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[*in press* Emotion]

Does a culture of happiness increase rumination over failure?

Lucy McGuirk¹, Peter Kuppens², Rosemary Kingston¹, & Brock Bastian³,

¹University of New South Wales

²University of Leuven

³University of Melbourne

Corresponding Author: Brock Bastian, Melbourne School of Psychological Sciences, University of Melbourne, Victoria, 3010, Australia, brock.bastian@unimelb.edu.au

Abstract

Promoting happiness within society is good for health, but could the *over-promotion* of happiness have a downside? Across two studies we investigate two emotion norms associated with an emphasis on happiness – the importance of a) seeking positive emotion, and b) avoiding negative emotion – and whether these norms have implications for how people respond to, and seek to regulate, their negative emotional experiences. In Study 1 we used an experimental design to show that emphasizing the importance of happiness increased rumination in response to failure. In Study 2 we drew on cross-sectional evidence to investigate the other side of this equation, finding that emphasizing the importance of *not* experiencing negative emotional states (e.g., depression and anxiety) was also associated with increased rumination, and that this had downstream consequences for well-being. Together, the findings suggest that the over-promotion of happiness, and in turn the felt social pressure not to experience negative emotional states, has implications for maladaptive responses to negative emotional experiences.

Keywords: Happiness, Culture, Emotion Norms, Wellbeing, Rumination, Social Expectancies

One thing is clear: it is good to be happy. Most of us prefer to experience positive emotions and like to spend time with people who inspire these feelings within us. It is no wonder that we do, given the large body of work demonstrating that feeling happy is good for wellbeing and leads to a more successful life (e.g., Fredrickson, 2001; Lyubomirsky, King, & Diener, 2005; Seligman & Csikszentmihalyi, 2000). It is also due to these benefits that schools aim to increase the happiness of their students (Terjesen, Jacofsky, Froh, & DiGiuseppe, 2004), organizations seek to maximize the happiness of their employees (Cameron, Dutton, & Quinn, 2003), and national campaigns are designed to promote the happiness of nations (“State ‘happiness’ campaign,” 2012). Yet, could there be a downside to *over-promoting* happiness? Although placing value on happiness may have benefits when we feel happy, could it be that such cultural climates exacerbate our negative emotional experiences? In the current studies we examine whether placing a premium on happiness may lead people to respond to their negative emotional states in maladaptive ways.

Is happiness over-promoted?

Within the positive psychology movement there has been a tendency to assume that having more positive emotional experiences is always better (Grant & Schwartz, 2011). Although this approach to happiness overlooks evidence that intense positive affect comes with psychological costs (Diener, Colvin, Pavot, & Allman, 1991), or that extremely cheerful people engage in riskier behaviors (Martin et al., 2002), live shorter lives (Friedman et al., 1993), and earn lower salaries (Oishi, Diner, & Lucas, 2007), it has nonetheless shaped modern cultural discourse on what constitutes the good life. Rather than being the by-product of a life well-lived, feeling happy has become a goal in itself; it has become a prominent measure of success in life – and the more the better.

This emphasis has led some to suggest that happiness has become a cultural obsession. Whether it is the smiling happy faces splashed across electronic media, billboards, and magazines,

or the constant buzz of ‘happiness gurus’ selling their latest emotional quick fix, the message that we should aim to maximize our positive emotions and avoid our negative ones is constantly reinforced. As Barbara Ehrenreich (2003) argues in her aptly titled book *Smile or Die*, Western culture has become infatuated with optimism and happiness.

There are two reasons that over-promoting happiness as an important goal in life may be problematic. The first is that placing an extreme value on happiness tends to be self-defeating (e.g., Gruber, Mauss, & Tamir, 2011). Research shows that when people expect to feel happy they often experience less happiness (Mauss, Tamir, Anderson, & Savino, 2011), that trying to feel happy often leads to reductions in happiness (Ford, Shallcross, Mauss, Floerke, & Gruber, 2014; Schooler, Ariely, & Loewenstein, 2003), and that placing value on happiness is linked to affective disturbances (Thompson, Kircanski, & Gotlib, 2016).

The second reason has to do with the ways in which the promotion of happiness can lead people to devalue and feel threatened by their negative emotional states. Indeed, in modern cultures where happiness is highly valued, common experiences of sadness are all too often cast as pathological, as medical conditions that need treatment (Frances, 2013). In such contexts, people often experience their negative emotional states as a sign that they are failing to live up to salient and desired social values. For instance, when people feel socially pressured to experience positive emotions, and therefore not to experience negative emotions, they tend to experience more negative affect and less wellbeing (Bastian et al., 2012), and feel more lonely in response to negative emotional events (Bastian, Koval, Erbas, Houben, Pe, & Kuppens, 2015). Furthermore, evidence suggests that the link between depression and holding happiness as an important life goal is moderated by the extent to which people believe they can successfully regulate, and by implication feel less threatened by, their negative emotions (Fergus & Bardeen, 2015). Other work has shown that a failure to value negative affect amplifies the link between negative emotion and poor health outcomes (Luong, Wrzus, Wagner, & Riediger, 2016).

Does culture play a role?

Together, the evidence identifies two problematic beliefs apparent in contexts that over-promote happiness: that it is important to a) seek positive emotion, and b) avoid negative emotion, and both may have negative consequences for wellbeing. Critically, although research on this topic explicitly acknowledges the role of culture in promoting such beliefs, less work has directly examined whether salient cultural values themselves cause negative wellbeing outcomes. For instance, the widely employed valuing happiness scale developed by Mauss et al. (2011) examines personal beliefs about the value of happiness, rather than perceived social values, and cultural variation is attributed to non-specific dimensions such as individualism vs. collectivism (e.g., Ford et al., 2014). Other work has observed that the relationship between poor wellbeing outcomes and the experience of negative emotion varies across culture, yet has not directly identified which cultural factors may explain these differences (e.g., Curhan et al. 2014).

An emerging body of work has begun to examine the role that perceptions of one's own socio-cultural environment play in determining the relationship between emotion valuation and wellbeing outcomes. For instance, Bastian, Kuppens, De Roover, and Diener (2015) observed that country-level variance in perceptions of whether other people value positive emotion determines the relationship between one's own emotional states and satisfaction with life. Other work has focused on the perceived socio-cultural expectations to either experience positive emotion (Chang, Jetten, Cruwys, & Haslam, 2017) or not to experience negative emotion (Bastian et al., 2012; 2015; Bastian, Pe, & Kuppens, 2017), finding negative wellbeing implications. Furthermore, this work has demonstrated that when compared to an individual's personal valuation of emotional states, it is perceptions of how others are believed to value those same emotions (the socio-cultural value) that most strongly predict well-being outcomes (e.g., Bastian et al., 2012).

This work has employed the term ‘social expectancies’ to characterize the felt social pressure to maximize positive emotion and minimize negative emotion. Because social expectancies directly capture how people perceive the emotional expectations of their immediate socio-cultural environment, such an approach extends beyond previous work on social norms for emotional experience (e.g., Eid & Diener, 2001) or ideal affect (Tsai, Knutson, & Fung, 2006), which measure an individual’s own norms or ideals and how these vary across cultural contexts. In this way, social expectancies share some similarity with concepts such as display rules (Ekman & Friesen, 1969), or feeling rules (Hochschild, 1983). Yet they differ from these constructs in that they explicitly refer to the felt social pressure to up-regulate positive emotion and to down-regulate negative emotion—a pressure that is especially evident in so called ‘happiness cultures’ (see Bastian et al., 2012; Chang et al., 2017).

Social Expectancies and Rumination

Closer inspection of this link between poor wellbeing outcomes and the felt social pressure to a) seek positive emotion and b) avoid negative emotion suggests that emotion regulation strategies may play an important role. Perceiving that others expect us to experience (or not to experience) certain valued (or devalued) emotional states sets up important reference values for our own emotional experiences (Carver & Scheier, 1990). These expectations communicate to people that they *should* feel happy and *should not* feel sad. Compared to personal emotion goals, which one may feel more capable of revising at will, social expectancies are the province of one’s socio-cultural environment. This makes these emotion goals especially insidious, as they are constantly reinforced through salient cultural reminders of the value of happiness, ensuring that they are hard to abandon. Within these contexts, negative experiences such as failure or loss interrupt feelings of happiness and represent a discrepancy between how people think they *should* feel and how they *do* feel. When faced with such discrepancies, people tend to reflect negatively on themselves, repetitively focusing on their symptoms of distress and

on the possible causes and consequences of those symptoms (Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Watkins, 2008). This maladaptive response style is referred to as rumination, and has been linked to a range of negative health and wellbeing outcomes (Nolen-Hoeksema, 2000), including the aggravation of negative emotion (Moberly & Watkins, 2008).

The Current Study

We aimed to examine whether people ruminate more about their negative emotional experiences in social contexts where happiness is portrayed as important and valuable. Although promoting happiness can have positive benefits, we argue that in contexts where happiness is *over-promoted*, and where negative emotional states are consequently portrayed as counter-productive, people will respond to their negative experiences in maladaptive ways (see Catalino, Algoe, & Fredrickson, 2014). In Study 1, we sought experimental evidence by directly manipulating the environmental context within which participants had an experience of failure. We predicted that experiencing failure in a context where the social expectation of happiness is made salient, and by implication the *inappropriateness* of negative emotion is emphasized, would lead to increased rumination in response to failure. In this context, negative emotions signal a failure to achieve desirable and valued social goals, and become a focus of attention, triggering unhelpful responses such as ruminating on the causes of these unwanted emotional states. In Study 2, we built on these findings with cross-sectional data, employing widely used measures of rumination and wellbeing that have diagnostic value to examine the other side of this equation – the wellbeing implications of perceived social pressure *not* to experience negative emotion. We predicted that these perceived social norms would be related to an increased tendency to ruminate on negative experiences, and that this would have downstream consequences for common indicators of wellbeing.

Study 1

The aim of Study 1 was to investigate the causal relationship between making salient the social expectation for happiness and increased rumination in response to a negative experience. To this end, we manipulated the social context, either making salient the value of happiness or not. Across these two contexts we either exposed participants to the experience of failure (i.e., negative emotion induction) or not, and evaluated levels of rumination in response to this experience. We predicted that people who experienced failure in a context where the value of happiness was made salient would engage in increased levels of rumination. Although our focus was on rumination, we also examined whether this effect might extend to changes in positive or negative affect following rumination.

Method

One hundred and twenty first year psychology students (86 female, $M_{age}=19.59$, $SD_{age}=4.66$) participated in exchange for course credit. This sample size was considered sufficiently powerful to determine a novel experimental effect and we stopped collecting data when this number was met. Data from four participants were excluded because initial scores of negative or positive emotion were >3 standard deviations above or below the mean, leaving 116 participants. Because the effects of cultural valuations on emotional experience are more apparent in Western cultures (e.g., Australia and United States) compared to Eastern cultures (e.g., Japan; see Bastian et al., 2012, but also Diener, Diener, & Diener, 1995; Kuppens, Realo, & Diener, 2008) we recruited students who were born in Australia or had lived in Australia for at least ten years.

Participants were randomly allocated to one of three experimental conditions. Participants in the first condition completed the experiment in an environment that placed a value on happiness, and completed an impossible anagram task (*happy room/failure* condition, $n = 39$). Participants in the second condition also completed an impossible anagram task, but within a

neutral environment (*neutral room/failure* condition, $n=39$). A final condition was included to examine the effects of placing value on happiness but where participants did not encounter failure (*happy room/no failure*, $n=38$).

Before entering the laboratory room, participants provided basic demographic information and reported their current emotional state using the 20-item Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988; Positive affect: $\alpha=.83$, $M=25.62$, $SD=5.97$; Negative affect: $\alpha=.77$, $M=13.41$, $SD=3.72$). They were then guided to a small room with a computer in it. In the happy room conditions, the room was decorated with motivational posters, happiness and wellbeing trade books, and motivational self-statements on sticky notes. Additionally, the experimenter communicated a valuation of happiness by behaving in a positive and cheerful manner as the participant was seated in the experimental room and stated the following:

Sorry, the computer isn't working in the room I've been testing in, so we'll have to use this room. Don't mind all my things, I've just been studying in here. Have you read any of those books before? My Mum got them for me to help me through my Honours year and they've been a huge help! I just think it's so important to stay positive, you know? Getting overwhelmed with stress or sadness is such a waste of time. Those books showed me how to not let the negativity get the better of me and to stay happy.

In the neutral room/failure condition, the laboratory environment and experimenter were identical to those present in the happy room/failure and happy room/no failure conditions, but conveyed a neutral valuation of happiness (i.e., no happiness merchandise and neutral experimenter manner).

Failure induction. Participants then completed an anagram task, during which they attempted to solve 35 anagrams in 3 minutes. Approximately half (i.e., 15) of the anagrams had no solvable answer and all participants, therefore, performed poorly on the task. The approach has been frequently used in studies of rumination (e.g., Kingston & Watkins, 2015; Watkins,

Moberly, & Moulds, 2008). The experimenter responded to participants' underperformance to either induce a negative emotional state (i.e., "I thought you may have gotten at least a few more but we'll move onto the next task" – *failure condition*) or to reduce the experience of failure by telling participants in advance that the task was extremely difficulty and not to expect to solve many anagrams (*no failure condition*).

State rumination. State rumination was measured using a 5-minute breathing exercise, interrupted intermittently by a series of tones (12 in total). This was based on Kingston and Watkins (2015), which was adapted from a "breathing focus task" designed to measure worry (Hirsch, Hayes, & Mathews, 2009). Following the sound of each tone, participants were required to indicate whether their attention had been focused on their breathing or on any other thought unrelated to their breathing. If they were focused on another thought, they were then asked to describe the thought. Once all 12 tones had sounded and the breathing task had finished, participants elaborated on their thoughts and rated these thoughts in terms of valence¹. If the thought was negative, participants rated the thought on five criteria; thought frequency (rated 0=*only once*, 4=*more than 4 times*), duration (rated 0=*only for an instant*, 6=*nearly all the time*), distress (rated 0=*not at all* to 4=*extremely*), repetitiveness ("When thinking about this subject, how much did your thoughts keep coming back to the same or similar ideas again and again?", rated 0=*not at all*, 4=*a great deal*), and uncontrollability ("How difficult did you find it to stop this thought coming or to move on to other thoughts?", rated 0=*not at all*, 4=*extremely*). These criteria were an assessment of the ruminative qualities of a participant's thoughts during the 5 minute exercise and were used to calculate indices of rumination.

¹ Although not strictly inconsistent with our hypotheses, it is possible that participants in the happy room (compared to those in the control room) were more likely to rate their thoughts as negative (vs. neutral or positive) because of the relative contrast with an emphasis placed on happiness. This might have inflated the rumination score for participants in this room. To examine this possibility, we had a coder (blind to condition and purpose of coding) rate all listed thought content on a scale from 0=very negative, 5=neutral, to 10=very positive. Focusing only on anagram thoughts (as this relates to our reported effect), we then analyzed whether there was more negative thought content in the neutral room/failure condition (M=3.964, SD=.317) relative to the happy room/failure condition (M=3.761, SD=.172; note: there were no negative anagram-related thoughts reported in the happy room/no-failure condition, so we could only focus on the two failure conditions). This revealed that there was no significant difference ($F(1,22)=.317, p=.579$) between objectively rated negativity of thought content across conditions.

For each participant, there were five ratings of ruminative qualities for each of the 12 thought probes (tones), resulting in a total of 60 ratings. All five ratings were coded zero if, at the time of the thought probe, participants were (i) focused on their breathing, (ii) had a thought that was positive or neutral in valence, or (iii) had a negative thought that was rated as having no ruminative qualities (i.e., rated 0 by the participant on all five dimensions). Means of the 60 ratings were calculated for each participant across all 12 thought probes to provide a measure of generalized state rumination.

To quantify the degree of anagram-specific rumination, means of the 60 ratings were calculated for each participant across all 12 thought probes. Inspection of the thoughts that participants engaged in ruminatively (i.e., thoughts that participants scored as greater than zero on ruminative criteria) suggested four main categories of thought content: anagram-related, university-related, tone-related, and other-related. Ruminative thoughts were coded for anagram content (anagram-related=1, non-anagram-related=0) if the participant explicitly mentioned the previous task. They were coded for university content (university-related=1, non-university-related=0) if the participant explicitly mentioned exams or assignments and tone-related content (tone-related=1, non-tone-related=0) if the participant explicitly mentioned the tone².

All other ruminative thoughts (e.g., thoughts of family, friends, weekend) were coded as other-related (other-related=1, non-other-related=0). Anagram-related thoughts constituted 28% of all ruminative thoughts, university-related thoughts constituted 29%, tone-related thoughts constituted 25%, and other-related thoughts constituted 18%. For our analytic approach we analyzed both generalized rumination (including all thought content) and anagram specific

² Tone-related thoughts reflected a short-coming of the study design. Some participants indicated their thoughts about the tone when the tone sounded, rather reporting what they were thinking about prior to the tone. Other participants reported anticipating the tone, in which case the tone had become a source of thought content. Given this was consistent across conditions we do not see this as limiting our ability to analyze anagram specific-thought content, the key focus on the study.

rumination³. Finally, before leaving, participants responded to a shortened measure of social expectancies based on Bastian et al. (2012) to determine whether emphasizing the importance of happiness impacted on general beliefs about the social appropriateness of negative emotion (e.g., “I think society accepts people who feel depressed or anxious as normal”, “Society generally expects people not to feel depressed or anxious”). They also reported their current emotional state on the 20-item PANAS (Positive affect: $\alpha=.88$, $M=22.95$, $SD=6.62$; Negative affect: $\alpha=.87$, $M=14.18$, $SD=5.26$).

Results

The primary dependent variable of the study was the degree to which participants ruminated on the previous anagram task during the breathing exercise. A one-way ANOVA revealed that experimental condition predicted the degree of anagram-related rumination, $F(2,113)=12.55$, $p<.001$, $\eta^2_p=.18$ (see Figure 1). Post hoc Tukey HSD tests indicated that participants in the happy room/failure condition had more anagram-specific rumination ($M=.62$, $SD=.85$) than those in the neutral room/failure ($M=.17$, $SD=.47$), $p=.002$, 95% CI[.15, .78], and happy room/no failure ($M=.00$, $SD=.00$), $p<.001$, 95% CI[.31, .93] conditions. Participants in the neutral room/failure and happy room/no failure conditions did not differ in rumination relating to the anagram task, $p=.41$, 95% CI[-.14, .47]. The same one-way ANOVA revealed no effect of experimental condition on generalized rumination, $F(2,113)^4=2.35$, $p=.10$, $\eta^2_p=.04$ (happy room/failure: $M=.99$, $SD=1.00$; neutral room/failure: $M=.60$, $SD=.71$; happy room/no-failure: $M=1.03$, $SD=1.10$).

³ Separate analysis of university-related rumination, tone-related rumination and other-related rumination did not reveal any significant differences across conditions.

⁴ Degrees of freedom differ slightly between analyses because some participants had missing data.



Figure 1. Mean anagram-related rumination (with 95% confidence intervals) as a function of experimental condition.

A one-way ANOVA revealed no significant differences between conditions in initial positive emotion, $F(2,113)=1.95$, $p=.15$, $\eta^2_p=.03$, or negative emotion, $F(2,113)=.39$, $p=.68$, $\eta^2_p=.01$. One-way ANOVAs were then conducted to determine the effects of experimental condition on levels of positive and negative emotion following rumination. There was no main effect of experimental condition on positive emotion, $F(2,113)=1.59$, $p=.21$, $\eta^2_p=.03$, but there was a marginal effect on negative emotion, $F(2,113)=2.83$, $p=.06$, $\eta^2_p=.05$. Participants in the happy room/failure condition reported similar levels of negative emotion ($M = 14.59$, $SD = 4.38$) relative to the neutral room/failure condition ($M = 15.34$, $SD = 6.29$), $p = .80$, 95% CI [-3.56, 2.05], and higher-levels of negative emotion relative to the happy room/no failure condition (although the difference was not significant; $M = 12.61$, $SD = 4.69$), $p = .22$, 95% CI [-.82, 4.79]. There was a marginally significant difference between those in the neutral room/failure and happy room/no failure conditions, $p = .06$, 95% CI [-5.56, .09].

Despite there being only a marginal main effect of condition on negative affect, correlational analysis revealed that anagram-related rumination was significantly associated with

negative emotion following rumination ($r=.22, p=.02$). Given the significant effect of experimental condition on anagram-related rumination, we tested an indirect effect of experimental condition on negative emotion, via anagram-related rumination. Due to the fact that those in the happy room/failure condition were higher in anagram-related rumination relative to the two control conditions (neutral room/failure and happy room/no failure), experimental condition was contrast coded such that the happy room/failure condition (coded 1) was compared to both the neutral room/failure and happy room/no failure conditions (both coded 0). Regression analyses revealed that experimental condition predicted anagram-related rumination, $\beta=.41, SE=.11, p<.001, 95\% CI[.32, .76]$. Anagram-related rumination was also a significant predictor of negative emotion, $\beta=.54, SE=.78, p=.02, 95\% CI[.31, 3.47]$. Mediation analyses based on 5000 bootstrapped samples using bias-corrected and accelerated 95% confidence intervals (Hayes, 2012) showed that experimental condition had an indirect effect on negative emotion via its tendency to increase anagram-related rumination, $IE=1.16, 95\% CI[.48, 2.08]$.

Finally, a one-way ANOVA revealed that our measure of social expectancies did not reliably vary across experimental condition, $F(2,111)=2.99, p=.054, \eta^2_p=1.46$. Post hoc Tukey HSD tests did not reveal any significant differences between conditions ($ps>.09$). We discuss this further below.

Discussion

The findings of Study 1 supported our predictions: participants who experienced failure in a context where the value of happiness was made especially salient tended to ruminate on the cause of their failure more, and this in turn lead them to experience more negative emotion. Although we predicted an overall increase in rumination, we only found an increase that was specific to the failure event. One reason for this could involve methodological issues: a) the tendency for subjects to report ruminating on the tone, an unintended side-effect of the rumination

measure, and b) the effect of having university students complete the experiment at university, making salient current course demands. Tone and university-related rumination accounted for 54% of ruminative thoughts, and their salience was determined by factors outside of the experimental focus. A second reason may have to do with the nature of rumination itself. The specificity of rumination found in the present study is consistent with the response style theory conceptualization of rumination (Nolen-Hoeksema et al., 2008) as repetitive thoughts about the causes, consequences, and symptoms of an individual's negative emotion. In the current study, the experience of failure was a clear and direct cause of negative emotion, and hence became the focal point of ruminative thought content which differed as predicted across conditions. To this extent, the specificity of our finding to the current context could also be viewed as a strength, in that it was especially the experience of failure within the context of the expectation to be happy (compared to when that expectation was not made salient) which triggered a tendency to ruminate on the causes of that failure.

It is also noteworthy that our measure of social expectancies *not* to experience negative emotion, intended as a manipulation check in Study 1, did not capture the effects of the happy vs. neutral room. We think there are three possible reasons for this. First, and most straightforwardly, our manipulation might not have impacted our manipulation check is that it was delivered at the end of the study. This meant that any effects of the verbal script used by the research assistant might have been diluted by the rather lengthy state rumination measure and the anagram task. Second, as we note at the outset, the over-promotion of happiness may lead to two different emotion norms: a) the norm to experience positive emotion, and b) the norm not to experience negative emotion. Although these two norms could be construed as two sides of the same coin, and indeed norms not to experience negative emotion have been found to be more pronounced in cultures that tend to value happiness (Bastian et al., 2012), it may also be the case that they are (at least partially) distinct. Indeed, in some cultures the co-occurrence of positive and negative

emotion is more prevalent (e.g., Grossman, Huynh, & Ellsworth, 2015; Miyamoto & Ryff, 2011; Sims et al., 2015), and in these contexts such norms may be relatively less yoked to the other. Finally, another possible reason is that variation in the perceived socio-cultural pressure to be happy tends to be subtle. For instance, we did not tell participants they should be happy, yet we infer from our findings that they felt this pressure when the value of happiness was made salient. Although these effects may eventually translate into generalized beliefs about what others expect of us, this may only occur over repeated exposure. We believe that our findings potentially point to the subtle and therefore insidious effects of valuing happiness. Living in such cultures may shape how people respond to their negative emotional experiences even outside of their conscious awareness.

Study 2

Study 1 provided experimental evidence that experiencing failure in a context where value is placed on happiness increases rumination on that experience. We argue that *over-promoting* happiness is associated with two emotions norms: the importance of a) seeking positive emotion, and b) avoiding negative emotion. Study 1 provided evidence that emphasizing the first of these promotes rumination. In Study 2 we focus on the second of these beliefs, examining whether the felt social pressure *not* to experience negative emotion may be related to rumination and in turn a range of negative wellbeing outcomes. In Study 2 we also sought cross-sectional evidence, employing an individual differences measure of social expectancies by drawing on a widely used measure of rumination (the Ruminative Response Scale; Nolen-Hoeksema & Morrow, 1991) which has been shown as predictive of poor well-being outcomes (e.g., Nolen-Hoeksema, 2000), and by including a number of diagnostic and commonly employed wellbeing measures. Given our theoretical case above that experiencing emotional states that are perceived to be socially and culturally devalued would lead people to ruminate on those states, we treated rumination as the

mediator or process variable in our analysis which might have downstream implications for wellbeing indicators. This is also consistent with the treatment of rumination as a risk indicator for depression (e.g., Nolen-Hoeksema, 2000).

Given the cross-sectional study design, we aimed to control for a number of potentially confounding variables. Endorsing the notion that social pressures exist around the experience of particular emotional states could be the result of individual differences in social anxiety, rather than actual differences in the socio-cultural context. We therefore included a measure of social anxiety. More generally, we also included measures of social desirability and personality to rule out other potentially confounding individual differences (e.g., neuroticism).

Method

Two hundred and twenty-seven American participants (95 female, $M_{age}=21.08$, $SD_{age}=13.67$) were recruited using Amazon Mechanical Turk and were paid USD\$.0.50. This sample size was considered sufficient to determine novel correlational relationships and we stopped collecting data when this number was met. Twenty five participants (11%) were excluded due to having 25% missing data or failing to produce a personal identification code at the end of the questionnaire, resulting in a sample size of 202. Participants completed a questionnaire that including the following measures in the following order:

Frequency and intensity of negative emotions were measured first in order to reduce mood contamination from other measures. We used a list of four negative emotions (depressed, sad, anxious, stressed; Bastian et al., 2012). Participants rated each emotion on the frequency (“How often have you felt _____ in the last month?”; rated 1=*none of the time*, 9=*all of the time*) and intensity (“When you feel _____, what is your experience of it like?”; rated 1=*very mild*, 9=*very intense*). Responses for all emotions were combined to create an index score of frequency ($\alpha=.88$) and intensity ($\alpha=.90$).

Social expectancies⁵. Participants rated a revised version of the Bastian et al. (2012) measure of social expectancies. The previous version had five items and assessed four different negative emotions separately (depressed, sad, anxious, stressed). The revised version focuses just on anxiety and depression and has been extended to 13-items ($\alpha=.93$, e.g., “I think society accepts people who feel depressed or anxious”, “Overall, people in society are very comfortable with those who feel anxious or depressed”; 1=*strongly disagree*, 9=*strongly agree*; Bastian & Kuppens, 2017).

Rumination. Participants completed the Ruminative Response Scale, a 10-item measure of rumination (RRS: $\alpha=.86$; Nolen-Hoeksema & Morrow, 1991). Responses were made on a 4-point scale (1=*never*, 4=*always*).

Depression and wellbeing. Participants responded to the Centre for Epidemiological Studies Depression scale (CES-D: $\alpha=.95$; Radloff, 1977). Indicators of wellbeing included self-esteem (RSES: $\alpha=.92$; Rosenburg, 1965; 1=*strongly agree*, 4=*strongly disagree*) and life satisfaction (SWLS: $\alpha=.89$; Diener, Emmons, Larsen, & Griffin, 1985; 1=*strongly disagree*, 7=*strongly agree*).

Potential confounds. We examined three potential individual difference confounds that might have been associated with endorsement of social expectancies. These included social anxiety (LSAS-SR: Liebowitz, 1987; $\alpha=.97$; $M=88.99$, $SD=12.92$; 1=*strongly disagree*, 7=*strongly agree*), social desirability (MC-SDS: Crowne & Marlowe, 1960; $\alpha=.84$; $M=48.84$, $SD=12.92$; 1=*strongly disagree*, 7=*strongly agree*) and personality (TIPI: Gosling, Rentfrow, & Swann, 2003; 1=*disagree strongly*, 7=*agree strongly*).

⁵ Personal expectancies were also measured, as per Bastian, Pe and Kuppens (2015), but did not correlate with social expectancies, $r = .08$, $p = .27$, and showed inconsistent relationships with the dependent variables. When controlling for the effects of personal expectancies the reported results did not change.

Results

Correlations revealed that participants who reported higher perceived social expectancies indicated greater rumination, depression, and negative emotion (frequency and intensity; see Table 1). This did not vary when controlling for social desirability or personality, thus replicating the past findings of Bastian et al. (2012). Only the relationship between social expectancies and self-esteem became non-significant when controlling for social anxiety, $r=.08$, $p=.24$, or emotional stability, $r=.09$, $p=.22$.

Regression and nonparametric bootstrapping analyses with 5000 bootstrap samples were conducted to determine whether participants' self-reported rumination mediated the link between social expectancies and wellbeing (Hayes, 2012). Social expectancies predicted rumination, $\beta=.26$, $SE=.03$, $p<.001$, 95% CI[.05, .16] and rumination was also a significant predictor of the wellbeing variables, including frequency of negative emotion, $\beta=.53$, $SE=.20$, $p<.001$, 95% CI[1.41, 2.20], intensity of negative emotion, $\beta=.51$, $SE=.23$, $p<.001$, 95% CI[1.50, 2.41], depression, $\beta=.49$, $SE=.07$, $p<.001$, 95% CI[.41, .68], self-esteem, $\beta=.32$, $SE=.07$, $p<.001$, 95% CI[.20, .49], and satisfaction with life, $\beta=-.23$, $SE=.18$, $p=.001$, 95% CI[-.89, -.23]. When entered alongside rumination, the effect of social expectancies on frequency of negative emotion, $\beta=.29$, $SE=.08$, $p=.001$, 95% CI[.13, .45], remained significant but reduced in magnitude, suggesting partial mediation (see Figure 2). The same pattern emerged for intensity of negative emotion, $\beta=.38$, $SE=.09$, $p<.001$, 95% CI[.20, .57], depression, $\beta=.09$, $SE=.03$, $p=.001$, 95% CI[.04, .15], self-esteem, $\beta=.06$, $SE=.03$, $p=.04$, 95% CI[.00, .12] and satisfaction with life, $\beta=-.19$, $SE=.17$, $p=.01$, 95% CI[-.33, -.06]. Mediation analyses based on 5000 bootstrapped samples using bias-corrected and accelerated 95% confidence intervals (Hayes, 2012) showed that social expectancies had a significant indirect effect on frequency of negative emotion, $IE=.17$, 95% CI[.07, .28], intensity of negative emotion, $IE=.18$, 95% CI[.08, .30], depression, $IE=.05$, 95%

CI[.02, .08], self-esteem, $IE=.03$, 95% CI[.01, .06], and satisfaction with life, $IE=-.05$, 95% CI[-.11, -.01], via rumination⁶.

Table 1. Means and correlations among main measures.

	Means (SDs)	Correlations					
		1	2	3	4	5	6
Social Expectancies	5.80 (1.50)						
Rumination – RRS-10	2.21 (.60)	.26***					
Frequency Neg. Em.	4.10 (2.04)	.34***	.53***				
Intensity Neg. Em.	4.14 (2.30)	.37***	.51***	.86***			
Depression – CESD	1.79 (.67)	.32***	.49***	.79***	.75***		
Self-Esteem - RSES	2.06 (.65)	.22**	.32***	.51***	.45***	.62***	
Life-Satisfaction - SWLS	4.26 (1.47)	-.24***	-.23**	-.54***	-.48***	-.61***	-.51***

Note: * $p<.05$, ** $p<.01$, *** $p<.001$

⁶ Although our mediational analysis was theoretically justified, we also tested the reverse mediation model, predicting social expectancies with wellbeing measures via the mediating role of rumination. This revealed no reverse mediation pathway for negative emotion frequency, $IE=.05$, 95% CI[-.02, .11], negative emotion intensity, $IE=.03$, 95% CI[-.02, .09], or Depression, $IE=.15$, 95% CI[-.02, .36]. This shows that an increased tendency to experience negative emotion does not predict social expectancies not to experience that emotion via increased rumination. We did, however, find reverse mediational pathways for broader measures of well-being: self-esteem, $IE=.16$, 95% CI[.05, .30], and satisfaction with life, $IE=-.05$, 95% CI[-.11, -.01].

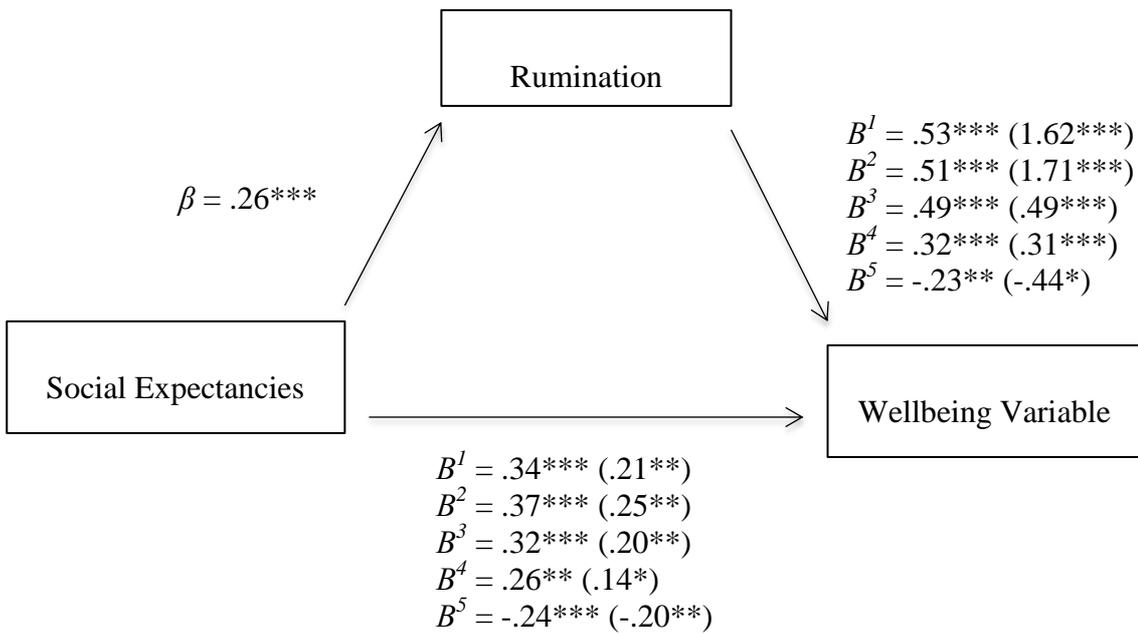


Figure 2. Mediation model for wellbeing variables: Study 2.

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Parameter estimates are standardised. Variables are numbered as follows: 1. frequency of negative emotion, 2. intensity of negative emotion, 3. depression, 4. self-esteem, 5. life satisfaction.

Discussion

The findings of Study 2 corroborate our findings from Study 1. Consistent with past research, people who endorse the belief that other people and their culture more generally expects them *not* to experience negative emotion experienced reduced wellbeing, as indicated by measures of positive and negative emotion, depression, self-esteem, and life satisfaction. Furthermore, it was these same individuals who were more likely to ruminate on their negative personal experiences, and this ruminative tendency statistically mediated the effect of social expectancies on reductions in wellbeing. Furthermore, we were able to show that these relationships could not be accounted for by other factors such as social anxiety, social desirability, or personality, all of which might provide an alternative explanation for perceiving social

pressures to inhibit negative emotion. Finally, it is noteworthy that although the direction of relationships is consistent with both our theoretical orientation and the findings of Study 1, we cannot infer directionality from these data, and our mediational analysis provides statistical but not causal evidence.

General Discussion

Across two studies, we find that two norms associated with over-emphasizing happiness—the importance of a) seeking positive emotion and b) avoiding negative emotion—have implications for how people respond to their negative emotional experiences. Specifically, we find that in these contexts people are more likely to ruminate on their negative feelings and negative experiences. In Study 1, we found experimental evidence that experiencing failure in a social context where social value is placed on seeking positive emotion leads to increased rumination. Furthermore, to the extent that people engaged in rumination within this context, they also experienced an increase in negative emotion. In Study 2, we focused directly on the social expectation to avoid negative emotion, finding that this norm was associated with a general tendency to ruminate on negative emotions. Moreover, rumination mediated the previously established links between this felt social pressure and low levels of wellbeing (e.g., Bastian et al., 2012).

The findings point to the critical role of social norms for determining how people respond to negative experiences. When people experience failure in a context where they believe that others either expect them to experience positive emotion or not to experience negative emotion, they focus more on their failure, and this in turn increases their levels of negative affect. Our findings are consistent with theoretical accounts of rumination, which suggest that people engage in ruminative thinking when they experience a discrepancy between how they think they should feel and how they actually do feel (e.g. Carver & Scheier, 1990), and that this can have deleterious effects on wellbeing (Nolen-Hoeksema, 2000; Nolen-Hoeksema et al., 2008; Moberly

& Watkins, 2008). Experiencing failure is a negative emotional experience which is inconsistent with the goal of feeling happy, and leads people to engage in unconstructive, negative, and self-focused thinking on the reasons for their failure.

Importantly, prior work suggests that rumination is especially likely in the context of hard-to-attain and hard-to-abandon goals (Watkins, 2008). Our work makes a critical contribution by detailing how social contexts can communicate these goals to people. Placing social value on happiness sets up a hard-to-attain goal that is constantly reinforced through popular culture, through advertising, and through the ways in which others who adhere to these norms communicate their own emotional experiences, making that goal hard to abandon.

Implications for research on social norms and norm violations

There is an existing body of work on emotion norms which recognizes that emotions are fundamentally social phenomena (Fischer & Manstead, 2008; Mesquita, & Frijda, 1992; Mesquita, Boiger, & De Leersnyder, 2016) and that people regulate their emotions to fit with social expectations (Fischer, Manstead, Evers, Timmers, & Valk, 2004). Emotion norms have been studied in relation to emotion management at work (see e.g., Fineman, 1997; Hochschild, 1983), where display rules shape how people express emotions in these contexts (Ekman & Friesen, 1969). For instance, individuals in service industries are explicitly trained to suppress negative emotions and to display smiles, even if they don't feel very happy. This effortful regulation of emotion has been referred to as emotional labor, and also extends beyond expression to 'deep acting' where emotion management operates at the level of feeling (e.g., 'feeling rules', Hochschild, 1983; Parkinson, 1991).

While people may act in accordance with social norms, they may also violate these norms, the consequences of which have been studied in terms of people's deviant beliefs and behavior (e.g., Abrams, Marques, Bown, & Henson, 2000; Festinger, Gerard, Hymovitch, Kelley, & Raven, 1952; Levine, 1989; Schachter, 1951). There has, however, been less work examining the

implications of violating emotion norms or experiencing ‘deviant emotions’ (although see Thoits, 1990). Our findings provide an important contribution to research on norm violations, illustrating that in the case of emotion norms, salient social standards can sometimes have ironic effects, leading to maladaptive emotion regulation strategies and in turn an increase, rather than decrease, in deviant emotional experiences. This reveals an especially insidious side to emotion norms; they may aggravate deviant emotional states, thereby leading people to more strongly experience the very emotions that feel they should not experience. Importantly, these same processes have been shown within the domain of cognition and behavior (e.g., Wegner, 2009) where monitoring our deviant thoughts and actions can also lead to ironic effects.

Critically, what is considered deviant also shifts in accordance with the salient social context (Goode & Ben-Yehuda, 2010). While the norm of happiness appears to be broadly endorsed within many cultural contexts (perhaps especially Western cultures; see Curhan et al., 2014) it may be less so in others. Just so, the appropriateness of negative emotion may also shift. For instance, anger is strongly discouraged in some groups or societies (Briggs, 1970) whereas it is openly discussed and expressed in others (White, 1990), and may be seen as a legitimate pathway to restoring one’s honor (Fischer & Mosquera, 2001; Cohen & Nisbett, 1994; 1997). This raises the question of what we might expect to observe in contexts where negative emotions, such as anger, are deemed appropriate, and positive emotions, such as joy, are deemed inappropriate. For instance, prison guards or police officers may be encouraged to act tough and to suppress their positive emotion, funeral attendees are expected to feel sad rather than joyous, and we expect to feel angry when others commit moral transgressions. Would a failure to experience negative emotion or a failure to suppress positive emotion within these contexts have similar ironic effects? One reason to think it might is that research on positive rumination or savoring suggests that, just as with negative emotions, reflecting on the existence of positive emotions can lead to their amplification (Bryant, 2003; Bryant, Smart, & King, 2005; Feldman, Joormann, & Johnson,

2008). Yet, there is also good reason to expect that this process may be different. Failing to meet valued social standards triggers negative emotional responding. For instance, we might feel anxious when feelings of joy erupt at a funeral, or when we fail to feel anger at another's moral transgression. In these cases, the negative emotional response attached to deviance and the existence of positive emotion, or lack of negative emotion, are not additive in the same way that feeling anxious about our deviant negative emotions can be. This suggests that it may be especially the norms to experience and express positive emotion, and to avoid all negative emotion, which are most likely to produce the ironic effects observed in the current study. Indeed, as we argue, it is these norms that are most salient in cultures that over-emphasize happiness.

The social causes of emotion dysregulation pose an important research question. Current rates of affective disturbance are reaching epidemic proportions (Ferrari et al., 2013; Kessler, Petukhova, Sampson, Zaslavsky, & Wittchen, 2012), suggesting that locating causes within the biological and psychological attributes of individuals alone is no longer sufficient. Examining the broader social and normative contributors to emotion dysregulation is an important research direction. By demonstrating the causal role that placing a social value on happiness can have for downstream emotional dysregulation, we provide a critical step in this direction.

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