



Focusing on the time to be happy: Past, present and future focused happiness interventions

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April 2010

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ABSTRACT

Drawing upon past positive-psychology literature and happiness increasing strategies, this study investigated the temporal orientation of three happiness increasing exercises; past, present and future-focused interventions, and the effects upon subjective happiness, gratitude and positive and negative affect. Sixty participants were randomly assigned to each of the week-long intervention conditions, with baseline and post intervention measures of well-being recorded. Irrespective of condition, significant increases in positive affect, subjective happiness and gratitude were observed, along with decreases in negative affect. The greatest increases in gratitude were observed for the past-focused, daily-blessings condition. Building upon previous literature, this study demonstrates the effectiveness of happiness increasing interventions and the benefits of implementing one small daily habit to increase overall well-being irrespective of temporal orientation of the exercise.

KEY WORDS:	POSITIVE PSYCHOLOGY	HAPPINESS INTERVENTION	TEMPORAL ORIENTATION	GRATITUDE	MINDFULNESS
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Introduction

Positive psychology is a growing field within psychology concerned with the study of strengths, well-being and optimal functioning (Duckworth, Steen, & Seligman, 2005). The approach represents a move away from psychology's traditional focus on mental illness and psychological problems, towards a science of increasing happiness, subjective well-being (SWB) and positive affect (PA). Current psychological treatments target the presence of mental illness with symptom reduction as the primary goal, with the assumption that in remedying suffering well-being will result, however it is at the expense of strategies to increase resilience, happiness and SWB. Seligman (2002) proposed that the goal of positive psychology should be to move people 'not from -3 to 0 but from +2 to +5', in which a "build-what's-strong" as opposed to the "fix-what's-wrong" approach (Duckworth et al., 2005) is adopted to complement or supplement traditional therapy. Instead of just repairing damage, positive human traits can be developed to act as buffers against psychopathology and emotional disorders. Positive psychology therefore pioneers prevention, intervention and promotion strategies (Keyes & Lopez, 2005, in Snyder & Lopez, 2005) to address the fact that a reduction of symptomology does not necessarily lead to optimal well-being.

It has been argued that the ability to be happy and contented with life is central to positive mental health (Diener, 1984). Operationalised, happiness and SWB can be defined as the presence of frequent positive affect (PA), infrequent negative affect (NA), and high life satisfaction (Lyubomirsky, Sheldon, & Schkade, 2005), with the terms chronic happiness, trait PA and SWB used interchangeably throughout the literature to define high average levels of positive emotion. Together, the largely independent components of positive and negative affect form the basic dimensions of emotional experience (Watson, 2005, in Snyder & Lopez, 2005). Separated, PA reflects the extent to which positive states such as joy and interest are experienced (Watson, 2005, in Snyder & Lopez, 2005) with research indicating that it is the frequency of experiencing PA, and not the intensity, which defines happiness (Diener, Sandvik, & Pavot, 1991), whilst NA represents the extent to which an individual experiences negative emotional states such as fear, anger, and sadness (Watson, 2005, in Snyder & Lopez, 2005). Individuals with high levels of happiness report experiencing PA 80% or more of the time (Lyubomirsky et al., 2005), with PA

correlating at .75 consistently across various situations and contexts (Watson, 2000, in Watson, 2005). In addition, characteristically happy individuals tend to have higher self-esteem, greater self-reported health and high immune functioning, in addition to being judged as more intelligent, friendly and popular (Lyubomirsky, King, & Diener, 2005). With such desirable associated characteristics of happiness it is therefore beneficial to understand how (and if) it is possible to increase happiness levels.

From an evolutionary perspective, happiness has survival value, with more areas in the human brain producing more positive than negative experiences (Veenhoven, 1991). Both longitudinal observations of life satisfaction and experimental mood studies indicate that a positive view of life broadens perception and encourages participation, whilst fostering health and lengthening life (Veenhoven, 1991). Reflecting this, the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001 cited in Fredrickson, 2006) illustrates how positive emotions can broaden momentary thought-action repertoires and build enduring personal resources. For example, contentment- a positive emotion, promotes savouring which in turn produces self-insight and alternative world-views. Consequentially, broadening builds enduring personal resources (Fredrickson, 2006) such as physical, social, intellectual and psychological resources which can have direct, indirect and long-term consequences on well-being. Such accrued resources can outlast the transient states that caused them and can be drawn upon in different emotional states (Fredrickson, 2006) bolstering functioning when difficulties are encountered.

Seligman (2007) suggests that the key to increasing happiness lies in understanding and implementing the happiness formula, of which he suggests is $H = S + C + V$, in which H represents an individual's enduring level of happiness whilst S represents the set range- the percentage attributable to heredity, with C referring to life circumstances. V however, is considered to be the most important factor; the factors assumed to be under voluntary control which are modifiable to instigate change. Lyubomirsky et al. (2005) also propose that chronic happiness is causally affected by a genetic set point, life circumstances and intentional activities. Citing evidence, they suggest that genetics (set point) account for 50% of the population variance, circumstances form 10% and intentional activity contribute the remaining 40% variance. As the set point is genetically determined, and shows substantial long-term stability (Lykken & Tellegen, 1996) by definition it cannot be changed, therefore

targeting intentional activities appears to be the most effective means of increasing happiness.

Lyubomirsky et al. (2005) suggest that SWB- a component of happiness, can be increased if the 'architecture of sustainable happiness' is understood in which they propose an integrative 'model of sustainable happiness', which encompasses the relative influences of personality, motivation and genetics, with circumstantial and demographic factors. According to their model, the potential for increasing happiness lies in changing ones goals and intentional activities (Sheldon & Lyubomirsky, 2007) which is consistent with Seligman's (2007) happiness formula. Changing one's circumstances would offer little long-term benefit as 'hedonic adaptation'- the rapid and inevitable adjustment to good things (Seligman, 2007), leads to a consequential increase in expectations. People tend to habituate to changes in circumstances which results in a decrease of appreciation, reduced satisfaction and less pleasure. In contrast, intentional activities are open to variation and can be modified frequently to counteract habituation (Seligman, 2002).

Intentional activity, or the 'practices in which people choose to engage' (Lyubomirsky et al., 2005) are the ways in which individuals can act within their circumstances to both increase happiness and counteract hedonic adaptation. Such activities can include behavioural, cognitive or volitional activities and can be episodic and varied in nature, whilst practices such as mindful awareness and pausing to savour experiences can prevent pleasures and positive experiences from being taken for granted (Brown & Ryan, 2003). Interventions which comprise of such activities thus offer the opportunity to increase positive emotions, subjective happiness and SWB.

The most experimentally supported positive activity interventions include cultivating gratitude, recalling happy events, savouring experiences, increasing optimism, and using signature strengths (Sheldon & Lyubomirsky, 2007). Positive emotions are therefore temporally situated, that is they can be about the past, the present and the future with exercises designed to develop the skills to enhance the frequency, duration and intensity of one or more of these. Whilst the temporal orientations (TO) are linked, and it is desirable to be happy in all three, it is possible to hold different emotions towards each area. It is possible to experience pleasures in the present, but feel disheartened by the past and despondent towards the future

(Seligman, 2007) – types of emotions therefore vary according to where temporally situated.

Subsequently, interventions designed to increase happiness tend to have a specific TO with associated positive emotions. For example, positive emotions about the past include satisfaction and contentment which can be increased through past-focused happiness interventions such as gratitude exercises (Emmons & McCullough, 2003). Humans have a natural bias towards remembering and attending to the negative (Seligman, 2007) so past-focused interventions help re-orientate towards the positive. Seligman, Steen, Park, & Peterson (2005) found participants who were required to record three good things that went well each day showed increased happiness and decreased depressive symptoms following the exercise, with effects maintained for six months.

Whilst a positive past TO can be developed, without the ability to cultivate an adaptive present-focused orientation it would be difficult to both construct positive views of the past, or hold optimistic views of the future (Seligman, 2007). The present-moment is therefore affected by the abstract constructions of the past and future which in turn influence current cognitions, emotions and decisions. Negative views towards the past and anxieties concerning the future detract away from what is happening in the present which means the here-and-now occurs with little conscious awareness (Brown & Ryan, 2003). Such lack of awareness can be best illustrated by automatic or compulsive behaviours and when individuals are detached from their thoughts, emotions or desires. This is illustrated by Zimbardo and Boyd (1999) who found negative past perspectives correlated with depression, anxiety and low self-esteem, whilst positive past perspectives correlated with happiness and high self-esteem. Furthermore, Kazakina (1999, cited in Zimbardo & Boyd, 1999) found positive correlations between a present orientation and positive affect and general happiness. One such link between TO is the ability to appreciate the good which can be cultivated through the practice of present-focused interventions practicing mindful awareness of the present or engaging in savouring experiences exercises (Seligman, 2007).

The concept of mindfulness, which originates from eastern meditation practices and Buddhist teachings (Brown & Ryan, 2003) can be applied in happiness increasing interventions. In contrast to 'mindlessness' which results from a lack of attention, 'mindfulness' is an awareness that develops from paying attention on

purpose, in the present moment, in a non-judgemental way (Kabat-Zinn, 2003). Mindfulness, a state of attentiveness and awareness orientated towards what is occurring in the present involves observations of perceptions, cognitions, sensations and emotions without evaluations such as right and wrong, or good or bad (Baer, 2003). Consequentially, mindfulness can directly enhance wellbeing through the challenging of automatic thoughts and by orientating actions towards healthy-behaviours (Ryan & Deci, 2000) with benefits including positive psychological and physical outcomes. Following a clinical intervention, Brown and Ryan (2003) demonstrated mindfulness practice was predictive of more positive well-being and reduced emotional disturbances, with higher levels of mindfulness related to lower levels of both mood disturbances and stress. Additionally, strong empirical support for the benefits of mindfulness skills can be seen in the integration of mindfulness training in psychological treatments. Dialectical behaviour therapy (DBT; Linehan, 1993) - a popular treatment for borderline personality disorder, has mindfulness training as its central concept, with clients learning mindfulness skills in a year-long weekly skills group. To foster mindfulness, exercises such as observing the breath, observing sounds, and mindful awareness during everyday activities such as washing the dishes or having a bath are practiced. Mindfulness has the ability to transcend and join TO, with in-the-moment awareness connecting the present, past and future (McCarthy, 2009) with the best illustrative example seen in the act of 'savouring' experiences.

Savouring can be defined as the thoughts or behaviours which generate, intensify or prolong enjoyment (NIMH, 2004) such as smelling fresh coffee, hearing rain droplets or really 'seeing' something for the first time. The ability to savour positive experiences is one of the most important ingredients of happiness (Lyubomirsky, 2008), and has itself a past, present and future component. We savour the past through reminiscing, the present by being mindful and fully living in the moment, and we savour the future through optimistic thinking, anticipating and planning. Such savouring can bring the pleasure of what has gone and what is to come into the present moment; however effort and motivation are needed for true savouring (Lyubomirsky, 2008).

Despite the benefits, savouring is often neglected due to the increased demands placed on individuals by the fast-paced competitive modern life which is changing how people spend their time. Consequentially this is contributing to

increased working hours and the need to multitask at the expense of nonessential activities such as enjoying a social life or pursuing a spiritual life (Zimbardo, 2002). Research however has indicated that being able to savour the present can counteract such pressures, with individuals being less likely to suffer stress, depression, guilt and shame, in addition to experiencing more intense positive emotions and increased satisfaction from immediate pleasures (Lyubomirsky, 2008) with savouring bringing positive emotional and psychological benefits. Recognising this, Seligman, Rashid, & Parks (2006) included an intervention in their positive psychotherapy programme which was designed to help participants learn how to savour experiences such as eating a meal or taking a shower. Significantly they found that upon completion of the programme and at a one-year follow-up, participants' scores on depression halved whilst satisfaction with life almost doubled which brings empirical support to the benefits of savouring practice. Indeed, Langer (2009, cited in McCarthy, 2009) suggests that the key to positive well-being lies in the awareness of novelty in the present moment, with both savouring and mindfulness transcending time to join past, present and future-focused temporal orientations, increasing positive emotions towards the past, present and future. Appreciating positive outcomes in the present can bring the associated appreciation of events in the past, whilst in turn, an awareness of novelty in the present can help reduce concerns and anxieties towards the future- fostering hope and optimism.

Hope and optimism are examples of positive emotions towards the future which can be increased through savouring and happiness increasing interventions. Related but independent concepts, hope (Snyder, Rand, & Sigmon, 2005, in Snyder & Lopez, 2005) concerns the attainment of future positive goal-related outcomes, whilst optimism (Scheier & Carver, 1985) encompasses the belief in oneself and one's ability to move towards a desired goal. Hope and optimism happiness interventions can therefore counteract pessimism, increase satisfaction and enhance happiness (Seligman et al., 2006) whilst individuals high in hope are more able to adapt to challenges, cope with set-backs and maintain a positive internal dialogue (Carr, 2004). In addition, optimism and hope are predictive of physical and mental health, subjective well-being, positive mood and immunological robustness (Snyder, 2000) which are arguably desirable if not essential attributes.

Empirically, the ability to increase levels of hope and optimism has been demonstrated by Seligman et al. (2006) who successfully included a hope intervention as part of a positive psychotherapy package which required participants to think of three doors in their life that had closed, but three more that would open in consequence. Following participation, results indicated that in addition to increased happiness and life satisfaction, there were observable symptomatic improvements of depression scores and symptoms. Hope therefore has direct positive consequences in addition to secondary prevention potential, with goal theorists suggesting that individuals can achieve subjective well-being when they accomplish a valued aim or reach a goal state (Diener, Lucas, & Oishi, 2005, in Snyder & Lopez, 2005). Therefore, the inclusion of goal-orientated future-focused interventions, in which participants list their goals and the steps in which to achieve such a goal, can have beneficial consequences in terms increasing hope, optimism and happiness.

Whilst many happiness interventions have shown to increase both short-term and long-term happiness (Duckworth et al., 2005; Emmons & McCullough, 2003; Fordyce, 1977; Lyubomirsky et al., 2005; Seligman et al., 2006) there is little research comparing the influence of time perspectives/TO of positive interventions/exercises on happiness levels and SWB (Boniwell & Zimbardo, 2004; McCarthy, 2009; Zimbardo, 2002; Zimbardo & Boyd, 1999). Well-being is greatly affected by ways of explaining the past, engagement with the present, and optimism towards the future. Mindfulness/awareness of the present is emerging as a potential moderator of happiness in which the benefits of gratitude come from an appreciation of positive outcomes in the present, whilst being aware of novelty in present surroundings reduces anxiety and stress concerning the future (Langer, 2009, cited in McCarthy, 2009).

The rationale for this study was therefore based upon the premise that it would be of benefit to ascertain whether happiness interventions with TO reflecting on the past, appreciating the present, of feeling optimistic and hopeful about the future create differing degrees of happiness, PA and gratitude increases, in addition to decreases of NA. McCarthy (2009) suggests the relationship between the past, present and future may be complex and intertwined, so, if individuals wanted to implement one simple, effective daily happiness intervention knowing which TO creates the greatest increases would be advantageous.

Three specific hypotheses were formed regarding the interventions and measures employed in this study. The first hypothesis was that all three interventions would cause an increase in subjective happiness and gratitude scores. The second hypothesis was that all three interventions would lead to increases in participant's scores of positive affect and decreases in negative affect. The final hypothesis specifically concerned the past-focused intervention in which it was hypothesised that participants in this condition would experience the greatest increases in gratitude scores. In sum, this study aimed to look at the efficacy of three happiness increasing interventions, of which each had a different temporal orientation (past-focused, present-focused, future-focused) in order to build upon existing literature and to ascertain whether a specific temporal orientation leads to greater increases in subjective happiness, gratitude and positive affect.

Method

Design

A between subjects mixed design was used, with each participant being assigned to one of three intervention conditions, with all participants completing baseline and post-intervention questionnaires measuring affect, gratitude and subjective happiness. The independent variable was therefore an assigned happiness increasing intervention- of which there were three levels; a gratitude exercise, savouring experiences exercise and a hope and optimism exercise (see Appendices A,B, and C). The dependent variables were participant's scores on questionnaires measuring positive and negative affect (PANAS)- with positive affect (PA) and negative affect (NA) separated for analysis, gratitude (GQ-6), and subjective happiness (SH scale, see Appendices D,E, and F).

Participants

Sixty participants (51 female, 9 male), ranging in age from 18 to 83, completed the study. Participants were recruited by opportunity sampling and consisted of students in the psychology participant pool at Southampton Solent University (students currently studying BSc psychology or pathway courses), and from friends and family of the researcher. The sample was thus drawn from a wider age range and living circumstances than an exclusively university-based sample. Participants were randomly allocated to the three experimental conditions with 20 participants in each condition. A control group was not required as all participants completed a set of questionnaires prior to carrying out their assigned intervention in order to ascertain baseline (and comparable) measures of SH, gratitude and PA and NA. No incentive for participation was offered, however 75 minutes of participation credit were awarded to students who required this for course credit.

Materials

Prior to taking part in the study all participants viewed an information poster (Appendix G) displayed on the psychology notice board in the basement of the psychology department or, e-mailed to the friends and family of the researcher. The poster provided brief details of the study; topic area, assignment of a daily exercise, expected duration, credit offered, and researchers contact details to indicate interest in participating. Friends and family of the researcher were required to e-mail back in

response to the poster e-mail if they wished to indicate their interest in participation, if no reply was received it was assumed they did not want to participate.

Upon the first point of contact an information sheet/consent form (Appendix H) was given to all participants detailing who the researcher and research supervisor were, the topic of study (positive psychology), what participating entails (assignment to 1 of 3 positive interventions- each requiring a brief daily commitment), and an outline of the questionnaire procedure. Participants were informed that the decision to take part was entirely voluntary and the right to withdraw at any point in the research process was indicated. Confidentiality was assured and the contact details of the ethics committee at Southampton Solent University were provided. Prior to taking part all participants were required to sign and date the consent form to indicate that they had read and understood the information and were wishing to convey their informed consent to take part. The opportunity to ask questions to clarify understanding was given.

Subsequent to signing the consent form participants were given three short questionnaires to complete in order to record baseline scores of which post intervention scores would be comparable to. The first questionnaire- the *Positive and Negative Affect Scale* (PANAS: Watson, Clark, & Tellegen, 1988, Appendix D) was used to measure participants' level of positive and negative affect. The PANAS questionnaire comprised of 20 words describing different feelings and emotions; 10 items measuring PA such as *excited, proud, inspired*, and 10 items measuring NA such as *irritable, guilty, and nervous*. Participants indicated the extent to which they felt that particular way in the present moment on a 5-point likert-type scale in which 1= very slightly/ not at all, and 5= extremely. Scores for PA and NA ranged from 10 to 50, with a score at the upper end signifying a high degree of positive or negative affect respectively. The PANAS scale was chosen as it has high inter-correlations and internal consistency reliabilities, with high scale and item validity (Watson, Clark, & Tellegen, 1988), which provides reliable and predominantly independent measures of positive and negative affect. The PANAS affords the benefit of separately measuring positive/negative affect as research indicates the partial independence of the concepts (Argyle & Martin, 1999). Whilst weakly correlated, it does not follow that an increase in PA results in a decrease of NA.

The second questionnaire was a short, 6-item self-report measure of the disposition to experience gratitude- the *Gratitude Questionnaire-6 (GQ-6: McCullough, Emmons, & Tsang, 2002, Appendix E)*. The 6 items are short statements that describe examples of ways people may think (e.g. 'I have so much in life to be thankful for') with participants required to indicate on a scale of 1 to 7 (1= 'strongly disagree', 7= 'strongly agree') the extent to which they identify with them. The scores of the 6 items are summed together (items 3 and 6 are reversed scored), with a minimum total score of 6 indicating low feelings of gratitude and a maximum total score of 42 indicating strong feelings of gratitude. The GQ-6 was chosen as it has good internal reliability (.82-.87) and is positively related to, but distinct from trait measures of PA, optimism, and hope and life satisfaction, whilst negatively related to depression and anxiety (McCullough, Emmons, & Tsang, 2002). Gratitude is considered to be an activating emotion with a positive emotional valence which can therefore have happiness bestowing properties.

The final questionnaire was a scale designed to measure participant's Subjective Happiness (SH) levels (*Subjective Happiness Scale, SHS: Lyubomirsky, 1999, Appendix F*). The SHS is a 4-item self-report scale used to measure global subjective happiness with 2 items requiring participants to characterize themselves using absolute measures of happiness with regard to their own rating, and again compared to their peers on a 7-point likert scale (1= 'not a very happy person'/ 'less happy', 7= 'very happy person'/ 'more happy'). A further 2 items require participants to rate the extent to which descriptions of happy and unhappy people characterize themselves again measured on a 7-point likert scale. (1='not at all' 7='a great deal'). Question four is reversed scored before summing the scores of all four items, with a score of minimum score of 4 indicating a low degree of happiness, and a maximum of 28 indicating a high degree of happiness. A 'subjective' scale was used to measure happiness in order to reflect the subjective nature of the concept and to bring assurances of validity. Judgements of happiness are made through a combination of cognitive evaluations of life as a whole and subjective judgements of satisfaction (Sheldon & Lyubomirsky, 2007) so the SHS scale was used to acknowledge this process.

Three happiness increasing interventions were based upon exercises cited within the positive psychology literature, chosen specifically for their respective TO, and were created by the researcher. Each intervention was presented individually on

an A4 sheet of paper which was given to the participants to take away and complete. Intervention 1 (Appendix A) was a gratitude exercise with a past-focused TO. Based upon the 'engagement' component of a positive psychotherapy programme (Seligman et al., 2006), participants were required to keep a daily 'blessings journal'- recording at the end of every day, for one week, three good things that happened to them that day and what caused those things to happen. Examples of positive emotions about the past (e.g. contentment) and examples of the type of activities to record and possible reasons (e.g. having a bath, needing to relax) were also provided as a starting point. A table was provided for participants to record their daily blessings journal. Intervention 2 (Appendix B) was a 'savouring experiences' exercise with a present-focused TO. The savouring exercise was based upon the 'pleasure' component of the Seligman et al. positive psychotherapy programme, and from research demonstrating the benefits of mindfulness (Brown & Ryan, 2003). Participants were required once, everyday for one week, to take time to enjoy something they would usually rush through (examples included eating, walking, cooking), to carry them out mindfully in the present moment, paying attention on purpose in a non-judgemental way. Examples of positive emotions about the present were provided (e.g. satisfaction) along with a table to record activities attempted and the associated feelings. Intervention 3 (Appendix C) was a 'hope and optimism' intervention with a future-focused TO. Again, based upon the 'pleasure' component of a positive psychotherapy programme (Seligman et al., 2006), and research which indicates that increased well-being and happiness occur when individuals pursue and attain self-concordant goals in the future (Sheldon & Houser-Marko, 2001) participants were required to spend some time thinking at the end of each day about the events which were likely to occur the following day, and note down three goals or things that they hope will happen with the steps they can take to help make them occur. Examples goal ideas (e.g. sending a letter) and examples of positive emotions about the future (e.g. optimism, hope) were listed. A table to record goals and steps was also provided. All 3 interventions were expected to increase SH, PA and gratitude, whilst intervention 1 (past-focused TO) was expected to result in the greatest increase of gratitude.

Following participation, a copy of the debrief sheet (Appendix I) stating the aims of the study, the temporal orientation of the 3 interventions and the expected findings of the study were provided. The right to withdraw and the contact details of

the researcher and ethics committee were detailed along with the opportunity to receive a copy of the study upon completion.

Procedure

After responding to the research poster and reading and signing the information/consent form (Appendix H) participants were randomly allocated to one of the three experimental conditions. Participants were each assigned a number in order to identify and keep track of which participants questionnaires went together and detail which intervention condition they were under. The procedure remained the same for all participants irrespective of condition, with each participant being tested individually. Participants were free to choose to complete the questionnaires via e-mail or in person at mutually convenient participation sessions in a psychology lab room on campus. Participants were given the 3 questionnaires (PANAS; Appendix D, GQ-6, Appendix E, SHS, Appendix F) to complete before being given a sheet detailing their exercise to complete over the following week. Participants were then required to return a week later (if in person), bringing their completed exercise sheet, to complete the questionnaires again. If completed via e-mail the researcher sent participants the second set of questionnaires on day 7, with participants required to e-mail back the completed forms. Upon completion of the second set of questionnaires participants were thanked for participation, given a copy of the debrief (Appendix I), reminded of their right to withdraw, and were awarded participation credit if it was required- if completed via e-mail participation credit was placed in student pigeon holes for collection.

Ethical considerations

In order to reduce the potential feeling of obligation to take on the part of friends and family of the researcher they were contacted via e-mail with the study poster attached. Contact would not be made again unless they indicated their wish to participate by replying by e-mail stating their interest. This was important to reinforce the fact that participation is optional and that it is fine not to reply. All other procedure (consent/information sheet/debrief) was followed as per-student participants.

Whilst participation credit was offered to psychology students, it was made clear that whilst they need to accrue a specific amount of time they could do this

through participation of alternative studies. As all participants were over 18 and not cognitively impaired it was assumed that all were able to give informed consent.

Results

All participants completed baseline and post-intervention measures for the PANAS, SHS and GQ-6 questionnaires. Table 1 shows the means and standard deviations for the baseline and post-intervention scores, along with the calculated mean differences. The greatest increase in PA ($M= 3.65$, $SD= 9.18$), and greatest decrease in NA ($M= -1.55$, $SD= 4.63$) were observed in the future-focused condition, however the greatest increase in subjective happiness ($M= 2.10$, $SD= 2.77$) occurred in the present-focused condition. On the measure of gratitude, the greatest mean increase was in the past focused condition ($M= 1.15$, $SD= 5.23$). Of all the measures, the most substantial difference between conditions occurred for PA, with a 2.55 difference between past-focused ($M= 1.10$, $SD= 7.83$) and future-focused ($M= 3.65$, $SD= 9.18$) interventions. In contrast, there was only a minimal difference between conditions for gratitude, with 0.30 difference between present-focused ($M=0.85$, $SD= 2.80$) and past-focused ($M= 1.15$, $SD= 5.23$).

Table 1**Means and standard deviations for positive affect, negative affect, subjective happiness and gratitude by happiness intervention condition**

	Past-Focused: Daily Blessings Journal		Present-Focused: Savouring Experiences		Future-Focused: Hope and Optimism	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
	PANAS (1): Positive Affect	28.35	9.17	26.30	6.18	29.15
PANAS (2): Positive Affect	29.45	8.92	28.95	5.97	32.80	7.96
Positive Affect Difference	1.10	7.83	2.65	5.26	3.65	9.18
PANAS (1): Baseline Negative Affect	14.10	4.97	13.00	4.23	15.30	4.70
PANAS (2): Negative Affect	12.85	3.07	12.40	3.19	13.75	4.52
Negative Affect Difference	-1.25	3.55	-.60	3.91	-1.55	4.63
SHS (1) Subjective Happiness Scale	17.70	3.33	16.90	3.16	19.30	3.54
SHS (2) Subjective Happiness Scale	19.05	4.44	19.00	4.63	21.15	3.69
Subjective Happiness Difference	1.35	2.96	2.10	2.77	1.85	2.25
GQ-6 (1) The Gratitude Questionnaire- Six Item Form	33.45	5.54	33.40	4.27	34.45	3.69
GQ-6 (2) The Gratitude Questionnaire- Six Item Form	34.60	6.05	34.25	4.22	35.55	5.41
Gratitude Difference	1.15	5.23	.85	2.80	1.10	4.60

Several inferential statistical tests were conducted on the results. A MANOVA was carried out on the results, with multi-variate tests indicating that there were no significant differences overall between the intervention conditions, $F(2,57)= 0.31$, $p= 0.96$, illustrated by comparing between-subjects effects, with no significant differences on the scores of dependent variables between interventions: PA, $F(2,57)= 0.57$, $p= 0.57$; on NA, $F(2,57)= 0.29$, $p= 0.75$; on GQ-6, $F(2,57)= 0.28$, $p= 0.97$; and on SHS, $F(2,57)= 0.41$, $p= 0.67$.

Further to this, mixed-model ANOVAS on a 3X2 design were conducted to compare the significance of each individual within-subject measure. An ANOVA for PA showed a significant difference between base-line and post-intervention scores $F(1,57)= 6.32$, $p= 0.01$, however there was not a significant interaction between PA and intervention, $F(2,57)= 0.57$, $p= 0.57$. The pattern was repeated for NA, with within significance between pre and post intervention NA scores $F(1,57)= 4.68$ $p= 0.03$, but no significant intervention-measure interaction, $F(2,57)= 0.29$, $p= 0.75$.

The same occurred for subjective happiness with a significant difference between base-line and post-intervention scores $F(1,57)= 26.10, p= 0.000$, but no significant interaction between SH and intervention $F(2,57)=0.41, p=0.67$. However, an ANOVA for gratitude showed no significant differences on either within subjects comparisons $F(1,57)= 3.41, p=0.07$, or for intervention interaction $F=(2,57)= 0.03, p=0.97$.

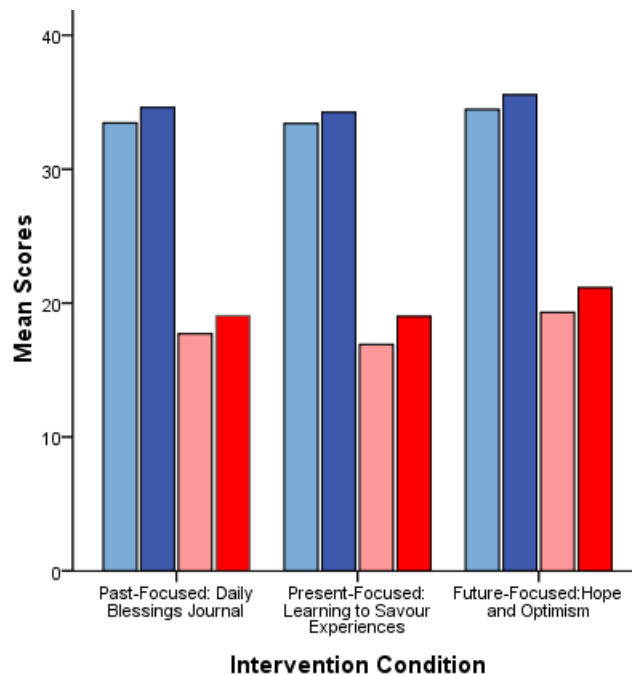


Figure 1: Mean scores of base-line and post-intervention PA and NA

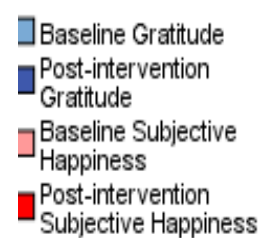


Figure 2: Mean scores of base-line and post-intervention gratitude and subjective happiness

Discussion

The results of this current study were consistent with the hypotheses outlined previously. Irrespective of the TO of the interventions, participants in all conditions experienced significant increases in scores of SH, PA and gratitude, with significant decreases in NA. Whilst all dependent variables evidenced significant increases, there was not a significant interaction of the intervention condition; therefore the greatest observed differences for each measure were diffused across interventions. In line with the third hypothesis, the greatest mean increase in gratitude was observed in the past-focused condition. The present-focused condition however evidenced the greatest mean increase on scores of SH. Therefore, the future-focused condition produced the greatest mean increase of PA along with the greatest mean decrease in NA. Consequentially, each intervention led to positive effects on at least one dimension related to happiness.

Within the positive psychology literature conceptions and operationalisations of happiness and well-being vary, but consistently positive functioning is associated with subjective well-being and PA. Operationalised, health and well-being exist on a continuum between complete mental health with high happiness and satisfaction, and complete mental illness with low levels of emotional and psychological well-being in addition to poor subjective views of life and happiness (Keyes & Lopez, 2005, in Snyder & Lopez, 2005). Such dichotomous views of mental health and wellbeing often neglect the variations between poles, with most treatments targeting the presence of mental illness with the sole goal of symptom reduction. Recent research however has indicated that the relief of states such as depression, anxiety and suffering does not necessarily result in well-being and positive functioning (Duckworth et al., 2005). As Seligman (2007) suggests, therapy often comes too late, however the promotion of positive therapeutic systems and well-being in addition to increasing positive emotions, can build individual buffers to foster resilience. Whilst therapy and medication are often vital and necessary, positive interventions have financial, individual and societal benefits as they cost a small amount in comparison, are easily accessible, can be self-administered and come without the association of stigma (Seligman et al., 2006). Traditional treatments for mental illness could be effectively supplemented by positive intervention exercises such as those used in the current study, whilst directing interventions at healthy individuals can help increase

global happiness and potentially help prevent later depression, schizophrenia and substance abuse (Seligman, 2007).

Following a recent review of research, Sheldon & Lyubomirsky (2007) report empirically that it is possible to increase happiness, but that the pursuit of happiness takes work- involving the practice of intentional activity. Therefore, all interventions in the current study involved intentional activity or, the 'practices in which people choose to engage' (Lyubomirsky et al., 2005) - which defined are the ways in which individuals can act within their circumstances to increase happiness and counteract hedonic adaptation. Such activities can be behavioural, volitional or cognitive in nature, with the interventions used in the current study based upon happiness increasing exercises previously cited within the positive psychology literature (Seligman et al., 2006). All participants were required to both participate in, and record, the daily task as research indicates that participants actually have to do the activity in order to achieve benefit, with significant effects only observed for participants who complete their assigned exercise (Seligman et al., 2005). Additionally, the TO of each intervention was varied purposefully (past-focused, present-focused, future-focused) as such activities provide the opportunity to increase different positive emotions about the past, present, and future which contribute to enhanced subjective happiness and well-being (Seligman, 2007). Despite being distinguished as separate for the purpose of study, TO are to an extent linked and it is desirable to be happy in all three domains.

Whilst all interventions in this study evidenced increases (and decreases) in the desired direction, specific associated benefits can vary depending on the TO of the exercise. The first intervention, a daily 'blessings journal' exercise was a cognitive happiness-increasing activity with a past-focused TO. This intervention was designed to encourage the cultivating of gratitude which as an emotion has been shown to co-vary with positive affect states (Mayer, Salovey, Gomberf-Kaufman, & Blainey, 1991) and well-being. Furthermore, the ability to appreciate life circumstances is cited to be an adaptive coping strategy in which people are able to positively reinterpret situations and experiences, which boosts coping resources and can strengthen social relationships (Lyubomirsky et al., 2005). In support of this, participants in the 'blessings journal' condition evidenced the greatest mean increases of post-intervention gratitude scores ($M= 1.15$, $SD= 5.23$) in addition to PA and SH increases and NA decreases, relative to the present and future-focused conditions. This is

consistent with research which states that the regular practice of grateful thinking can enhance concurrent well-being (Emmons & McCullough, 2003) in addition to counteracting the effects of hedonic adaptation. Supporting previous research (Emmons & McCullough, 2003; Lyubomirsky et al., 2005; Seligman et al., 2005) the results again suggest it is possible to increase short-term happiness by undertaking a daily gratitude based exercise. Although participants in the current study were not followed up beyond the week intervention, participants who completed a similar 'three good things' exercise (Seligman et al., 2006) evidenced improvements which were maintained for six months.

The observed increases of gratitude, PA, SH, and decreases of NA in the past-focused intervention are important as research indicates there are many benefits associated with the ability to hold positive emotions towards past events. Perhaps the best illustration can be seen in the success of cognitive therapy for depression in which therapists encourage clients to alter negative/ruminative thoughts and attributions about the past and present to more positive ways of viewing events (Beck, 1976). Cognitive therapy techniques can produce relief from depression that is equal to the effects of taking antidepressants- but significantly are better at preventing future recurrence and relapse (Seligman, 2007). This is in line with Seligman's (2002) view that positive psychology should be as much about prevention as it is about intervention, with the cultivating of strengths providing buffers against stressors and negative life events.

The past and present temporally orientated interventions may share an underlying process in which the focus upon the good of what you have had, and the good in which you currently have, direct attention away from making upward comparisons, for example, McCullough et al. (2002) found gratitude to be inversely related to dispositional envy. If attention is focused on what is lacking, the blessings one does have will be missed, therefore engaging in practices such as mindfulness (Kabat-Zinn, 2003) and savouring (Emmons & McCullough, 2003)- which are similar and related concepts, can prevent pleasures and positive experiences from being taken for granted. Gratitude, which has a past TO promotes savouring- the hallmark of present-focused interventions, and the consequential cultivation of appreciation. Research indicates that mindfulness can be cultivated by practice which is encouraging as higher levels of mindfulness have been related to both lower levels of mood disturbances and stress (Brown & Ryan, 2003). Through engaging in

savouring or mindfulness activities it is possible to increase positive emotions about the present such as satisfaction from immediate pleasures. In addition, past and present-focused interventions can help counteract hedonic adaptation or, the habituation that can occur when one adjusts to the conditions of their circumstances (Seligman, 2007). At a biological level, neurons are wired to respond to novel events-ignoring events which do not provide new information (Seligman, 2007), therefore novel events are noticed whilst familiar and repeated events are disregarded. Whilst the timing and spacing of events can help counteract such adaptation and keep events fresh, savouring and mindfulness can be applied to everyday activities and experiences to enhance awareness of novelty and increase the satisfaction of momentary pleasures (Kabat-Zinn, 2003).

The current present-focused 'savouring experiences' intervention was therefore based upon the savouring component of a positive psychotherapy programme (Seligman et al., 2006) which evidenced satisfaction increases and a halving of depression scores following participation. In line with their findings, the current study saw increases in participants scores of PA, SH and gratitude, with decreases in NA. This therefore suggests that by engaging in a 'savouring experiences' exercise it is possible to increase short-term happiness, with the ability to counteract hedonic adaptation offering the potential to create the conditions for enduring happiness.

Similar to the links between a past and present TO, the present can be affected by a future TO. Both past and future events exist cognitively in the present which can have an impact on present behavioural functioning. Whilst it is possible to increase happiness by engaging in past and present focused interventions, a focus on the future can help improve well-being (Seligman, 2002). Constructions of the present can extend into the future through the formation of expectations and anticipations (Zimbardo & Boyd, 1999), with a future TO helping in the development of personal goals and realistic ideal goal states. Research consistently indicates that a higher level of well-being is associated with intrinsic goals which are congruent with needs, and when higher levels of commitment, involvement and belief in personal control are held (Nurmi & Salmela-Aro, 2006). The positive emotions about the future (hope and optimism) are critical for achieving happiness, with optimism about the possibility of attaining a goal providing the basis for happiness (Nurmi & Salmela-Aro, 2006). Indeed, optimism has been characterized as a global expectation of a positive

future and a belief that one's goals can be accomplished (Carver & Schier, 2005). According to Lyubomirsky (2008), being optimistic about the future involves a choice about how you perceive the world, it is not about denying negatives or trying to control situations that cannot be controlled but is instead about looking for the positives and considering the silver linings.

The future-focused hope and optimism intervention used in the current study was therefore based upon the future-focused component of the Seligman et al. (2006) positive psychotherapy programme and upon research which shows optimistic thinking can boost happiness (Lyubomirsky, 2008). Optimism is as much about the process as it is about the end state, with optimism coming from identifying and believing in the specific steps of how to accomplish a goal (Rook, 1984). Optimists invest effort in achieving goals, perceive outcomes as attainable and are realistic about how to overcome obstacles, therefore the included intervention required participants to identify three short-term goals and list the steps of how they can make the identified goals achievable. The results indicated that following participation in the future-focused intervention it was possible to increase happiness, with participants exhibiting increased scores of PA, SH, and gratitude, and decreased NA. This is important as research indicates that compared against pessimists, optimists report more happiness, satisfaction and a higher quality of life in addition to greater perceived subjective well-being (Scheier et al., 1986), whilst higher levels of optimism can predict lower levels of future psychological distress (Carver & Scheier, 2005). To an extent, being optimistic is about more than a positive future focus, instead it is the integration of all three TOs- accepting the past, whilst appreciating the present, but anticipating a better future (Lyubomirsky, 2008).

As time does not exist independently of the person (Drake et al., 2008) affective states in the present can influence constructions of the past and the kind of goals an individual desires in the future. Feelings of happiness can lead to the construction of goals which are likely to lead to increased positive feelings, whilst low levels of well-being are likely to lead to rumination and low beliefs in personal control and goal attainment (Nurmi & Salmela-Aro, 2006). Although the construction and achievement of goals is associated with more optimistic thinking and a greater engagement with positive health behaviours (Drake et al., 2008), a continuous self-focus tends to result in a low sense of well-being (Nurmi & Salmela-Aro, 2006). Similarly, whilst a focus on the present is associated with subjective well-being and

global happiness, over emphasis of immediate gratifications with the disregard of consequences can lead to reduced SH and lower PA (Drake et al., 2008). Therefore, perhaps as Boniwell & Zimbardo (2004) propose, holding a balanced time perspective may be the key to maintaining and achieving increased happiness and PA.

The ability to enjoy higher levels of PA and happiness is important because despite the pathology-orientated views that have historically dominated psychology, biology tells us that we are pre-programmed to seek anything which promises to increase the probability of survival (Csikszentmihalyi & Csikszentmihalyi, 2006). The biased focus of psychology towards negative emotion arises from the fact that such negative emotions can cause problems for both individuals and society alike. Negative emotions can lead to aggression, dysfunctions and disorders and are therefore typically associated with problems and dangers (Fredrickson, 2006) which attracts the most attention from researchers. Positive emotions in contrast are evolutionarily advantageous- they produce an adaptive bias to approach and explore the environment whilst providing the motivation to engage in social situations and activities (Fredrickson, 2006). Positive emotions can broaden thinking and build personal psychological resources which overtime can enhance individual's emotional and physical well-being (Fredrickson, 2006). For example, Fredrickson, Tugade, Waugh, & Larkin (2003) found that frequent experiences of positive emotions produce increments in personal resources and increases in trait resilience. This is significant as trait resilience predicts psychological well-being and growth in addition to physiological recovery (Fredrickson et al., 2003). Further to this, an in-depth meta-analysis by Lyubomirsky, King, & Diener (2005) suggests that in contrast to negative emotions, there are wide individual and societal benefits of positive emotions and happiness such as enhanced physical health, longer life expectancy, better functioning relationships and greater career success. Happiness should therefore be promoted as interventions represent a sound social and public health investment- happy individuals tend to be flourishing people who are more likely to be co-operative, pro-social and charitable (Sheldon & Lyubomirsky, 2007). Therefore, adding to the current literature, this present research contributes empirical evidence which suggests that irrespective of the TO of the chosen intervention, it is possible to increase (at least short-term) PA, SH, and gratitude, along with decreases in NA.

Future research should focus upon the key to maintaining such increases on a long-term basis, which perhaps may lie in choosing one intervention to practice at a time but, varying the TO of the happiness increasing intervention on a regular basis. Similar to the way that mindfulness and savouring help to counteract habituation, a varying TO could help to sustain the relative increases and improvements that come from the differing interventions. As the types of positive emotions vary according to whether they concern the past, present or future, cumulatively building up the relative emotions may offer a stronger, more multifaceted buffer to protect against subsequent stressors and life events. As Seligman (2007) suggests, by learning about each of the three types of happiness, emotions can be moved in a positive direction through changing the ways one feels about the past, experiences the present, and thinks about the future. In conclusion, interventions with a varying TO appear to have comparable affects on increasing the components of happiness. It therefore appears that true happiness comes from experiencing the past, present and future in the most optimal way.

In terms of strengths and limitations of the current study, the 'subjective' happiness scale was chosen to measure happiness in order to reflect the subjective nature of the conceptualisations of both emotions and time and to bring assurances of validity. Whilst questions measuring happiness are susceptible to numerous situational influences, such differences disappear in repeated tests of the one-time measurement and can thus be explained away as random error (Veenhoven, 1991). To illustrate the fact that high ratings of global happiness are not necessarily synonymous with the absence of negative emotions, and that one can be generally happy with life but still have negative feelings, the SHS was used in conjunction with the PANAS. As positive and negative affect correlate weakly (Argyle & Martin, 1999) it follows (and supports the need for research into happiness increasing interventions) that happiness is not necessarily the opposite to unhappiness, likewise relieving someone of depression does not guarantee they will therefore be happy.

Similarly, in order to reflect the multidimensional conceptualisations of positive mental health and happiness, the present study treated PA, NA, SH and gratitude as separate but related concepts. Whilst the PANAS scale measures both positive and negative affect, as affective traits they show some degree of independence (Watson et al., 1988). It does however appear that positive affectivity is typically consistent across various situations and contexts, with research indicating that PA typically

correlates positively with life satisfaction and negatively with NA (Sheldon & Lyubomirsky, 2007). Whilst the questionnaires used in the current study were measuring related dimensions of happiness, the presentation order of the questionnaires (which remained constant across all participants- PANAS; GQ-6; SHS) could have contributed to an order effect in response. Participant's gratitude ratings may have been affected by the activation of positive and negative affect which was measured by the preceding PANAS questionnaire. Similarly, assessments of global happiness may have been based upon assessments of how much in life they have to be grateful for. To minimise any potential order effect the sequence of presentation could be varied which, if the study were to be replicated on a larger sample could control for such potential variance. However, as all three questionnaires are assumed to activate cognitions of a similar valence, the order effect is considered to be minimal.

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