J Happiness Stud
DOI 10.1007/s10902-012-9339-1

RESEARCH PAPER

Exploring the Causes of Subjective Well-Being: A Content Analysis of Peoples' Recipes for Long-Term Happiness

Benjamin S. Caunt · John Franklin · Nina E. Brodaty · Henry Brodaty

Abstract This study set out to explore conceptions of the elements or ingredients that lead to long-lasting happiness. A content analysis (Smith in Handbook of research methods in social and personality psychology. Cambridge University Press, Cambridge, 2000; Weber 1990) coded 201 respondents' (18–84 years old) written happiness recipes for the mention of a priori (pre-defined from a literature review) and *empirical* (from a pilot study) content analysis categories. These were organized into six dimensions (i.e. Personality, Circumstances, Social Relationships, Behavioral Activities, Cognitive Activities and Volitional Activities) based on a model of the causes of long-term happiness (Lyubomirsky et al. in Rev Gen Psychol 9(2):111–131, 2005b). Participants were happy and mentally healthy. An overwhelming majority of responses referred to Social Relationships such as with *Family, Friends* and *Partners,* supporting the assertion that relationships are necessary for happiness (Diener and Oishi in Psychol Inquiry 16(4):162–167, 2005; Diener and Seligman in Psychol Sci Public Interest 5(1):1–32, 2002). Participants frequently mentioned Circumstances such as *Health* despite the fact these have been found to have a minimal influence over long-term happiness (Argyle in The foundations of hedonic psychology. Russel Sage Foundation, New York, 1999). Respondents mentioned a variety of New Behavioral Activities (e.g. time in *Nature*) that could offer a list of active leisure pursuits for use in happiness interventions. Finally, participants spoke of the importance of *Social Values* and having a *Philosophy of Life* (New Cognitive Activities). A recipe for long-term happiness is proposed based on past and current findings.

B. S. Caunt (✉) · J. Franklin
Department of Psychology, Macquarie University, Sydney, Australia
e-mail: bencaunt@hotmail.com

J. Franklin
e-mail: John.franklin@mq.edu.au

N. E. Brodaty
Prince of Wales Hospital, Sydney, Australia

H. Brodaty
Dementia Collaborative Research Centre, School of Psychiatry, University of New South Wales, Sydney, NSW 2052, Australia

Published online: 19 May 2012

Keywords Happiness · Subjective well-being · Content analysis · Social relationships · Behavioral activities · Cognitive activities

No man is happy that does not think himself so (Marcus Aurelias, cited Diener 1984).

1 Introduction

The pursuit of happiness is emerging as a topic of burgeoning global interest (Lyubomirsky et al. 2005a). A review of experimental literature found "compelling evidence" that happiness fosters sociability and social activity, altruism, liking of the self and others, strong bodies and immune systems and effective conflict resolution skills (Lyubomirsky et al. 2005a). *How might these benefits occur?* Happiness involves positive emotions, and these emotions may have evolved to help humans to "broaden" their awareness by encouraging new, varied and exploratory thoughts and actions (Fredrickson 1998, 2001; Fredrickson and Branigan 2005). Over time these broadened thoughts and actions "build" new skills and resources (Fredrickson 1998, 2001; Fredrickson and Branigan 2005). Negative emotions in contrast, prompt narrow and immediate survival-oriented behaviors (Fredrickson 2001; Fredrickson and Branigan 2005). In order to influence individuals' levels of happiness, it is necessary to define happiness and understand its causes and its potential for change.

1.1 Defining Happiness

Happiness research has evolved in two directions based on the philosophical perspectives of *hedonism* and *eudemonia.* Hedonic psychology (Kahneman et al. 1999) concerns "the experience of pleasure versus displeasure construed to include all judgments about the good/bad elements of life" (Ryan and Deci 2001). Definitions of happiness drawn from hedonic psychology represent the internal information people draw on if you ask them if they are happy (Diener 1984; Ryan and Deci 2001). One widely accepted hedonic definition of happiness is that of *subjective well-being* (SWB). "People experience abundant SWB when they feel many pleasant and few unpleasant emotions, when they are engaged in interesting activities, when they experience many pleasures and few pains, and when they are satisfied with their lives" (Diener 2000). SWB is made up of *high life satisfaction* (a cognitive evaluation), experiences of frequent *positive affect* and infrequent *negative affect* (Diener 1984; Diener et al. 1999). SWB represents a higher order factor made up of these interrelated constructs (Diener et al. 1999). Subjective happiness can also be approached at a global level by assessing people's summary judgments of their happiness (Lyubomirsky and Lepper 1999; Lyubomrisky et al. 2006). Subjective definitions of happiness have led to effective self-report measures of global happiness (Lyubomirsky and Lepper 1999) and the components of SWB (Diener et al. 1985; Kahneman and Krueger 2006; Watson et al. 1988).

Eudemonic happiness focuses on "a well-being that is beyond subjective happiness" (Ryan and Deci 2001) valuing external criteria such as virtue and positive action (Kashdan et al. 2008; Peterson et al. 2005). Though the philosophical distinction between hedonism and eudemonia may not be empirically supported (Kashdan et al. 2008) eudemonia inspired constructs have encouraged a broader scope of happiness research (Ryff 1989). For example, the operational definition of *psychological well-being* (PWB) includes environmental mastery, a sense of purpose in life and positive relations with others (Ryff

1989; Ryff and Singer 1998). Such broad definitions can confuse attempts to develop a clear operational definition of happiness by confounding happiness with its causes and consequences (Kashdan et al. 2008). In the case of PWB, if "positive relations with others" (Ryff 1989; Ryff and Singer 1998) is part of the definition of happiness then the study of whether and how interpersonal relationships affect happiness becomes "a potentially messy examination of conceptually overlapping predictor and outcome variables" (Kashdan 2004; Kashdan et al. 2008). To avoid such confusion and at the risk of limiting its scope, the current study has chosen to focus on research into the causes of happiness that has used outcome measures of SWB. Though happiness could be operationalized in a number of ways, SWB represents a clearly defined and well researched happiness proxy (Diener 2000) that is separable from the causes of happiness under investigation (Kashdan et al. 2008).

1.2 Causes of Happiness

Seligman (2002) proposed a formula for the causes of happiness that accounts for stable and variable components of long-term happiness; H (enduring level of happiness) = S (personal set range) + C (circumstances) + V (factors under personal voluntary control). Similarly, Lyubomirsky and colleagues propose "*set-point, life circumstances,* and *intentional activity"* causally effect long-term happiness; and estimate a percentage of variance in happiness accounted for by each (Lyubomirsky et al. 2005b; Sheldon and Lyubomirsky 2006a, 2007).

1.2.1 Set-Point (Estimated Influence = 50 %)

The happiness set-point "is genetically determined and assumed to be fixed, stable over time, and immune to the influence of control" (Lyubomirsky et al. 2005b). Research on genetic predisposition, hedonic adaptation and personality traits provides support for this stable component of happiness. Twin studies indicate that between 27 and 80 % of variance in long-term SWB is explained by genetic inheritance (Diener et al. 1999; Lucas and Donnellan 2007; Lykken and Tellegen 1996; McGue et al. 1997; Sheldon and Lyubomirsky 2007; Tellegen et al. 1988). The theory of hedonic adaptation proposes that good and bad events may temporarily effect happiness, but most people eventually return to their set-point (Brickman and Campbell 1971; Diener et al. 2006). People adapt to major events such as winning the lottery (Brickman et al. 1978), death of a spouse, marriage and unemployment (Lucas et al. 2003). However, adaptation is not always complete (Diener et al. 2006; Fujita and Diener 2005; Lucas et al. 2003; Lyubomirsky 2011) and "set range" may be a more accurate descriptor (Seligman 2002).

Personality traits are cognitive, affective and behavioural complexes that are consistent across situations and the lifespan (Allport and Ross 1967). Though not completely fixed, heritable personality traits reflect relatively stable influences on daily fluctuating attitudes, emotions and actions (Diener and Lucas 1999; Diener et al. 1999; Weiss et al. 2008). Of those personality traits proposed to influence SWB *extraversion* and low *neuroticism* (Costa and McCrae 1980; Lucas et al. 2000; Weiss et al. 2008), *optimism* (Aspinwall and Taylor 1992; Carver and Gains 1987; Fontaine and Jones 1997; Scheier and Carver 1992; Scheier et al. 2001) and *self-esteem* (Diener and Lucas 1999; Schimmack and Diener 2003) have the strongest support, predicting higher scores on measures of SWB.

1.2.2 Circumstances (Estimated Influence = 10 %)

Circumstances are the secure and stable elements of a person's life. These include the geographical region where a person resides, demographic factors such as age and gender, and major life-status factors such as marriage (Lyubomirsky et al. 2005b). Circumstances account for only 8–20 % of total SWB variance (Andrews and Withey 1976; Argyle 1999; Diener et al. 1999), possibly because of adaptation (Diener et al. 1999, 2006; Lyubomirsky 2011; Lyubomirsky et al. 2005b). The circumstances that most consistently predict high SWB are being *married* (Diener et al. 2000; Lee et al. 1991; Lucas et al. 2003; Myers 2000; Stack and Eshelmen 1998), *religious* (Lazar and Bjorck 2008; Myers 2000), *employed* (Haring et al. 1984; Lucas et al. 2003), *healthy* (Diener and Seligman 2004; Lyubomrisky et al. 2006; Okun and George 1984; Verbrugge et al. 1994) and *sufficiently wealthy* to meet basic needs (Diener and Biswas-Diener 2002; Diener et al. 1993, 1995, 2010).

1.2.3 Social Relationships (Estimated Influence = Not Specified)

Social relationships are stable connections with family, friends, partners and community (Diener and Oishi 2005; Diener and Seligman 2002). Relationships predict higher SWB (Argyle 1999; Diener and Seligman 2002; Gallagher and Vellabrodrick 2008) and people report happier feelings when with others (Pavot et al. 1990). Further, "very happy people" have stronger relationships with friends, family and romantic partners (Diener and Seligman 2002). The consistency of such findings has led some to conclude that relationships are necessary for happiness (Diener and Oishi 2005; Diener and Seligman 2002). Even though they are difficult to classify because of confounding factors (e.g. *marriage, forgiveness* and *social activities*, see Table 1), social relationships are classified as a unique and influential cause of happiness in the current study (rather than as a component of circumstances).

1.2.4 Intentional Activities (Estimated Influence = 40 %)

Intentional activities are effortful actions or practices that include the variety of things people think and do (Lyubomirsky et al. 2011; Lyubomirsky et al. 2005b). Activities are more controllable than genetic factors, personality and most circumstances and offer the greatest potential to sustainably increase happiness (Lyubomirsky et al. 2011; Sheldon and Lyubomirsky 2007). They also have features that combat adaptation such as the ability to maintain novelty by altering the time, place and nature of an activity (Lyubomirsky et al. 2005b). Lyubomirsky et al. (2005b) describe three types of intentional activity (behavioral, cognitive and volitional). With a few exceptions (Fordyce 1977, 1983; Seligman et al. 2006) happiness interventions have focused on a limited variety of specific happiness enhancing strategies that can be organized into these three activity types.

Behavioral activity reflects a person's actions. *Physical activities* (Babyak et al. 2000; Motl et al. 2005; Rejeski et al. 2001; Stewart et al. 1997), *meditation and mindfulness* (Brown and Ryan 2003; Smith et al. 1995) and *social activities* such as deliberate acts of kindness and gratitude (Lyubomirsky et al. 2005b; Seligman et al. 2005) have been found to increase SWB. **Cognitive activity** indicates a person's attitudes. Cultivating *gratitude* (Emmons and McCullough 2003; Lyubomirsky et al. 2011; Seligman et al. 2005; Sheldon and Lyubomirsky 2006b), *forgiveness* (Bono et al. 2008; McCullough and Worthington 1999) and cognitive approaches to *coping with adversity* (Folkman 1997; Gloaguen et al. 1998; Headey and Wearing 1990; McCrae and Costa 1986) increase SWB. **Volitional**

Table 1 A priori **dimensions** and *categories*, and category definitions from the literature

Dimension and *category names*	Category definitions from literature (as described in *Coding Scheme*)	Author(s)
Personality[a]		
Extraversion[a,b]	Characterized by openness, positive emotions and the tendency to seek stimulation with others	Costa and McCrae (1980)
Neuroticism[a]	A characteristic tendency to experience negative emotions such as anger, sadness and vulnerability	Costa and McCrae (1980)
Optimism	A tendency toward "the global expectation that good things will be plentiful in the future and bad things scarce"	Scheier and Carver (1992)
Self-Esteem	"A global feeling of self-worth or adequacy as a person, or generalized feelings of self-acceptance, goodness, and self-respect"	Lyubomrisky et al. (2006)
Circumstances[a]		
Marital status[a,b]	Married (vs. never married, separated or divorced)	Myers (2000)
Religion[b]	"Religious activity", "Religious faith" and/or "Religiousness"	Myers (2000)
Sufficient Wealth	Enough money to meet basic needs	Diener and Biswas-Diener (2002, Diener et al. (1993)
Employment[a]	Being employed, not unemployed	Haring et al. (1984), Lucas et al. (2003)
Health	Self-reports of health and the absence of chronic illness	Okun and George (1984, Verbrugge et al. (1994)
Social Relationships[b]		
Social Relationships[b]	Stable connections with family, friends, partners, and community	Diener and Oishi (2005), Diener and Seligman (2002)
Behavioral Activities[a]		
Physical Activity[a]	Any movement of the body that results in energy expenditure above the resting level	Mutrie and Faulkner (2004)
Meditation and Mindfulness[a]	Meditation practices cultivate mindfulness, an enhanced attention to and awareness of current experience	Brown and Ryan (2003)
Social Activities[a,b]	Deliberate acts of kindness or goodness for the benefit of another	Lyubomirsky et al. (2005a, b)
Cognitive Activities[a]		
Gratitude[a]	A sense of wonder, appreciation and thankfulness	Tkach and Lyubomirsky (2006)
Forgiveness[b]	When a person believes the actions of another were harmful, immoral or unjust; but is able to reduce negative responses and increase pro-social responses (e.g. attempt to mend the relationship)	McCullough and Worthington (1999)
Coping Attitudes[a]	Maintaining optimism, faith and strength in the face of adversity	Folkman (1997), McCrae and Costa (1986)

Table 1 continued

Dimension and *category names*	Category definitions from literature (as described in *Coding Scheme*)	Author(s)
Volitional Activities[a]		
Goals[a]	Pursuing aims that are concordant with ones interests, motives and values	Sheldon and Houser-Marko (2001)
Hope	The perceived capability to derive pathways to desired goals and motivate oneself to initiate and sustain movement along those pathways	Snyder et al. (1991)
Meaning in Life	"The cognizance of order, coherence, and purpose in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment"	Reker et al. (1987)

Dimensions are bolded, and categories italicized

[a] An established causal influence on SWB (via longitudinal and/or experimental research)

[b] A social component (i.e. overlap with social relationships dimension)

activity is motivated towards achieving goals. Pursuing *goals* that are concordant with one's values and interests (Cantor and Sanderson 1999; Headey 2008; Kasser and Ryan 1996; Sheldon and Houser-Marko 2001; Sheldon et al. 2002; Sheldon and Lyubomirsky 2004), maintaining *hope* (Davis 2005; Snyder et al. 1991) and *meaning in life* (Ardelt and Koenig 2006; Zika and Chamberlain 1992) increase SWB. Though increases in SWB can be achieved through the above intentional activities, there is a paucity of studies demonstrating their long-term effectiveness (Sheldon and Lyubomirsky 2007).

1.3 The Current Study

The current study set out to explore conceptions of the elements that lead to enduring happiness via a *content analysis* of people's written "recipes for long-term happiness". Two questions emerge from the above review. Given happiness is defined as a subjective phenomenon, what do individuals suggest are the ingredients that determine long-term happiness? Do these happiness ingredients indicate new directions that could be pursued in developing future interventions?

Previous studies have used content analysis to explore new directions in happiness research. Park and Peterson (2006) devised an a priori (pre-defined) content analysis scheme (Smith 2000; Weber 1990) for identifying 24 character strengths (e.g. love, zest, hope, and gratitude) from parental descriptions of children too young to respond themselves. These character strengths were drawn from prior research with adults and older youth (Peterson and Seligman 2004). The current study developed an a priori content analysis scheme based on literature regarding the causes of long-term SWB. Table 1 summarizes these 19 pre-defined categories and provides definitions from the literature. They are organized into six dimensions (Personality, Circumstances, Social Relationships, Behavioral, Cognitive and Volitional Activities) based on the model proposed by Lyubomirsky and colleagues. Genetic inheritance and hedonic adaptation were not included as they represent theoretical concepts and were thus deemed unlikely to emerge in laypersons' happiness recipes, (especially given the observation people tend to assume happiness is responsive to changing life circumstances) (Diener et al. 2006; Lucas and Donnellan 2007).

Tkach and Lyubomirsky (2006) used content analysis to assess the responses of 70 students to a question asking them to "list the things you do to maintain or increase your happiness". In their pilot study an *empirical* content analysis scheme (Smith 2000; Weber 1990) of 66 happiness-enhancing strategies was developed based on responses. The current study adopted this method of generating empirical (new) content analysis categories to account for common responses not covered by the a priori scheme. This study took a wider view of the causes of happiness by 1) asking participants to list general "factors and elements that lead people to long-term happiness" (rather than targeting *activities* that people do to maintain or increase happiness), and by 2) broadening the sample beyond a student population.

Tkach and Lyubomirsky (2006) then asked 500 students to rate how frequently they used these 66 happiness-strategies, and used factor analysis to derive eight clusters ("Social Affiliation, Partying and Clubbing, Mental Control, Instrumental Goal Pursuit, Passive Leisure, Active Leisure, Religion and Direct Attempts"). They found positive correlations (*r*s from 0.22 to 0.45) between *global happiness* and frequency of strategy use for all clusters other than Mental Control ($r = -.56$) and Passive Leisure (non-significant $r = .07$). The current study assesses associations between the importance ascribed to six dimensions (i.e. Personality, Circumstances, Social Relationships, Behavioral, Cognitive and Volitional Activities) and *global happiness*. The study also investigates associations with *positive mental health*, a broader measure of eudemonic well-being (Keyes 2002; Lamers et al. 2011).

By relying on spontaneously generated happiness recipes, this exploratory content analysis encouraged expression of a broad range of ingredients. We hypothesized that:

1. The six dimensions derived from the literature review would provide a framework for organizing ingredients from respondents' happiness recipes.
2. The 19 ingredients associated with happiness in prior research would be represented in respondents' recipes and successfully coded into a priori content analysis categories.
3. Respondents' happiness recipes would suggest new ingredients not well represented in literature and these would be successfully coded into *empirical* categories.

We also calculated the number of participants who mentioned each ingredient (frequency) as an indication of the relative importance people assigned ingredients as causes of long-term happiness. To evaluate the importance participants ascribed to the six dimensions we calculated the number of categories each participant mentioned from each dimension. We then assessed correlations with their *global happiness* and *positive mental health*.

2 Method

2.1 Sample and Procedure

Participants were a convenience sample of 68 males and 183 females ($n = 251$). Data from 50 randomly selected participants were separated for a pilot study used to develop the *Coding Scheme* (see below) leaving 201 participants in the final sample (48 males and 153 females). All participants provided basic demographic information, wrote recipes for long-term happiness and filled out self-report measures of global happiness and positive mental health. Participants were recruited via a snowball email sampling strategy and word of mouth. Sampling originated with an email from the first author to his contacts requesting they participate in the research and forward the email on. This original group included

family, friends, work colleagues and approximately 20 clinical psychology Masters students. People over 18 years old were directed to a website which provided an introduction and the opportunity to volunteer (or decline) to participate (Information Sheet available on request). Ethics approval was granted by the Macquarie University Ethics Review Committee (Human Research).

Following completion of demographic questions participants were given the following instructions (full instructions available on request).

> Please take your time to consider and respond to the following. Remember that there are no "right" or "wrong" answers. Every response is valuable and should be an accurate reflection of your own thoughts, feelings, beliefs, and ideas.
> In your opinion, what are the factors or elements that lead people to **long-lasting happiness in their lives**? A good way to approach this question could be to think of writing the ingredients list for **a recipe for long-term happiness**.

2.2 Measures

2.2.1 Subjective Happiness Scale (SHS)

The SHS (Lyubomirsky and Lepper 1999) is a 4-item measure of global happiness; happiness that is "more enduring than momentary happiness but still somewhat malleable over time" (Lyubomirsky et al. 2005b). The first item asks participants the extent to which they are a happy person (1 = *not a very happy person to* 7 = *a very happy person)*. The second asks them to describe their happiness compared to their peers (1 = *less happy* to 7 = *more happy*). The third and forth items ask how well descriptions of a chronically happy and a chronically unhappy person describe them (1 = *not at all* to 7 = *a great deal*) (Tkach and Lyubomirsky 2006). SHS scores represent the mean of these four items. Chronbach's alpha indicated the SHS demonstrated good reliability in the current study ($\alpha = 0.84$).

2.2.2 Mental Health Continuum—Short Form (MHC—SF)

The MHC—SF (Lamers et al. 2011) is a 14-item measure of positive mental health derived from the Mental Health Continuum—Long Form (Keyes 2002). Each item offers six response options (*never, once or twice, about once a week, about 2 or 3 times a week, almost every day, every day*). Items one to three measure *Emotional Well-Being* (Lamers et al. 2011). Items four to eight measure the facets of Keyes' (1998) model of *Social Well-Being*. Items nine to fourteen measure the dimensions of Ryff's (1989) model of *Psychological Well-Being*. The mean of these 14 MHC- SF items represents a general measure of positive mental health (Lamers et al. 2011). Chronbach's alpha indicated the scale demonstrated good reliability in this study ($\alpha = 0.90$).

2.3 Content Analysis

This content analysis followed eight-steps proposed by Weber (1990).

2.3.1 Define Text and Recording Units

A *text unit* is "the largest body of material subjected to analysis" (Smith 2000). In this study one text unit was defined as one respondent's happiness recipe. The *recording unit* is

"that part of the text to which coding categories are applicable" (Smith 2000). One recording unit was defined as the writing in one text box (space for writing an ingredient) from a respondent's happiness recipe. In cases where one text box clearly referred to more than one ingredient, responses were split into separate boxes prior to categorization. Each recording unit was coded exclusively into one category as per Weber (1990).

2.3.2 *Define the Categories*

Two coders (BC, NB) reviewed data from the pilot sample of 50 respondents (male = 20, female = 30; aged 18–68 years, mean age 45.5) to develop a *Coding Scheme* (available on request). Using a separate data set to develop this Coding Scheme maximized external validity (Neuendorf 2002).

The starting point for coding the 19 a priori categories (found in Table 1) was the category names, definitions from the literature (see Table 1), and/or any obvious synonyms. For example, *physical activity* was defined as "any movement of the body that results in energy expenditure above the resting level" (Mutrie and Faulkner 2004) and responses such as "physical activity" (category name), "jogging" (from definition) and "exercise" (synonym) were coded in this category.

To derive *empirical* categories coders reviewed pilot data and created new categories for each ingredient that did not belong in an a priori category. Coders then reviewed the new categories and expanded or collapsed them to increase clarity. Empirical categories were retained if they occurred in over 15 % of respondents' happiness recipes. Thirteen new categories emerged and definitions and examples of each were added to the Coding Scheme. For example, *Social Values* was defined as "any word or phrase that clearly refers to values, attitudes or ways of approaching or interacting with other people" and examples such as "acceptance", "honesty" and "ability to see the others point of view" were provided.

2.3.3 *Test Coding on a Sample of Text, Assess Reliabilities, Review Coding Rules, and Repeat if Needed*

The same pilot data were then used to test this Coding Scheme. The two coders independently coded the 50 happiness recipes for the mention (=1) or not (=0) of each of the 19 a priori and 13 empirical categories. The Coding Scheme was revised until adequate reliabilities ($kappa > 0.70$) were achieved for each category. The following revisions were made yielding 35 categories in the final Coding Scheme.

(1) Due to the high frequency (100 %) of occurrences of Social Relationships, five categories were created describing different relationships (i.e. *Family, Friends, Partner, Community* and *General and Other*). (2) *Marital Status* was removed from the Circumstances dimension as Social Relationships provided a more obvious fit; and combined with *Partner* relationships as people often referred to them together. (3) *Goals* and *Meaning in Life* were collapsed into a single category because they were difficult to distinguish. This is consistent with literature relating meaning in life to the "pursuit and attainment of worthwhile goals" (Reker et al. 1987). (4) The category *Money* was created to distinguish people referring to wealth in general from those referring to *Sufficient Wealth* to meet basic needs.

The Coding Scheme was reviewed and revised. The final Coding Scheme offers a definition and examples for each of the 35 categories. Notes were added to clarify coding decisions and ensure each recording unit was coded exclusively into one category.

2.3.4 Code the Final Text

The same two judges then coded the study sample of 201 happiness recipes for mention (=1) or not (=0) of each of the 35 categories in the final Coding Scheme. Dimensions (e.g. Personality) were coded for mentions of at least one of their categories.

2.3.5 Assess Achieved Reliabilities

Acceptable intercoder reliability was set as *kappa* of .70 (Frey et al. 2000; Park and Peterson 2006). Four a priori categories (*Extraversion, Neuroticism, Social Activity, Coping*) and two empirical categories (*Fun and Enjoyment* and *Self-Awareness*) were removed from the final analysis due to insufficient reliabilities. As all but one excluded category (*Social Activity*, 18.9 %) had a frequency below 15 % (the cut-off point for inclusion of new categories) minimal information was sacrificed by excluding these categories. Excluded categories are not reported further.

After removing excluded categories, 29 remained in the final analysis. Reliabilities and scores on dimensions were recalculated. *Kappas* for the final 29 categories and six dimensions ranged from .70 to .98. Final results were derived from the coding of the primary researcher. Table 2 illustrates the final categories and examples of coded responses for each.

2.4 Statistical Analyses

2.4.1 Frequencies

Frequency scores for categories were calculated by summing the number of respondents who mentioned each category. Frequencies for dimensions indicate the number of respondents who mentioned at least one category within that dimension. These were also separated into a priori and empirical dimensions providing three dimension frequencies; one to indicate the mention of at least one a priori category (e.g. Initial Circumstances), one for empirical categories (e.g. New Circumstances) and one for the overall dimension (e.g. Total Circumstances).

The average number of categories mentioned from each dimension (*mean coded categories*) was calculated under the assumption that people who believed a dimension was more important would mention more categories within that dimension. Given that each of these dimensions was made up of a different number of categories, a *weighted mean* was devised by dividing the *mean coded categories* by the total number of categories within that dimension. This is proposed as a means to investigate the relative importance respondents assigned to dimensions. This *weighted mean* should be viewed as an explanatory tool in the context of this exploratory content analysis.

2.4.2 Global Happiness and Positive Mental Health: Associations with Dimensions

Pearson correlations were calculated to assess relationships between the numbers of categories participants mentioned from each of the six total dimensions and their *global happiness* and *positive mental health*. A Bonferroni adjustment was applied to the *p*-level for this analysis to account for the six comparisons with each measure (i.e. .05/6 = .008).

Table 2 Examples of coded responses from the final sample ($n = 201$)

Happiness **dimensions** and *categories*	Examples (from coded participant responses)
Personality	
Optimism	"Sense that the future will be good", "Optimism"
Self-Esteem	"Sense of self-acceptance/self-esteem", "Love myself"
Social Relationships	
Family	"Healthy relationships with family", "Family"
Friends	"Good friends", "Network of close friends"
Partner	"Happy marriage", "Good relationship with partner"
Community	"Sense of community", "Connection to local community"
General and Other	"Healthy relationships", "Love"
Initial Circumstances	
Religion	"Having a spiritual practice", "Have faith", "Trusting in a higher power"
Sufficient Wealth	"Financial security", "Basic needs met"
Money	"Money", "Prosperity"
Employment	"Meaningful job", "Stable employment and work satisfaction", "Career"
Health	"Health", "Being in good physical health"
New Circumstances	
Education	"Having a broad education", "Always learning"
Safety	"Having freedom", "Security", "Safe and a peaceful society"
Mental Well-Being	"Mental well-being", "Good mental health"
Initial Behavioral Activities	
Physical Activity	"Exercise", "Yoga", "Physical activity", "Walking"
Meditation and Mindfulness	"Meditation", "Present moment thinking"
New Behavioral Activities	
Hobbies and Interests	"Hobbies and interests", "Music", "Singing", "Theatre"
Travel and Holidays	"Travel", "Travelling", "Holidays"
Relaxation	"Relaxation, "Having regular time for rest"
Nature	"Sunshine", "Enjoy the natural environment"
Humor and Laughter	"Having a good laugh", "Laugh often", "Laughter"
Good Food	"Good food", "Well cooked food", "Healthy eating"
Initial Cognitive Activities	
Forgiveness	"Forgiving other people", "Practicing forgiveness"
Gratitude	"Appreciation", "Gratitude", "Realize how lucky we are"
New Cognitive Activities	
Social Values	"Treating others as you would like to be treated", "Honesty", "Be non-judgmental", "Respect", "Tolerance"
Philosophy of Life	"Having a personal belief or value system by which to live", "Know that all things change and accept this", "Live a balanced life"
Volitional Activities	
Goals and Meaning in Life	"Having goals and achieving them", "A sense of purpose", "Having a sense of meaning"
Hope	"Hopes and dreams for the future", "Hope"

3 Results

3.1 Sample Characteristics

The ages of participants ranged from 18 to 84 years with a mean of 39.2 (SD = 13.3). There were more females than males in the study (153 vs. 48). Most participants described themselves as White Caucasian (72.1 %); had completed a degree or post-graduate degree (82.6 %); were married or in a relationship (74.2 %); and were living with their partner or spouse (54.7 %). The average global happiness score (SHS) was 5.27 (SD = 1.07) indicating participants were above a neutral (SHS of 4) level of happiness. Similarly, the average positive mental health score (MHC-SF) was 3.53 (SD = 0.79) representing responses between *"about 2 or 3 times a week"* and *"almost every day"* on items indicating positive mental health. A moderate and significant correlation between SHS and MHC-SF scores ($r = .65$, $p < .001$) indicated happier respondents also had higher positive mental health.

3.2 Frequency of Happiness Factors

Happiness recipes varied greatly in length from four to 562 words, averaging 70.69 words (SD = 87.34). Even very short responses were useful as they invariably listed ingredients. The average recipe contained 8.00 (SD = 3.24) coded ingredients. Table 3 illustrates frequencies, mean coded ingredients and weighted means (see Statistical Analyses above for calculations) of the final 29 categories and six dimensions.

3.2.1 Social Relationships

The most striking finding in this study was the dominance of Social Relationships. Total Social Relationships had the highest weighted mean of all dimensions, with 95 % of participants referring to at least one of the five Social Relationships categories. This dimension also contained the three most frequently mentioned categories (i.e. *Family, Friends* and *General and Other* relationships) confirming Social Relationships were very well represented in respondents' happiness recipes.

3.2.2 Personality

Total Personality was made up of two categories and had the second lowest weighted mean of the six total dimensions. *Self-Esteem* was thirteenth most frequently mentioned of the 29 categories and was close to the median frequency (24.4 %). *Optimism* was not well represented ranking equal twentieth.

3.2.3 Circumstances

Total Circumstances contained eight categories with disparate contributions from its two, a priori (Initial Circumstances) and empirical (New Circumstances) dimensions. The Initial Circumstances dimension had the third highest weighted mean of the 12 dimensions (including total, a priori and empirical dimensions). Three of the five Initial Circumstances categories were amongst the 10 most frequently mentioned categories (i.e. *Health, Employment* and *Sufficient Wealth*). The New Circumstances dimension was eleventh of 12 in terms of its weighted mean and all three categories in this dimension (i.e. *Safety*, *Education*

Table 3 Frequencies, mean coded ingredients and weighted means ($n = 201$)

Happiness **dimension**/*category*	Frequency (%)	Mean coded categories (SD)	Weighted mean (number of categories)
Total Personality	**66 (32.8)**	**0.39 (0.60)**	**0.19 (2)**
Optimism	24 (11.9)		
Self-Esteem	54 (26.9)		
Total Social Relationships	**191 (95.0)**	**2.36 (1.08)**	**0.47 (5)**
Family	132 (65.7)		
Friends	135 (67.2)		
Partner	61 (30.3)		
Community	23 (11.4)		
General and Other	123 (61.2)		
Total Circumstances	**167 (83.1)**	**1.85 (1.30)**	**0.23 (8)**
Initial Circumstances	**158 (78.6)**	**1.49 (1.09)**	**0.30 (5)**
Religion	48 (23.9)		
Sufficient Wealth	77 (38.3)		
Money	9 (4.5)		
Employment	79 (39.3)		
Health	87 (43.3)		
New Circumstances	**65 (32.3)**	**0.35 (0.54)**	**0.12 (3)**
Education	24 (11.9)		
Safety	32 (15.9)		
Mental Well-Being	15 (7.5)		
Total Behavioral Activities	**154 (76.6)**	**1.99 (1.82)**	**0.25 (8)**
Initial Behavioral Activities	**85 (42.3)**	**0.54 (0.70)**	**0.27 (2)**
Physical Activity	67 (33.3)		
Meditation and Mindfulness	42 (20.9)		
New Behavioral Activities	**138 (68.7)**	**1.44 (1.38)**	**0.24 (6)**
Hobbies and Interests	74 (36.8)		
Travel and Holidays	35 (17.4)		
Relaxation	41 (20.4)		
Nature	42 (20.9)		
Humor and Laughter	49 (24.4)		
Good Food	49 (24.4)		
Total Cognitive Activities	**134 (66.7)**	**1.02 (0.93)**	**0.26 (4)**
Initial cognitive Activities	**26 (12.9)**	**0.15 (0.41)**	**0.07 (2)**
Forgiveness	13 (6.5)		
Gratitude	17 (8.5)		
New Cognitive Activities	**129 (64.2)**	**0.87 (0.76)**	**0.44 (2)**
Social Values	78 (38.8)		
Philosophy of Life	97 (48.3)		
Total Volitional Activities	**65 (32.3)**	**0.34 (0.50)**	**0.17 (2)**
Goals and Meaning in Life	61 (30.3)		

Table 3 continued

Happiness **dimension**/*category*	Frequency (%)	Mean coded categories (SD)	Weighted mean (number of categories)
Hope	7 (3.5)		

Mean coded categories indicate the average number of categories mentioned from that dimension

Weighted means were calculated by dividing mean coded categories by the number of categories in that dimension

and *Mental Well-Being*) were amongst the 10 least frequently mentioned. Initial (a priori) Circumstances were well represented but New (empirical) Circumstances were not.

3.2.4 Behavioral Activities

The Total Behavioral Activities dimension contained eight categories. The weighted means of the Initial Behavioral Activities and New Behavioral Activities dimensions were both close to the median (0.25) of the 12 dimensions. Categories in the Initial Behavioral Activities dimension were the tenth (*Physical Activity*) and seventeenth (*Meditation and Mindfulness*) most frequently mentioned of the 29 happiness categories. The six New Behavioral Activities ranged from ninth (*Hobbies and Interests*) to twentieth (*Travel and Holidays*) with the remaining four categories (*Relaxation, Nature, Humor and Laughter* and *Good Food*) falling within 5 % of the median frequency (24.4 %). On the whole Behavioral Activities were moderately represented.

3.2.5 Cognitive Activities

The Total Cognitive Activities dimension contained four categories. This dimension demonstrated the starkest contrast between a priori and empirical dimensions. The Initial Cognitive Activities dimension had the lowest weighted mean of the 12 overall dimensions, while New Cognitive Activities had the second highest weighted mean. Further, Initial Cognitive Activities was made up of two of the five least frequently mentioned categories (*Forgiveness* and *Gratitude*), whereas New Cognitive Activities contained the fourth (*Philosophy of Life*) and seventh (*Social Values*) most frequently mentioned. Empirical Cognitive Activities were strongly represented whilst a priori Cognitive Activities were poorly represented.

3.2.6 Volitional Activities

Total Volitional Activities was made up of two categories and had the lowest weighted mean of the six total dimensions. This dimension contained the least frequently mentioned category in *Hope*, while *Goals and Meaning in Life* was the eleventh most frequently mentioned of the final 29 categories.

3.3 Global Happiness and Positive Mental Health: Associations with Summary Dimensions

Correlations were assessed between the number of categories participants mentioned from each of the six total dimensions and their *global happiness* and *positive mental health*.

After adjusting for multiple analyses and setting p-level at .05/6 = .008, no significant correlations were found although three approached significance. A small negative correlation between Total Circumstances and *global happiness* approached significance ($r = -.14$, $p = .046$) indicating a trend for less happy people to suggest more circumstances. Small correlations between Total Behaviors and both *global happiness* ($r = .14$, $p = .042$) and *positive mental health* ($r = .19$, $p = .009$) indicated trends for happier people and those with higher mental health to report more behavioral activities.

4 Discussion

This content analysis asked participants to describe "the factors or elements that lead people to long-lasting happiness in their lives". The sample was happy and mentally healthy (Keyes 2002; Lyubomirsky and Lepper 1999).

The data supported the hypotheses. As regards hypothesis one, the six dimensions derived from the literature review provided a useful framework for organizing ingredients from respondents' happiness recipes. Participants referred to ingredients from each dimension (i.e. Personality, Circumstances, Social Relationships, Behavioral, Cognitive and Volitional Activities).

As regards hypothesis two, the 19 ingredients associated with happiness in prior research provided a foundation for the final Coding Scheme in this content analysis. Twelve were coded into a priori content analysis categories without modifications (see Table 2). Of the remaining categories (1) *Social Relationships* was broken up into specific types of relationships to provide more information (i.e. *Family, Friends, Partner, Community,* and *General and Other*), (2) *Goals* and *Meaning in Life* were combined into a single category, (3) *Marital Status* was combined with the new category *Partner* relationships and (4) four categories were removed from the analysis due to coding inconsistencies (i.e. *Extraversion, Neuroticism, Social Activities* and *Coping Attitudes*).

Respondents also confirmed our third hypothesis. Happiness recipes from pilot data suggested 13 new ingredients not well represented in the literature. Eleven of these were successfully coded into *empirical* categories (See Table 2) while two were removed due to coding inconsistencies (i.e. *Fun and Enjoyment* and *Self-Awareness*).

The number of participants that mentioned each ingredient (frequency) provided a useful indication of the relative importance people assigned to ingredients as causes of long-term happiness. The most frequently mentioned happiness categories/ingredients were *Friends, Family, General and Other* relationships, *Philosophy of Life* and *Health,* respectively. No significant correlations were found after correcting for multiple comparisons between the numbers of categories each participant mentioned from each dimension, and their *global happiness* and *positive mental health* (though three approached significance). These findings and their implications are discussed below.

4.1 Theoretical Implications and Future Directions (Organized by Dimension)

4.1.1 Social Relationships

The most striking finding in this study was the dominance of the Social Relationships dimension. Respondents consistently referred to the importance of relationships with *Family* and *Friends*, as well as *General* relationships (e.g. "love" and "loving relationships"). *Partner* relationships such as a "happy marriage" were mentioned with moderate

frequency. These findings are especially convincing given Social Relationships began as an individual category and was expanded because all 50 respondents in the pilot study mentioned relationships.

The importance respondents gave Social Relationships serves as a reminder of what is already known about relationships. People are happier when they are around others (Pavot et al. 1990), relationships are likely necessary for happiness (Diener and Oishi 2005; Diener and Seligman 2002) and social support can enhance the effectiveness of happiness interventions (Sheldon and Lyubomirsky 2004). Therefore, individuals pursuing happiness should spend time and energy developing and maintaining their relationships, whilst researchers designing happiness interventions should consider how they might involve and influence participants' relationships.

This emphasis raises a theoretical question whether these relationships are adequately addressed by current models of happiness such as the "*set-point, life circumstances,* and *intentional activity"* model used as a framework for this study (Lyubomirsky et al. 2005b). The suggestion in the current study (see Introduction) was to classify Social Relationships as a unique and independent cause of happiness despite confounding factors (see Table 1). This content analysis confirmed that people place a high importance on a variety of relationships as causes of happiness. It did not provide an estimate of the variance in long-term happiness caused by these relationships and this continued investigation falls to future researchers.

4.1.2 Personality

This study did not provide clear or convincing findings regarding peoples' conceptions of the influence of personality on happiness. *Optimism* was poorly represented in respondents' happiness recipes, while *Self-Esteem* was moderately represented. *Extraversion* and *Neuroticism* were not consistently coded and were removed from the analysis, yet are reported to have a causal influence on SWB (Costa and McCrae 1980; Lucas et al. 2000; Weiss et al. 2008). This study advised participants to approach their responses as an "ingredients list for a recipe for long-term happiness". This may have led them to focus on what they could change at the expense of considering stable influences such as personality traits. In future, conceptions of the influence of genetic inheritance, personality traits and adaptation could be assessed directly by describing them in captions and asking people to rate their influence on long-term happiness. Although this content analysis did not provide a clear picture of the importance people assigned to all factors known to influence happiness (e.g. *Extraversion* and *Neuroticism*), this does not diminish the value of those factors that people emphasized (the focus of this discussion).

4.1.3 Circumstances

The Initial Circumstances defined from the literature review were well represented in respondents' happiness recipes, especially *Health*, *Employment* and *Sufficient Wealth. Religion* (including references to "spiritual practice" and a "higher power") was moderately represented. Respondents made very few mentions of the *Money* category indicating an ability to differentiate the importance of having enough money for basic needs from general wealth. This awareness of the importance of meeting basic needs could have been heightened by current events such as the global recession in the developed world. The three New Circumstances that emerged in the pilot study were not well represented. This may suggest people do not view *Education, Safety* and *Mental Well-Being* as important causes

of long-term happiness, or it may indicate a limitation in the operationalization of new categories based on a limited pilot sample.

Circumstances have been found to account for only 8–20 % of total variance in SWB (Andrews and Withey 1976; Argyle 1999; Diener et al. 1999); yet most respondents referred to Circumstances in their happiness recipes. There was also a trend towards people who mentioned more Circumstances being less happy. Though these findings are inconclusive, they point towards the pitfalls of overrating the importance of Circumstances. Recent life events can cause short-term changes in SWB, but these changes diminish or disappear over longer time periods as people adapt toward their hedonic baseline (Lucas et al. 2003; Suh et al. 1996). Future research could ask people to rate the importance of Circumstances in determining long-term happiness and assess correlations with subjective happiness over-time. If supported, this finding would have practical implications. Education about our tendency to adapt to these "secure and stable elements of life" might encourage people to focus more on Intentional Activities in their attempts to increase happiness. Interventions could also prompt people to transform Circumstances into activities (Lyubomirsky et al. 2005b). For example, people focused on their health status might be encouraged to introduce health promotion activities.

4.1.4 Behavioral Activities

Of three Initial Behavioral Activities, *Physical Activity* and *Meditation and Mindfulness* were moderately represented in respondents' happiness recipes. *Physical Activity* was most mentioned and research confirms activities such as cardiovascular exercise and weight training increase SWB (Motl et al. 2005; Rejeski et al. 2001). *Social Activities* (e.g. deliberate acts of kindness) was removed from the analysis due to coding inconsistencies, possibly influenced by their overlap with Social Relationships. Respondents suggested six New Behavioral Activities, comprising nearly half the total 13 new categories. There were trends toward people who mentioned more Total Behavioral Activities demonstrating higher happiness and mental health. These findings are encouraging given intentional activities may offer the greatest potential for achieving sustainable increases in happiness (Lyubomirsky et al. 2011; Sheldon and Lyubomirsky 2007).

The New Behavioral Activities in order of frequency were *Hobbies and Interests, Humor and Laughter, Good Food, Nature, Relaxation,* and *Travel and Holidays*. Collectively these categories represent a broad list of leisure activities. Research has linked leisure satisfaction to happiness (Argyle 1999) though few independent activities have been explored. Tkach and Lyubomirsky (2006) found that self-reported frequency of active leisure (e.g. hobbies), but not passive leisure (e.g. television) predicted global happiness. Active leisure pursuits are often performed with other people and this might accentuate their benefits.

The New Behavioral Activities in the current study suggest a list of active leisure pursuits with *Relaxation* (a passive pursuit) the sole exception. Which activities are most beneficial, for whom, and under what conditions requires further investigation. Behavioral activation is a treatment for depression that requires people to engage in intrinsically rewarding behaviors identified via instruments such as the "Pleasant Events Schedule" (Hopko et al. 2003; MacPhillamy and Lewinsohn 1982). Future researchers might similarly develop a *Happiness Activities Inventory* of beneficial activities for the general population to increase their happiness. Outcomes could be maximized by considering the fit between activities and individuals (Sheldon and Lyubomirsky 2004).

4.1.5 Cognitive Activities

Forgiveness and *Gratitude* were Initial Cognitive Activities that were not well represented, despite findings linking them to increases in SWB (Bono et al. 2008; Emmons and McCullough 2003; Lyubomirsky et al. 2011; McCullough and Worthington 1999; Seligman et al. 2005; Sheldon and Lyubomirsky 2006b). *Social Values* and *Philosophy of Life* were New Cognitive Activities that were well represented. They were also the most broadly defined of the 13 new categories. Although this may have inflated frequencies it was observed that participants who referred to these categories often suggested several ingredients from each. These new categories may offer important contributions to happiness research.

The *Social Values* category represents a broad range of responses referring to interpersonal value systems. "Honesty", "respect", "tolerance" and "be non-judgmental" were examples of responses. This finding suggests many people believe that having a set of values for how they approach Social Relationships contributes to happiness. This would come as no surprise for religious leaders, or researchers taking a eudemonic view of well-being to study constructs such as *positive mental health* (Keyes 1998) or *psychological well-being* (Ryff 1989; Ryff and Singer 1998). Further, Seligman et al. (2005) found that identifying and using personal strengths in new ways increased happiness and some of the 24 character strengths participants cultivated (e.g. authenticity and fairness) represent social values. Whether there exists a specific set of *Social Values* that lead to happiness, or simply following a personally defined social value system promotes happiness remains to be answered.

Philosophy of Life broadly represents a range of ideas about how to approach life to maximize happiness. For example, people advised "having a personal belief or value system by which to live life", "know that things change and accept this" and "live a balanced life". These guiding principles appear to complement activity and relationship based strategies for improving happiness. Further, a philosophy to approach happy living may provide a foundation to help a person navigate their pursuit of happiness and evaluate progress along the way. The *Philosophy of Life* dimension relates to research on *wisdom* in the elderly, linked to life satisfaction and "aging well" (Ardelt 2003). The cognitive dimension of wisdom is defined as "a person's ability to understand life that is to comprehend the significance and deeper meaning of phenomena and events" (Ardelt 2003). A Greek tragic poet Sophocles (495–406 BC) proposed, "Wisdom is the supreme part of happiness". Questions about how specific philosophies of living interact with happiness remain unanswered and this research invites further exploration of how people's broad approaches to living influence their happiness.

4.1.6 Volitional Activities

Goals and *Meaning in Life,* which were combined into one category due to difficulty distinguishing these two Volitional Activities, were moderately represented in participants' happiness recipes. *Hope*, which was narrowly defined to distinguish from *Goals and Meaning in Life*, was poorly represented. Pursuing personally meaningful goals can increase happiness (Sheldon and Houser-Marko 2001). Consideration of goals and associated meaning could also improve outcomes from other intentional activities. For example, adherence to an exercise regime should be maximized by setting specific goals to maintain progress (Sheldon and Lyubomirsky 2004) and considering intrinsic motivations to pursue this activity (Ryan and Deci 2001).

4.2 General Limitations and Directions

This study relied on open-ended responses about the ingredients that lead to long-term happiness. A content analysis Coding Scheme was developed based on the combination of past research and a review of pilot responses. The strength of this methodology was its exploration of peoples' subjective conceptions of the causes of happiness. However, the conclusions that can be drawn from a content analysis are limited. Results represented the percentage of people that mentioned each happiness ingredient. These findings lent further support to those a priori categories that were frequently mentioned. Empirical categories were suggestive of new directions researchers might pursue, though no conclusions could be drawn about their causal influence on happiness. Six categories were removed from this analysis due to insufficient intercoder reliabilities and attempts to resolve these coding inconsistencies would be valuable in future research.

In addition, possible threats to the validity of these findings warrant mention. Firstly, a priori categories in this content analysis were developed based on a review of research into the causes of happiness defined as SWB (Diener 1984; Diener et al. 1999). This allowed a focus on research drawn from a clear operational definition of happiness (Kashdan 2004; Kashdan et al. 2008). However, limiting the scope of research by not considering eudemonia inspired constructs such as PWB (Ryff 1989; Ryff and Singer 1998) may have overlooked other potential a priori categories. Secondly, the model used as a framework to organize a priori and empirical categories (Lyubomirsky et al. 2005b) was a conceptual model based largely on research on a student population. The current study assumed that the model of Lyubomirsky et al. (2005b) applies to a broader demographic, and has focused on this model at the exclusion of other "happiness models". Finally, empirical categories were developed from a pilot study of 50 respondents. Operationalization based on this limited sample may explain coding inconsistencies, which excluded some categories (e.g. *Fun and Enjoyment*) from the final data.

Though no significant associations were found between the numbers of happiness ingredients respondents suggested from dimensions, and global happiness and positive mental health, respectively, some approached significance (i.e. Circumstances and Behavioral Activities). These findings could be clarified in follow-up studies by asking participants to rate how important they think specific ingredients (e.g. *Health*) or dimensions (e.g. Circumstances) are in determining long-term happiness, or how frequently they practice specific activities (e.g. *Physical Activity*). Researchers could then assess correlations with participants' happiness (Tkach and Lyubomirsky 2006), positive mental health and other relevant outcome measures.

Participants in this study were predominantly female, university educated, White, Caucasian Australians, who were married or in a relationship. The percentage of participants who were female and university educated were substantially higher than Australian population norms (according to Australian Social Trends Data, 2009 and Education and Work Data, 2010 from the Australian Bureau of Statistics). This is likely a product of the snowball sampling strategy, which originated from the first authors contacts. For example, there are a higher percentage of females than males amongst the authors work colleagues, family and the clinical psychology Masters students who were sent the original email. Similarly the majority of these contacts are likely to be university educated as this reflects the education level of the author. The high level of education (and thus potentially socioeconomic status) of this sample limits the generalizability of findings, especially considering differences in happiness and its correlates across nations and cultures (Argyle 1999; Diener et al. 1995). For example, samples from less developed countries or socially

disadvantaged sectors of the community might be more likely to refer to Circumstances related to basic needs such as *Money* and *Safety*. Further, the use of an email based snowball sampling strategy may have biased the sample towards people who are socially connected influencing responses. Future research could replicate the current design across countries and cultures, and use a random population based sample rather than snowball sampling. Finally, responses may have been influenced by demand characteristics. For example, minimal references to material wealth may have represented a socially desirable response. To remedy this a measure of social desirability such as the Marlowe-Crowne measure could be introduced (Crowne and Marlowe 1960).

4.3 Practical Applications

This research has potential practical applications. Seligman and colleagues developed a 14-session web-based positive psychotherapy program for depression which teaches participants to identify and cultivate signature strengths, practice forgiveness and gratitude, develop hope and optimism and savor the moment (Seligman et al. 2006). The program has been found to reduce depression and depressive symptoms for up to 1-year compared to placebo controls (Seligman et al. 2006). Better understanding of the causes of long-term happiness could benefit the design and efficacy of such interventions. New happiness ingredients from the current research (once supported) could be incorporated into future programs.

Happiness researchers assert that a happiness index should be used to assess the flourishing of nations (Diener 2000). If happiness as measure is a worthy national index, perhaps teaching happiness and its causes should be offered through education systems. For example, children might be taught the importance of cultivating Social Relationships, and Behavioral and Cognitive Activities versus the relative unimportance of Circumstances in determining long-term happiness. Such initiatives may indeed increase the happiness of nations.

Many participants in this research emailed feedback that writing happiness recipes had been thought provoking and instructive. Completing personal happiness recipes could be used as the inspiration for committing to personally relevant changes targeted towards improving long-term happiness. Given happiness is a subjective experience people may become happier doing that which they believe will increase their happiness. Participants could be asked to rank or prioritize their responses to help them to determine which changes to target first.

5 Conclusion

This research set out to explore conceptions of "the factors or elements that lead to long-lasting happiness" via a content analysis of people's written "recipes for long-term happiness". Five broad dimensions proposed in a model of the causes of happiness provided a framework for organizing responses (Lyubomirsky et al. 2005b). Social Relationships was added as a sixth dimension due to the consistency of findings linking relationships to happiness (Diener and Oishi 2005; Diener and Seligman 2002). As hypothesized, a priori and *empirical* categories were represented in happiness recipes.

Incorporating past and current findings, the following are proposed as a recipe for long-lasting happiness. Happy people are those who (1) are actively involved in a number of close *relationships* and practice their *social values* in these relationships, (2) do not

overrate the importance of *circumstances* or spend undue energy striving for circumstantial change, (3) enjoy satisfying and preferably active leisure pursuits, (4) actively and intelligently pursue (*behavioral*) activities and (*cognitive*) attitudes that are intrinsically rewarding and in line with their broader sense of purpose, and (5) have a general *philosophy of living* that helps them to navigate life's complexities. Continued research regarding the influence of these factors on happiness may provide the building blocks for new happiness interventions. Another challenge is to provide accessible and scientifically validated interventions to increase happiness to the general public.

References

Allport, G., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology, 5*, 432–443.

Andrews, F., & Withey, S. (1976). *Social indicators of well-being: America's perception of life quality*. New York: Plenum.

Ardelt, M. (2003). Empirical assessment of a three-dimensional wisdom scale. *Research on Aging, 25*(3), 275–324. doi:10.1177/0164027503251764.

Ardelt, M., & Koenig, C. S. (2006). The role of religion for hospice patients and relatively healthy older adults. *Research on Aging, 28*(2), 184–215.

Argyle, M. (1999). Causes and correlates of happiness. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *The foundations of hedonic psychology*. New York: Russel Sage Foundation.

Aspinwall, L. G., & Taylor, S. E. (1992). Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment performance. *Journal of Personality and Social Psychology, 63*, 989–1003.

Babyak, M., Blumenthal, J. A., Herman, S., Khatri, P., Doraiswamy, M., Moore, K., et al. (2000). Exercise treatment for major depression: Maintenance of therapeutic benefit at 10 months. *Psychosomatic Medicine, 62*, 633–638.

Bono, G., McCullough, M. E., & Root, L. M. (2008). Forgiveness, feeling connected to others and well-being: Two longitudinal studies. *Personality and Social Psychology Bulletin, 34*(2), 182–195.

Brickman, P., & Campbell, D. T. (1971). Hedonic relativism and planning the good society. In M. H. Appley (Ed.), *Adaptation level theory: A symposium*. New York: Academic Press.

Brickman, P., Coates, D., & Janoff-Bulman, R. (1978). Lottery winners and accident victims: Is happiness relative? *Journal of Personality and Social Psychology, 36*(8), 917–927.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology, 84*(4), 822–848. doi:10.1037/0022-3514.84.4.822.

Cantor, N., & Sanderson, C. A. (1999). Life task participation and well-being: The importance of taking part in daily life. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology*. New York: Russel Sage Foundation.

Carver, C. S., & Gains, J. G. (1987). Optimism, pessimism, and postpartum depression. *Cognitive Therapy and Research, 11*, 449–462.

Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology, 38*(4), 668–678.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349–354.

Davis, B. (2005). Mediators of the relationship between hope and well-being in older adults. *Clinical Nursing Research, 14*(3), 253–272. doi:10.1177/1054773805275520.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*(3), 542–575.

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist, 55*(1), 34–43. doi:10.1037//0003-066x.55.1.34.

Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being. *Social Indicators Research, 57*(2), 119–169.

Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology, 69*, 851–864.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*(1), 71–75.

Diener, E., Gohm, C. L., Suh, M., & Oishi, S. (2000). Similarity of the relation between marital status and subjective well-being across cultures. *Journal of Cross Cultural Psychology, 31*, 419–436.
Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology*. New York: Russel Sage Foundation.
Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: Revising the adaptation theory of well-being. *American Psychologist, 61*(4), 305–314. doi:10.1037/0003-066x.61.4.305.
Diener, E., Ng, W., Harter, J., & Arora, R. (2010). Wealth and happiness across the world: Material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. *Journal of Personality and Social Psychology, 99*(1), 52–61.
Diener, E., & Oishi, S. (2005). The nonobvious social psychology of happiness. *Psychological Inquiry, 16*(4), 162–167.
Diener, E., Sandvik, E., Seidlitz, L., & Diener, M. (1993). The relationship between income and subjective well-being: Relative or absolute. *Social Indicators Research, 28*, 195–223.
Diener, E., & Seligman, M. E. (2002). Very happy people. *Psychological Science, 13*(1), 81–84.
Diener, E., & Seligman, M. E. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest, 5*(1), 1–32.
Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*(2), 276–302.
Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*(2), 377–389. doi:10.1037/0022-3514.84.2.377.
Folkman, S. (1997). Positive psychological states and coping with severe stress. *Social Science and Medicine, 45*, 1207–1221.
Fontaine, K. R., & Jones, L. C. (1997). Self-esteem, optimism, and postpartum depression. *Journal of Clinical Psychology, 53*, 59–63.
Fordyce, M. W. (1977). Development of a program to increase personal happiness. *Journal of Counseling Psychology, 24*(6), 511–521.
Fordyce, M. W. (1983). A program to increase happiness: Further studies. *Journal of Counseling Psychology, 30*(4), 483–498.
Fredrickson, B. L. (1998). What good are positive emotions? *Review of General Psychology, 2*, 300–319.
Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist, 56*(3), 218–226. doi:10.1037//0003-066X.56.3.218.
Fredrickson, B. L., & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought-action repertoires. *Cognition and Emotion, 19*(3), 313–332.
Frey, L. R., Botan, C. H., & Kreps, G. L. (2000). *Investigating communication: An introduction to research methods* (2nd ed.). Boston: Allyn & Bacon.
Fujita, F., & Diener, E. (2005). Life satisfaction set point: Stability and change. *Journal of Personality and Social Psychology, 88*, 158–164.
Gallagher, E., & Vellabrodrick, D. (2008). Social support and emotional intelligence as predictors of subjective well-being. *Personality and Individual Differences, 44*(7), 1551–1561. doi: 10.1016/j.paid.2008.01.011.
Gloaguen, V., Cottraux, J., Cucherat, M., & Blackburn, L. (1998). A meta-analysis of the effects of cognitive therapy in depressed patients. *Journal of Affective Disorders, 49*, 59–72.
Haring, M. J., Okun, M. A., & Stock, W. A. (1984). A quantative synthesis of literature on work status and subjective well-being. *Journal of Vocational Behavior, 25*, 316–324.
Headey, B. (2008). Life goals matter to happiness: A revision of set-point theory. *Social Indicators Research, 86*(2), 213–231.
Headey, B., & Wearing, A. (1990). Subjective well-being and coping with adversity. *Social Indicators Research, 22*, 327–349.
Hopko, D. R., Lejuez, C. W., Ruggiero, K. J., & Eifert, G. H. (2003). Contemporary behavioral activation treatments for depression: Procedures, principles, and progress. *Clinical Psychology Review, 23*(5), 699–717. doi:10.1016/s0272-7358(03)00070-9.
Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-being: The foundations of hedonic psychology*. New York: Russel Sage Found.
Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives, 20*(1), 3–24.
Kashdan, T. B. (2004). The assessment of subjective well-being (issues raised by the Oxford Happiness Questionnaire). *Personality and Individual Differences, 36*, 1225–1232.

Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: the costs of distinguishing between hedonics and eudaimonia. *The Journal of Positive Psychology, 3*(4), 219–233. doi:10.1080/17439760802303044.

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22*, 280–287.

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly, 61*, 121–140.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*, 207–222.

Lamers, S. M. A., Westerhof, G. J., Bohlmeijer, E. T., Klooster, P. M., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the mental health continuum-short form (MHC-SF). *Journal of Clinical Psychology, 67*(1), 99–110.

Lazar, A., & Bjorck, J. (2008). Religious support and psychosocial well-being among a religious Jewish population. *Mental Health, Religion & Culture, 11*(4), 403–421. doi:10.1080/13674670701486142.

Lee, G. R., Seccombe, K., & Shehan, C. L. (1991). Marital status and personal happiness: An analysis of trend data. *Journal of Marriage and the Family, 53*, 839–844.

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: Reactions to changes in marital status. *Journal of Personality and Social Psychology, 84*(3), 527–539. doi:10.1037/0022-3514.84.3.527.

Lucas, R. E., Diener, E., Grob, A., Suh, E., & Shao, L. (2000). Cross-cultural evidence for the fundamental features of extraversion. *Journal of Personality and Social Psychology, 79*(3), 452–468. doi:10.1O37//0022-3514.79.3.452.

Lucas, R., & Donnellan, M. (2007). How stable is happiness? Using the STARTS model to estimate the stability of life satisfaction. *Journal of Research in Personality, 41*(5), 1091–1098. doi:10.1016/j.jrp.2006.11.005.

Lykken, D., & Tellegen, A. (1996). Happiness is a stochastic phenomenon. *Psychological Science, 7*(3), 186–189.

Lyubomirsky, S. (2011). Hedonic adaptation to positive and negative experiences. In S. Folkman (Ed.), *The Oxford handbook of stress, health and coping* (pp. 220–224). New York: Oxford University Press.

Lyubomirsky, S., Dickerhoof, R., Boehm, J. K., & Sheldon, K. M. (2011). Becoming happier takes both a will and a proper way: An experimental longitudinal intervention to boost well-being. *Emotion, 11*(2), 391–402. doi:10.1037/a0022575.

Lyubomirsky, S., King, L., & Diener, E. (2005a). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 803–855. doi:10.1037/0033-2909.131.6.803.

Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social Indicators Research, 46*(2), 137–155.

Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005b). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology, 9*(2), 111–131. doi:10.1037/1089-2680.9.2.111.

Lyubomrisky, S., Tkach, C., & DiMatteo, M. R. (2006). What are the differences between happiness and self-esteem? *Social Indicators Research, 78*, 363–404.

MacPhillamy, D. J., & Lewinsohn, P. M. (1982). The pleasant events schedule: Studies on reliability, validity, and scale intercorrelation. *Journal of Consulting and Clinical Psychology, 50*(3), 363–380.

McCrae, R. R., & Costa, P. T. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality, 54*, 385–405.

McCullough, M. E., & Worthington, E. L. (1999). Religion and the forgiving personality. *Journal of Personality, 67*(6), 1141–1164.

McGue, M., & Christensen, K. (1997). Genetic and environmental contributions to depressive symptomatology: Evidence from Danish twins 75 years of age and older. *Journal of Abnormal Psychology, 106*, 439–448.

Motl, R., Konopack, J. F., McAuley, E., Elavsky, S., Jerome, G. J., & Marquez, D. X. (2005). Depressive symptoms among older adults: Long-term reductions after a physical activity intervention. *Journal of Behavioral Medicine, 28*(4), 385–396. doi:10.1007/s10865-005-9005-8.

Mutrie, N., & Faulkner, G. (2004). Physical activity: Positive psychology in motion. In A. Linley & S. Joseph (Eds.), *Positive psychology in practice*. Hoboken, NJ: Wiley.

Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist, 55*(1), 56–67. doi:10.1037//0003-066x.55,1.56.

Neuendorf, K. A. (2002). *The content analysis guidebook*. California: Sage Publications.

Okun, M. A., & George, L. K. (1984). Physician and self-ratings of health, neuroticism, and subjective well-being among men and women. *Personality and Individual Differences, 5*, 533–539.

Park, N., & Peterson, C. (2006). Character strengths and happiness among young children: Content analysis of parental descriptions. *Journal of Happiness Studies, 7*(3), 323–341. doi:10.1007/s10902-005-3648-6.

Pavot, W., Diener, E., & Fujita, F. (1990). Extraversion and happiness. *Personality and Individual Differences, 11*, 1299–1306.
Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies, 6*(1), 25–41. doi:10.1007/s10902-004-1278-z.
Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: American Psychological Association.
Rejeski, W. J., Shelton, B., Miller, M., Dunn, A. L., King, A. C., & Sallis, J. F. (2001). Mediators of increased physical activity and change in subjective well-being: Results from the activity counseling trial (ACT). *Journal of Health Psychology, 6*, 159–168.
Reker, G. T., Peacock, E. J., & Wong, P. T. (1987). Meaning and purpose in life and well-being: A life span perspective. *Journal of Gerontology, 42*, 44–49.
Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141–166.
Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069–1081.
Ryff, C. D., & Singer, B. H. (1998). The contours of positive human health. *Psychological Inquiry, 9*, 1–28.
Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research, 16*, 201–228.
Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological well-being. In E. C. Chang (Ed.), *Optimism and pessimism: Implications for theory, research, and practice* (pp. 189–216). Washington, DC: American Psychological Association.
Schimmack, U., & Diener, E. (2003). Predictive validity of explicit and implicit self-esteem for subjective well-being. *Journal of Research in Personality, 37*(2), 100–106. doi:10.1016/s0092-6566(02)00532-9.
Seligman, M. E. (2002). *Authentic Happiness: Using the new positive psychology to realize your potential for lasting fulfillment*. New York: Free Press.
Seligman, M. E., Rashid, T., & Parks, A. C. (2006). Positive psychotherapy. *American Psychologist, 61*, 774–788.
Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist, 60*(5), 410–421. doi:10.1037/0003-066x.60.5.410.
Sheldon, K. M., & Houser-Marko, L. (2001). Self-concordance, goal-attainment, and the pursuit of happiness: Can there be an upward spiral? *Journal of Personality and Social Psychology, 80*, 152–165.
Sheldon, K. M., Kasser, T., Smith, K., & Share, T. (2002). Personal goals and psychological growth: Testing an intervention to enhance goal-attainment and personality integration. *Journal of Personality, 70*, 5–31.
Sheldon, K. M., & Lyubomirsky, S. (2004). Achieving sustainable new happiness: Prosepcts, practices, and prescriptions. In A. Linley & S. Joseph (Eds.), *Positive psychology in practice* (pp. 127–145). Hoboken, NJ: Wiley.
Sheldon, K. M., & Lyubomirsky, S. (2006a). Achieving sustainable gains in happiness: Change your actions, not your circumstances. *Journal of Happiness Studies, 7*(1), 55–86. doi:10.1007/s10902-005-0868-8.
Sheldon, K. M., & Lyubomirsky, S. (2006b). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *The Journal of Positive Psychology, 1*(2), 73–82. doi:10.1080/17439760500510676.
Sheldon, K. M., & Lyubomirsky, S. (2007). Is it possible to become happier? (And if so how?). *Social and Personality Psychology Compass, 1*, 129–145.
Smith, C. P. (2000). Content analysis and narrative analysis. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 313–335). Cambridge: Cambridge University Press.
Smith, W. P., Compton, W. C., & West, W. B. (1995). Meditation as an adjunct to a happiness enhancement program. *Journal of Clinical Psychology, 51*(2), 269–273.
Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., et al. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570–585.
Stack, S., & Eshelmen, R. (1998). Marital status and happiness: A 17-nation study. *Journal of Marriage and the Family, 60*(2), 527–536.
Stewart, A. L., Mills, K. M., Sepsis, P. G., King, A. C., McLellan, B. Y., Roitz, K., et al. (1997). Evaluation of CHAMPS, a physical activity promotion program for older adults. *Annals of Behavioral Medicine, 19*, 353–361.
Suh, E., Diener, E., & Fujita, F. (1996). Events and subjective well-being: Only recent events matter. *Journal of Personality and Social Psychology, 70*, 1091–1102.

Tellegen, A., Lykken, D., Bouchard, T. J., Wilcox, K. J., Segal, N. L., & Rich, S. (1988). Personality similarity in twins reared apart and together. *Journal of Personality and Social Psychology, 54*(6), 1031–1039.

Tkach, C., & Lyubomirsky, S. (2006). How do people pursue happiness? Relating personality, happiness-increasing strategies, and well-being. *Journal of Happiness Studies, 7*(2), 183–225. doi: 10.1007/s10902-005-4754-1.

Verbrugge, L. M., Reoma, J. M., & Gruber-Baldini, A. L. (1994). Short-term dynamics of disability and well-being. *Journal of Health and Social Behavior, 35*, 97–117.

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

Weber, R. P. (1990). *Basic content analysis*, 2nd ed. Sage university paper series on quantitative applications in the social sciences (Vol. 07). Beverly Hills: Sage.

Weiss, A., Bates, T. C., & Luciano, M. (2008). Happiness is a personality thing: The genetics of personality and well-being in a representative sample. *Psychological Science, 19*(3), 205–210.

Zika, S., & Chamberlain, K. (1992). On the relation between meaning in life and psychological well-being. *British Journal of Psychology, 83*, 133–145.