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Promoting Well-Being through Recording Acts of Kindness: An Experimental Manipulation

(Submitted in partial fulfillment of Psyo 490: Honours Thesis)

Lynn J. Van Asseldonk

University of British Columbia - Okanagan

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Abstract

The effects of recording acts of kindness on well-being were assessed in a test-retest

experimental design. Participants in three of five groups were instructed to list their acts of

kindness directed toward themselves, other individuals, or the community. Participants in the

remaining two groups served as controls. Results indicated that acts of kindness resulted in

increased satisfaction with life more for participants reporting kindness toward other individuals

than for those reporting kindness toward the community or self. Listing acts of kindness did not

influence happiness or meaning in life. Possible reasons for the effect of kindness to other

individuals on one's satisfaction with life are discussed.

Promoting Well-Being through Recording Acts of Kindness: An Experimental Manipulation

The traditional approach to psychology has been an attempt to understand dysfunctional thinking and behaviour. Shifting the focus away from dysfunction, positive psychology seeks to understand individuals by examining those characteristics that make them well-adjusted, high-functioning, valuable members of our societies. More specifically, positive psychology is the study of subjective well-being which is defined as pleasant or unpleasant affect, including happiness, and life satisfaction (Diener, Suh, Lucas, & Smith, 1999). Psychological research examining positive states was outnumbered by research which considers negative states by seventeen to one in the mid-nineties (Myers & Diener, 1995). However, research in positive psychology is gaining ground. Until five years ago, a search for scholarly articles with the keyword 'well-being' yielded 17312 articles, compared to 95460 for 'depression'; a ratio of five and a half to one. However, during the past five years, the ratio has decreased to approximately three to one. Research programmes are currently identifying contributing factors (Griffin, 2007), measures (Ivens, 2007), correlations (DeNeve & Cooper, 1998), and even the biochemistry of subjective well-being (Steptoe, Gibson, & Hamer, 2007).

Subjective Well-being

Subjective well-being (SWB) has been understood to be a stable set-point in individuals (Lykken, 1999). While major life events (e.g., divorce; winning the lottery) can temporarily change an individual's level of SWB, it typically returns to the biological or ingrained set-point. For people with a low level of SWB this is an unfortunate lot in life. Recent research, however, has determined that life goals can have a lasting effect on SWB (Heady, 2008). Heady found individuals who focused on non-competitive goals such as commitment to family and social involvement show substantial and lasting changes in their set-points, whereas individuals setting

competitive goals involving career and financial gains do not. He concluded that known

personality characteristics such as extroversion, along with a desire to pursue altruistic goals, can

lead to enduring increases in SWB.

Life satisfaction is one important component of SWB, and has been assessed in hundreds

of studies over the past twenty-four years (Pavot & Diener, 2008). Life satisfaction involves a

judgement or assessment of one's overall quality of life. It is separate from, but related to, the

affective components of SWB, and is influenced by personality factors as the affective

components are. As with SWB in general, life satisfaction is stable yet flexible, and assessments

of overall quality of life are based on enduring information, not on momentary mood states.

Certain qualities such as gratitude have been shown to enhance life satisfaction (Wood, Joseph,

& Maltby, 2008). For example, Wood et al. found that gratitude explained 9% of the variance in

life satisfaction after controlling for the Big Five personality domains. Life satisfaction has been

associated with increased marital harmony, lower suicide risk, and numerous physical health

benefits (Pavot & Diener, 2008).

Happiness is another important component of SWB, and a major area of focus in positive

psychology. Happiness, like life satisfaction, is considered to be an enduring and stable trait,

rather than a momentary, fluctuating state (Diener et al., 1999). Happiness is a subjective

construct and not a trait that can be assessed based on demographics or history (Diener & Suh,

1997). Some predictors of happiness have been clearly identified; someone who is extroverted,

takes a positive outlook, does not ruminate excessively, and has social confidants is likely to be a

happy person (Diener et al., 1999). Research has recognized two different types of happiness.

Hedonia is a self-oriented type of happiness, or pleasure, often characterized by immediate

gratification, whereas eudaimonia is a more benevolent type of happiness, often characterized by

a delay of gratification in order to experience long-term benefits and to benefit others (Deci &

Ryan, 2008). Eudaimonic happiness has also been linked to intrinsic motivation and flow

experiences (Waterman, Schwartz, & Conti, 2008).

Enhancing Subjective Well-being

SWB may be enhanced by a number of different interventions. One strategy is to increase

awareness of personal meaning and the positive aspects of life. Meaning in life is an important

factor in many positively-focused programs, and has been linked to psychological distress in

individuals who fail to identify meaning in their lives (Steger, Frazier, Oishi, & Kaler, 2006).

Research has identified two important dimensions of meaning in life: (i) the degree to which

individuals believe they have found meaning in life; and (ii) the degree to which individuals are

searching for meaning in life. These two dimensions are independent (Steger et al., 2006).

Steger, Kawabata, Shimai, & Otake (2008) examined cross-cultural variations in meaning in life

by sampling American and Japanese populations. They found that the presence of meaning in

life is important to both cultures and functions similarly to other measures of well-being;

however, the search for meaning in life is positively correlated with presence of meaning and

well-being in the Japanese participants only. Western populations tend to view search for

meaning in opposition to, rather than in alliance with, presence of meaning. The presence of

meaning in life is correlated with various indicators of well-being including satisfaction with life,

optimism, and appreciation of life (Steger et al., 2006).

Strategies that involve appreciation of life, or gratitude, can enhance SWB. Gratitude

involves the ability to notice and value the elements of one's life, and it is a crucial determinant

of SWB (Bryant, 1989). Wood et al. (2008) found gratitude to be integral to satisfaction with

life. Emmons and McCullough (2003) studied the effect of counting blessings versus burdens on

happiness. Participants kept a daily list of things they felt grateful for (e.g., generous friends), hassles (e.g., difficulty finding parking), or neutral life events (e.g., cleaning the house), depending on the condition to which they were randomly assigned. Those who listed items related to gratitude showed enhanced overall well-being, and the effect was greater when daily records were kept compared to weekly records. In young adolescents the effect is similar; counting blessings was associated with enhanced life satisfaction and optimism (Froh, Sefick, & Emmons, 2008). Consciously focusing on blessings in daily life may have both emotional and interpersonal benefits.

The Latin root of the word gratitude is closely linked to the word *kindness*. Today, gratitude implies an effect resulting from the actions of others or the appreciation of one's, situation, whereas kindness is generally considered to be behaviour that benefits another (Shorr, 1993). Exhibiting kindness toward others is another possible strategy for enhancing SWB. Tkach (2006) assessed the effect of kind acts on well-being in an experimental intervention, in which participants in the treatment conditions were assigned to carry out kind acts of varying frequencies. He found small positive effects of kindness on SWB, and concluded that kind acts may lead to lasting improvements in happiness under optimal circumstances. Otake, Shimai, Tanaka-Matsumi, Otsui, and Fredrickson (2006) assessed the effect of counting kindness on happiness in an experimental intervention in Japan. The study compared levels of happiness before and after participants kept track of all acts of kindness performed by them throughout each day. Happiness increased after one week of daily reporting of acts of kindness. However, the research did not distinguish whether the acts of kindness were directed towards the self or others. Furthermore, Otake et al. (2006) used an all-women sample as they suggested that women may be more attuned to kindness than men.

It may be important to consider the nature of the party to whom the kind acts are directed. For example, Dunn, Aknin and Norton (2008) examined the effect of money on happiness. They found that how participants spent their money was a better predictor of happiness than the amount of money they had for spending. Specifically, those who spent money on others (e.g., a gift or donation) experienced greater happiness than those who spent money on themselves (e.g., paying a bill or buying a treat). The authors suggested that although personal spending is, by necessity, likely to always exceed the amount we spend on others, making minor increases in the amount spent on others, as little as five dollars, may be enough to improve happiness.

The purpose of the present study was to further examine the effects of kindness and personal meaning on happiness and life satisfaction. This study used an experimental design based on the previous studies by Otake et al. (2006) and Dunn et al. (2008). Whereas Otake et al. did not explicitly define or limit acts of kindness in their intervention condition, this study confined participants in the intervention groups to reporting one of three types of kindness: kindness toward other individuals, kindness toward the broader community, and kindness toward oneself. As suggested by Dunn et al., it was expected that greater increases in well-being would occur in participants who recorded acts of kindness to others. Whereas Otake et al. used only a measure of happiness, this study used a measure of life satisfaction as well. The present study also considered that the effect of recording kind acts on participants' well-being might depend more upon their enhanced awareness of personal meaning than on the type of kind act involved. The present study included a measure of meaning in life to test for this interaction. In addition, this study included a measure of eudaimonia to enable us to separate the effects of recording kind acts by happiness type, hedonic or eudaimonic, as defined by Deci and Ryan (2008). Finally, this

study did not focus exclusively on women as in Otake et al., but instead compared the effects between genders.

<p style="text-align:center">Method</p>

Participants

Participants were 261 university undergraduates, 178 females and 83 males, ranging from 17 to 53 years old ($M = 20$ years). The study was available to students through the university-based online subject pool, SONA, and students received two percent extra credit toward an eligible psychology course equal to two percent. No other remuneration was offered. Participation took about two hours, over a one-week period. The description provided on SONA indicated that the study would investigate predictors of well-being. Potential participants were informed that they would be asked to complete questionnaires evaluating their subjective well-being, happiness, and personality, and that they would be asked to repeat the well-being and happiness measures in one week's time. Participants were also informed that they may or may not be assigned a daily task to complete throughout the week, which would take approximately 10 minutes of their time each day. They were informed that the study was expected to take approximately 2 hours of their time in total. Once participants signed up for the study, they were guided to log in to SurveyMonkey.com where they were asked to complete the initial questionnaire battery, and then they were randomly assigned to a condition by the researcher and further instructed regarding their participation.

Participants were informed that they were free to withdraw from the study at any time without penalty and that notification of withdrawal was requested of them. Where no notification of withdrawal was received, participants who failed to complete the happiness measures or failed to carry out the daily task were considered to have withdrawn.

Materials

Six measures of well-being were administered: the Faces Scale, the Oxford Happiness Questionnaire Short Form, the Satisfaction With Life Scale, the Subjective Happiness Scale, the Meaning In Life Questionnaire, and the Scale of Eudaimonic Well-being. Additionally, a measure assessing personality, the NEO Five-Factor Inventory, was administered.

The Faces Scale (Andrews & Whithey, 1976). This measure assesses overall feelings of happiness and momentary happiness. It uses seven simple drawings of faces, arranged in a horizontal line, with the mouths of the faces ranging from very down turned (indicating very unhappy) to very upturned (indicating very happy), and is anchored with the labels "*very unhappy*" and "*very happy*". Using this scale, participants indicated the face that best represented their happiness in response to two questions: (i) "Overall, how do you usually feel? (ii) How do you feel at this moment?"

The Oxford Happiness Questionnaire Short Form (Hills & Arygle, 2002). This measure uses eight items to assess personal happiness. Participants are asked to respond to the items using a six-point Likert scale anchored with 1 (*strongly disagree*) to 6 (*strongly agree*). The items express how participants may feel about themselves (e.g., "I feel that life is very rewarding"). Cruise, Lewis, and McGuckin (2006) examined the psychometric properties of the OHQ and found acceptable internal consistency reliability ($\alpha = 0.62$) and test-retest correlation ($r = 0.69$) at two weeks. Three items are reversed scored (Hills & Argyle, 2002).

The Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). This measure assesses general life satisfaction. It consists of five items which participants are asked to rate on a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Items include statements about happiness (e.g., "I am very happy"; "Life is good"). This scale demonstrated good

reliability and validity (Pavot & Diener, 1993). In addition it is quick to administer and has a degree of sensitivity that shows changes in global life satisfaction over time (Diener et al., 1985).

The Subjective Happiness Scale (Lyubomirsky & Lepper, 1999). This measure assesses subjective happiness from a global perspective. Participants are asked to respond to four items using a seven-point scale (e.g., "Compared to most of my peers, I consider myself:" 1 [*less happy*] to 7 [*more happy*]). Lyubomirsky and Lepper reported high internal consistency ($\alpha = 0.79$ to 0.94 over 14 studies), test-retest reliability (ranged from 3 weeks to 1 year, $r = 0.55$ to 0.90), and construct validity. One item is reversed scored.

The Meaning In Life Questionnaire (MLQ; Steger et al., 2006) consists of two five-item subscales assessing personal meaning in life. The first focuses on the presence of meaning in life, and the second assesses the search for meaning in life. Items are rated on a 7-point Likert-type scale, from 1 (*absolutely untrue*) to 7 (*absolutely true*). Items include statements such as: "I am searching for meaning in my life", and "I understand my life's meaning".

The NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992) is a 60 item scale designed to measure the five personality types: openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. It is a brief version of the NEO personality inventory (NEO-PI) which is a 240 item questionnaire designed to measure the five personality types as well as 30 subfacets. Each item of the NEO-FFI is measured on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The NEO-FFI replicates the factor structure of the NEO-PI and also shows cross-observer validity (McCrae & Costa, 2007). Internal consistency values range from .74 to .89. An example of an item from this scale is "I like to have a lot of people around me".

The Scale of Eudaimonic Well-Being (Waterman, 2008) assesses the level of eudaimonia reported by the participants. The measure uses a Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*). It contains 21 items in total. An example of an item from this scale is "I believe I know what I was meant to do in life".

Finally, the initial questionnaire was preceded by a demographics page, which requested participants' age and gender, and asked if they regularly keep a journal or diary as the intervention in this study involves an activity similar to journaling.

Procedure

Participants were assigned on SurveyMonkey.com to one of the three intervention conditions, the placebo condition or the control condition. Assignment was done in rotating order for the five conditions to ensure equal sample sizes. While gender was not considered in assigning participants to groups, it was included in the data analyses to assess whether the kindness manipulations affected well-being differentially for males and females.

All measures were administered online using SurveyMonkey.com at the beginning and end of a seven-day period except the NEO-FFI and demographics which were only administered at the beginning. These were only administered once due to their stable nature. For the five days in-between, participants reported online their daily acts of kindness, foods eaten (placebo), or nothing (control). This design reduced the difficulty of juggling participation in this study with participants' daily schedules. All participants were first asked to read the consent form, and were then administered the battery of questionnaires for the first time. The order of materials presented in the battery was counterbalanced to control for carry-over effects. Kindness was considered to be *contributions to self*, *contributions to another individual*, or *community contributions*.

After completing the questionnaires the participants received their instructions for the week. The three intervention conditions were instructed to keep track of all the ways in which they performed particular acts of kindness throughout each day (self, other, or community); and they were given examples of kindness according to their particular intervention group. The Self group was instructed to keep track of things they did for themselves, such as buying themselves a treat, taking time to relax, or getting a massage. The Individual group was asked to keep track of kind acts toward other individuals, such as helping a stranger pick up dropped items, allowing another shopper to go ahead in the checkout queue, or holding an elevator door for someone who would not have reached it in time. The Community group was instructed to keep track of all the ways in which they contributed to their community throughout the day, such as volunteer work and making donations. The Placebo condition was instructed to keep track of the types of food they ate throughout the day such as unrefined carbohydrates, proteins, refined sugars, and fruits or vegetables. Participants in all four conditions were asked to make a list on SurveyMonkey.com once daily. Participants assigned to the Intervention and Placebo conditions were instructed that they were not being asked to change their daily routines while participating in the study, but only to be aware of those routines in order to report them daily. Finally, those randomly assigned to the Control condition were instructed, after completing the first questionnaire battery, that nothing further was required of them except to sign in to SurveyMonkey.com once each day indicating that they were continuing in the study, and that they would repeat the battery of tests in one week's time. Those in the Control condition were assured that they would receive the full credits offered by the study. Participants were asked not to discuss details of the experimental procedure, in order to minimize any diffusion of treatment.

Once all the tests were completed credits were granted on SONA based on participant's email addresses.

Data Analyses

The data were downloaded from the Survey Monkey website and were analyzed to determine normality. Fourteen participants were deleted due to either not completing the study (i.e., the follow-up questionnaire battery was blank) or non-compliance. The criteria for non-compliance was listing acts of kindness that applied to groups other than that to which the participant was assigned, in three or more entries (based on a total of five entries). For example, a participant assigned to the community kindness group who listed one or more acts of kindness toward an individual on three or more participation days would meet the criteria for non-compliance. Because a goal of intervention was to increase participants' awareness of a particular type of kind act, those who listed other types were assumed to become aware of kindness types that fall outside of their intervention group. Ten participants were further deleted because they were univariate outliers above or below 3.3 standard deviations from the mean, on one or more of the measures. Finally, one participant was determined to be a multivariate outlier, and was also deleted from the sample. The final sample size was $N = 239$, and was normally distributed. Further, the group sizes were equal to within 8 participants ($n = 40$ to 48).

<div align="center">Results</div>

Because the study was administered entirely online, whereas most of the previous research was conducted in person, it was important to determine the normality of the sample and also to examine how the measures used correlated with each other in this university student population. The sample was normally distributed after deleting 11 participants (out of $N = 240$); both univariate and multivariate normality was obtained. The measures used were intended to

assess well-being, including happiness, satisfaction, meaning, and happiness type. Therefore it was expected that the measures would be positively correlated. The measures correlated significantly with one another. The highest correlation was between the Oxford Happiness Questionnaire (OHQ) and the Subjective Happiness Scale (SHS), $r(229) = .829$, $p > .001$. While a correlation of this magnitude is expected between the two measures of happiness, they do not overlap completely, indicating the value of including both. The lowest correlation was between the SHS and the Meaning in Life Questionnaire (MLQ), $r(229) = .178$, $p > .01$. While happiness and meaning are different constructs, they are both measures of well-being, and the low positive correlation confirms that the measures used reflect this. Refer to Table 1 for the complete correlation matrix.

A principle components analysis was performed with the MLQ to determine whether the items fell into two principle components, *search* and *presence,* as expected based on existing literature. The scree plot confirmed two components, one with an eigenvalue greater than four and one with an eigenvalue of approximately three. All other components on the scree plot fell below one eigenvalue. Figure 1 illustrates the scree plot result. In addition, the principle components analysis factor matrix confirmed that each item fell under the expected sub domain.

For analyses of the intervention results, difference scores were created. Difference scores reflect the amount of change between two values, in this case the change over a 1-week period. Difference scores were created by subtracting the Time 1 total from the Time 2 total for each of the 5 measures used. Thus, positive difference scores reflect an increase in the measured construct over the intervention week. No significant gender effects were found, and participants' prior journaling habits also did not have any significant effects.

A multiple analysis of variance (MANOVA) was run to determine the significance of changes over time x group. The Satisfaction with Life Scale (SLS) showed a significant change x group interaction, $F(4, 22) = 5.24$, $p > .001$, $\eta^2 = .08$, $MSE = 11.76$. Follow-up Bonferroni tests were conducted to evaluate the pairwise comparisons among the difference scores for the concrete group. Pairwise comparisons indicated that the Individual group (I) increased significantly more over one week than the Community group (C), $F = 1.87$, $p > .01$, the Self group (S), $F = 2.81$, $p > .001$, and the Placebo group (P), $F = 2.72$, $p > .001$, but not the Control group. Figure 2 provides a visual representation of these results. There were no significant changes over time x group for the other measures.

Discussion

Counting acts of kindness has been associated with increases in happiness (Otake et al., 2006) in Japanese women. However, the definition of a kind act was left open for participants to define. Other research shows that focussing on others rather than oneself can enhance happiness (Dunn et al., 2008). Additional factors that may influence SWB (i.e., happiness and satisfaction with life) include personal meaning (Steger et al., 2006) and personality (Diener et al., 1999). The present study categorized acts of kindness according to the party toward which the kind act was directed, and investigated a western sample of both women and men, in a test-retest experimental design. Happiness, life satisfaction, meaning, and happiness type were assessed.

Results showed that recording kind acts was associated with an increase in life satisfaction more for the Individual group than the Community, Self, and Placebo groups. This result indicates that recording acts of kindness directed toward other individuals may result in greater life satisfaction than kindness toward the general community, as well as self-oriented kindness. Perhaps kindness toward an individual such as holding a door open or helping

someone carry heavy items results in more expressed gratitude, (e.g., a warm "thank you"), than one would receive from acts kindness toward the community such as picking up litter, and this immediate appreciative feedback may enhance life satisfaction. In fact, Tkach (2006) concluded that the small positive effect of kind acts that he found may depend greatly on the amount of gratitude expressed by those being helped. It is also likely that the Community group did not find enough opportunities for kind acts directed toward the community, and indeed, Community group participants' daily entries reflected occasional frustration and usually had one or two items listed compared to three to six in the other groups. As for the Control group, which was not significantly less satisfied than the Individual group; it may be that they found participation in the study to be rewarding in its simplicity, as they were only required to sign in to the Survey Monkey website once per day.

Happiness in general did not increase over time for the intervention groups. Also, eudaimonia did not increase for the Individual and Community groups, or decrease for the Self group. A principle components analysis examined the two sub-domains of the Meaning in Life Questionnaire (MLQ), *search* and *presence*, which confirmed that items fell into the two expected components in the current population. However, meaning in life also did not change significantly according to group. While the results do not reflect those of Otake et al. (2006), Tkach (2006) also examined the effect of kind acts on happiness, and was tentative in concluding that kindness is an effective strategy for enhancing happiness. It may be that in a western population, kind acts toward other individuals (i.e., where the likelihood for expressed gratitude is high) result in enhanced satisfaction with life but not enhanced happiness.

Limitations and Future Research

Some limitations of this study include the reliance on self-report measures and the possible homogeneity of the university student sample. However, many similar studies are done with a university population, thus it is an important sub-group in which to draw comparisons. Further, over sixty percent of UBC-O students come from outside the Okanagan Valley, and approximately twenty percent of first year psychology students are of a visible minority, which helped reduce the degree of homogeneity in the present sample. Another possible limitation is the duration of the study. The study was run for the first semester of the school year only, and participation lasted for 7 days. It may be useful to extend the data collection period to two semesters or one year, and also to extend the participation commitment to two or three weeks. Both of these modifications would better allow for participants in the Community group to record more act of kindness. For example, if students are only able to volunteer on weekends, they would have more opportunity to record acts of kindness toward the community while participating, and if the study ran all year opportunities for church missions during the summer would be included in the study. It is likely that, given the breadth of the current study, participants in the Community group felt limited in their responses, which may have resulted in frustration.

Also, the instructions could emphasize and clarify the differences between the kindness types, in order to ensure that the kind acts become salient for participants during the intervention week. Feedback could also be provided each day to further engage the participants in thinking about their acts of kindness. Alternatively, the study could require that participants change their behaviour, rather than simply becoming more aware of it. That is, rather than simply record an act of kindness if it has occurred, participants could spend the duration of the study seeking the

opportunity to perform and record specific acts of kindness. This may increase the salience of the intervention significantly, which may result in meaningful changes in happiness upon re-test.

Finally, perhaps personality interacts with the effect of kindness type on well-being. Personality factors such as extraversion and neuroticism have been consistently related to SWB (DeNeve & Cooper, 1998). Personality factors should be considered in relation to the results of this study; for example, it may be that an introverted individual finds kind acts toward the community more rewarding due to their more anonymous nature. Data collected during this study included a measure of personality, the NEO-FFI. While the analysis of group x time x personality was beyond the scope of this particular project, the door is open for investigation of personality in this sample, and how it may influence the happiness, satisfaction, and meaning in life that results from recording acts of kindness.

Conclusion

The results of this study confirm that an experimental manipulation can be administered entirely online, in that (i) the population was normally distributed, (ii) the measures correlated in the online sample as expected, and (iii) the MLQ showed two principle components, as expected based on existing literature. The results of this study suggest that acts of kindness toward other individuals enhance satisfaction with life, an important component of SWB. However, as many of the results were non-significant, some aspects of the study should be altered if the study is replicated, to increase the likelihood of finding meaningful effects.

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Table 1

Correlation Matrix of Measures

	SHS	SLS	MLQ	SEWB
OHQ	.829**	.763**	.229**	.632**
SHS		.735**	.178**	.506**
SLS			.215**	.564*
MLQ				.447**

**. Correlation is significant at the 0.01 level (2-tailed).
Note. N = 229.

Figure Captions

Figure 1. The Meaning in Life Questionnaire Principle Components Analysis Scree Plot.

Figure 2. The Satisfaction with Life Questionnaire results. Bars represent the mean change over time.

Scree Plot