will result in optimal well-being.
If ongoing research confirms the general efficacy of the BPO in eliciting other-oriented emotions and cognitions, practitioners and researchers may consider testing its efficacy with clients who have loved ones who are experiencing a time of transition. For example, the BPO could be tested with parents who have a child entering emerging adulthood, or spouses who have a partner transitioning to retirement. The BPO may prove helpful to the client as a counter-measure to worrying about their loved one. Future research effort will determine whether it is also beneficial to the loved one to know that someone is maintaining the view that their transition works out in the best possible way.

7.6 Conclusion

Following a critical review of the Best Possible Self (BPS) literature, the research program undertaken for this thesis commenced, as much BPS research does, with an experiment. However, unlike previous approaches, this research program took the novel approach of deliberately collecting and analysing both quantitative and qualitative data.

By using a mixed-methods design, the important role that relationships play in individual thriving was highlighted. It turns out that social well-being is universally important to one’s vision of their best possible self. Consistent with this finding, affiliation with others is the most important way in which leisure enhances well-being. Furthermore, the development of an other-oriented version of the BPS, known as the Best Possible Other, allowed participants to express their desire for the well-being of close others, and to express other-interest, other-oriented hope, closeness, and compassion.

By paying attention to the participant experience, and analysing how participants approach interventions it was observed that a seemingly-neutral intervention can take on the characteristics of a positive intervention. Furthermore, participating in an intervention study can have benefits for participants beyond what is imagined (and evidenced in statistical analysis) by allowing individuals to be self-reflective, appreciative, and to clarify their
personal views of happiness. All interventions are not created equal, and whether one writes passionately about a positive event or dispassionately about the previous day will influence what they feel like doing after the intervention. In fact, in terms of increasing one’s hope and happiness it seems that what matters most is participants’ enjoyment of, and interest in, an intervention, rather than the intervention itself.

The mixed-methods approach used in this research program led to rich insights and strong conclusions about optimal human functioning as was predicted by Plano Clark (2017). It was the combination of qualitative and quantitative exploration that resulted in advances in knowledge beyond what would have been achieved using either approach alone. Finally, in response to Wong’s (2011) concerns, examination of the BPS texts demonstrated that the motivation for the well-being of others is not entirely absent from positive psychology.
References


Jäger, D. T., & Rüsseler, J. (2016). Low arousing positive affect broadens visual attention and alters the thought-action repertoire while broadened visual attention does not. *Frontiers in Psychology, 7*.


# Appendices

## Adult Mental Health Continuum – Short Form

Please answer the following questions about how you have been feeling during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following:

<table>
<thead>
<tr>
<th>During the past month, how often did you feel…</th>
<th>Never</th>
<th>Once or twice</th>
<th>About once a week</th>
<th>About 2 or 3 times a week</th>
<th>Almost every day</th>
<th>Every day</th>
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<tr>
<td>1. Happy</td>
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<td>2. Interested in life</td>
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<td>3. Satisfied with life</td>
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<td>4. That you had something important to contribute to society</td>
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<td>5. That you belonged to a community (like a social group, or your neighbourhood)</td>
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<td>6. That our society is a good place, or is becoming a better place, for all people</td>
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<td>7. That people are basically good</td>
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<td>8. That the way our society works makes sense to you</td>
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<td>9. That you liked most parts of your personality</td>
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<td>10. Good at managing the responsibilities of your daily life</td>
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<td>11. That you had warm and trusting relationships with others</td>
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<td>12. That you had experiences that challenged you to grow and become a better person</td>
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<td>13. Confident to think or express your own ideas and opinions</td>
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<td>14. That your life has a sense of direction or meaning to it</td>
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Life Orientation Test - Revised

Please be as honest and accurate as you can throughout. Try not to let your response to one statement influence your responses to other statements. There are no "correct" or "incorrect" answers. Answer according to your own feelings, rather than how you think "most people" would answer.

A = I agree a lot
B = I agree a little
C = I neither agree nor disagree
D = I DISagree a little
E = I DISagree a lot

1. In uncertain times, I usually expect the best.
2. It's easy for me to relax.
3. If something can go wrong for me, it will.
4. I'm always optimistic about my future.
5. I enjoy my friends a lot.
6. It's important for me to keep busy.
7. I hardly ever expect things to go my way.
8. I don't get upset too easily.
9. I rarely count on good things happening to me.
10. Overall, I expect more good things to happen to me than bad.

------------------------------------------------------------------------

Note:

Items 2, 5, 6, and 8 are fillers. Responses to "scored" items are to be coded so that high values imply optimism. Researchers who are interested in testing the potential difference between affirmation of optimism and disaffirmation of pessimism should compute separate subtotals of the relevant items.

The Adult State Hope Scale
Read each item carefully. Using the scale shown below, please select the number that best describes how you think about yourself right now and put that number in the blank before each sentence. Please take a few moments to focus on yourself and what is going on in your life at this moment. Once you have this “here and now” set, go ahead and answer each item according to the following scale:

<table>
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<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Definitely</td>
<td>Mostly</td>
<td>Somewhat</td>
<td>Slightly</td>
<td>Slightly</td>
<td>Somewhat</td>
<td>Mostly</td>
<td>Definitely</td>
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<td></td>
<td>False</td>
<td>False</td>
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<td>False</td>
<td>True</td>
<td>True</td>
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</tbody>
</table>

_______ 1. If I should find myself in a jam, I could think of many ways to get out of it
_______ 2. At the present time, I am energetically pursuing my goals
_______ 3. There are lots of ways around any problem that I am facing now
_______ 4. Right now, I see myself as being pretty successful
_______ 5. I can think of many ways to reach my current goals
_______ 6. At this time, I am meeting the goals that I have set for myself

Scoring information
Pathways subscale score: Add items 1, 3, and 5. Scores on this subscale can range from 3 to 24, with higher scores indicating higher levels of pathways thinking.

Agency subscale score: Add items 2, 4, and 6. Scores on this subscale can range from 3 to 24, with higher scores indicating higher levels of agency thinking.

Total hope score: Add the pathways and Agency subscales together. Scores can range from 6 to 48, with higher scores representing higher hope levels.
The Positive and Negative Affect Schedule
PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment** OR **indicate the extent you have felt this way over the past week** (circle the instructions you followed when taking this measure).

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Slightly or Not at All</td>
<td>A Little</td>
<td>Moderately</td>
<td>Quite a Bit</td>
<td>Extremely</td>
</tr>
<tr>
<td>1</td>
<td>1. Interested</td>
<td>11. Irritable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2. Distressed</td>
<td>12. Alert</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>3. Excited</td>
<td>13. Ashamed</td>
<td></td>
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<tr>
<td>5</td>
<td>5. Strong</td>
<td>15. Nervous</td>
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<tr>
<td>7</td>
<td>7. Scared</td>
<td>17. Attentive</td>
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<tr>
<td>8</td>
<td>8. Hostile</td>
<td>18. Jittery</td>
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<tr>
<td>9</td>
<td>9. Enthusiastic</td>
<td>19. Active</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Scoring Instructions:**
Positive Affect Score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19. Scores can range from 10 – 50, with higher scores representing higher levels of positive affect. Mean Scores: Momentary 29.7 (SD 7.9); Weekly 33.3 (SD 7.2)

Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 – 50, with lower scores representing lower levels of negative affect. Mean Score: Momentary 14.8 (SD 5.4); Weekly 17.4 (SD 6.2)