

Situation selection is a particularly effective emotion regulation strategy for people who need help regulating their emotions

Thomas L. Webb, Kristen A. Lindquist, Katelyn Jones, Aya Avishai & Paschal Sheeran

To cite this article: Thomas L. Webb, Kristen A. Lindquist, Katelyn Jones, Aya Avishai & Paschal Sheeran (2018) Situation selection is a particularly effective emotion regulation strategy for people who need help regulating their emotions, *Cognition and Emotion*, 32:2, 231-248, DOI: [10.1080/02699931.2017.1295922](https://doi.org/10.1080/02699931.2017.1295922)

To link to this article: <https://doi.org/10.1080/02699931.2017.1295922>



Published online: 01 Mar 2017.



Submit your article to this journal [↗](#)



Article views: 348



View related articles [↗](#)



View Crossmark data [↗](#)



Situation selection is a particularly effective emotion regulation strategy for people who need help regulating their emotions

Thomas L. Webb^a, Kristen A. Lindquist^b, Katelyn Jones^b, Aya Avishai^b and Paschal Sheeran^b

^aDepartment of Psychology, University of Sheffield, Sheffield, UK; ^bDepartment of Psychology and Neuroscience, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

ABSTRACT

Situation selection involves choosing situations based on their likely emotional impact and may be less cognitively taxing or challenging to implement compared to other strategies for regulating emotion, which require people to regulate their emotions “in the moment”; we thus predicted that individuals who chronically experience intense emotions or who are not particularly competent at employing other emotion regulation strategies would be especially likely to benefit from situation selection. Consistent with this idea, we found that the use of situation selection interacted with individual differences in emotional reactivity and competence at emotion regulation to predict emotional outcomes in both a correlational (Study 1; $N = 301$) and an experimental field study (Study 2; $N = 125$). Taken together, the findings suggest that situation selection is an effective strategy for regulating emotions, especially for individuals who otherwise struggle to do so.

ARTICLE HISTORY

Received 30 September 2016
Revised 20 January 2017
Accepted 7 February 2017

KEYWORDS

Emotion regulation; situation selection; reappraisal; suppression

People often regulate their emotions: they try to stifle anger at their boss, hold back laughter during serious meetings, and try to feel more upbeat on grey days. Decades of research have examined the strategies that most effectively regulate emotions (see Webb, Miles, & Sheeran, 2012, for a review), often highlighting cognitive strategies that require individuals to change their interpretation or focus on the situation that they are in. Indeed, research shows that reappraisal (i.e. thinking differently about an emotional situation; Gross, 1998a), distancing (i.e. imagining oneself as not involved in an emotional situation; Kross & Ayduk, 2011), and distraction (i.e. shifting attention away from emotionally evocative information; Van Dillen & Koole, 2007) are particularly useful strategies for altering emotional experiences (Webb et al., 2012).

However, these strategies draw on cognitive resources (Hofmann, Schmeichel, & Baddeley, 2012) that are not always available (Vohs & Heatherton, 2000). Moreover, these strategies may not be helpful in certain contexts or for certain individuals, for other reasons. For instance, although reappraisal is

often considered to be one of the most effective strategies for regulating emotions (Webb et al., 2012), evidence also suggests that reappraisal is less effective when emotions are very intense (Sheppes & Gross, 2011). This may explain why people typically refrain from using reappraisal in highly emotional situations (Sheppes et al., 2012; Sheppes, Scheibe, Suri, & Gross, 2011). People may be less likely to use reappraisal in these contexts because it is difficult to change the interpretation of very strong feelings or the circumstances that created them. Reappraisal may also be particularly difficult for individuals who believe that they are poor at emotion regulation because they lack the motivation or self-efficacy to attempt to reappraise.

As cognitive strategies may not work for all individuals in all contexts (Aldao, Sheppes, & Gross, 2015; Bonanno & Burton, 2013; Kashdan & Rottenberg, 2010), we predicted that situation selection – an emotion regulation strategy that involves choosing situations based on their likely emotional impact – would be an especially useful strategy for individuals who frequently experience highly intense emotions

and/or are poor at regulating their emotions in the moment. For these individuals, knowing which situations to choose and which to avoid in order to circumvent intense, difficult to control affective states is likely to be particularly advantageous. If so, then this finding would point to a different way to help people to regulate their emotions – by prompting them to be aware of the likely affective consequences of different situations and to select which to engage with accordingly. The present research, therefore, investigates the effect of situation selection on the emotional experiences of individuals who typically experience intense emotions (i.e. are high in affective reactivity) and those who believe that they are poor at emotion regulation (i.e. are low in emotion regulation competence).

Situation selection and the process model of emotion regulation

Situation selection is a forward-looking, proactive strategy that requires people to anticipate how a situation might make them feel before deciding whether to approach or avoid that situation (Gross, 2015). It encompasses notions of behavioural activation (i.e. approaching situations that might prove rewarding, Gray, 1987), but is broader in that it can also involve avoiding situations that might evoke unwanted emotions. According to the process model of emotion regulation (Gross, 1998a, 1998b; 2015; Gross & Thompson, 2007), situation selection is an antecedent-focused regulation strategy that is instigated before affective responses occur (Gross, 2015). Once a person is in an emotional situation, however, s/he has to either try to modify aspects of that situation to achieve the desired emotional outcome (termed “situation modification”) or rely on strategies such as attentional deployment (e.g. distraction), cognitive change (e.g. reappraisal, distancing) or suppression, to regulate feelings as they unfold (Gross, 2015). Although some of the latter strategies have been shown to be effective (Webb et al., 2012), they are limited in that they can only be instigated once a person is already in an emotional situation.

There is growing evidence that situation selection is an effective way to regulate feelings (see Duckworth, Gendler, & Gross, 2016). Individuals select situations in an effort to change their mood (Erber, Wegner, & Theriault, 1996; Parkinson & Totterdell, 1999; Thayer, Newman, & McClain, 1994) and strategically use situations in an effort to evoke emotions that

they believe will serve their goals (see Duckworth et al., 2016; Tamir, 2016). For instance, participants expecting to play a confrontational video game (Tamir, Mitchell, & Gross, 2008) or take part in a negotiation (Tamir & Ford, 2012) were more likely to choose to listen to music that they believed would make them feel angry than choose exciting or neutral music. Similarly, participants who expected to play a video game that involved avoiding predators were more likely to choose to engage in activities likely to provoke fear (e.g. recalling memories of fearful experiences, listening to fear-inducing music) than activities likely to make them feel excited (Tamir & Ford, 2009).

Situation selection also emerges as a particularly useful emotion regulation strategy across the lifespan (for reviews, see Sims, Hogan, & Carstensen, 2015; Urry & Gross, 2010). For example, older adults are more likely than younger adults to be selective about who they socialise with (Carstensen, Gross, & Fung, 1997), perhaps because they are better able to predict the emotional consequences of these social interactions (Nielsen, Knutson, & Carstensen, 2008; Scheibe, Mata, & Carstensen, 2011; Urry & Gross, 2010). Older adults also seem to be more selective than younger adults about the types of information that they choose to engage with. For example, unless directed to reduce negative emotions, younger adults tend to engage with negative videos, articles, and slideshows. In contrast, older adults avoid looking at such negative information whether given the goal to minimise their negative affect or to simply look at what they find most interesting (Livingstone & Isaacowitz, 2015). These findings suggest that older adults may have learned to chronically adopt situation selection strategies, whereas younger adults only use them when they explicitly intend to reduce their negative feelings.

Findings from clinical domains are also consistent with the potential benefits of situation selection. Aspinwall and Taylor (1997) describe proactive coping strategies that involve, in part, efforts to prevent potentially stressful events from occurring. Like situation selection, proactive coping requires that the person appraise the likely psychological impact of a situation (e.g. should I be worried about this?) and then make efforts to minimise the potential stressor (e.g. planning or seeking information from others). Proactive coping can also involve simply avoiding an anticipated stressful situation. For example, Mrazek and Mrazek (1987) argued that children who appear resilient in the face of abuse may be less affected by negative situations because they have acquired

knowledge about the situations that are likely to trigger their tormentor, are vigilant for signs of danger, and are quick to avoid escalating situations.

Of course, at the extreme, some forms of situation selection can be maladaptive. People with social anxiety avoid situations in which they are likely to feel anxious (Salkovskis, 1991) and leave situations that start to make them feel anxious (Rachman, Crask, Tallman, & Solyom, 1986). Such “safety behaviours” (Salkovskis, 1996; Wells et al., 1995) can prevent reality testing, especially if such behaviours hinder engagement with the stimulus or experience (Goetz, Davine, Siwec, & Lee, 2016; Helbig-Lang & Petermann, 2010). However, many forms of therapy specifically employ situation selection by exposing people to the situations that are otherwise avoided (e.g. using virtual reality, Powers & Emmelkamp, 2008). Indeed, the goal of various forms of therapy is to encourage individuals with psychopathology to select situations that will alter their emotions. Cognitive-behavioural treatments for social anxiety involve encouraging individuals to test their assumptions by putting themselves in situations that make them anxious (Goetz et al., 2016; Helbig-Lang & Petermann, 2010). Similarly, therapeutic interventions for depression often increase the extent to which people engage in positive activities that they are otherwise not likely to do (e.g. Jacobson, Martell, & Dimidjian, 2001).

For whom might situation selection be most useful?

In the present research we hypothesise that avoiding situations that have negative affective consequences and approaching situations that have positive affective consequences may be especially beneficial for people who (a) have a tendency to experience strong emotions and/or (b) are not adept at dealing with emotions as and when they arise. Individuals differ in the quality and intensity of their reactions to emotionally evocative stimuli – for some individuals, emotional highs are extremely high and lows are extremely low. These individuals are said to be high in *affective reactivity*¹ (Aronson, Barrett, & Quigley, 2006; Gross, 1998; Nock, Wedig, Holmberg, & Hooley, 2008; Wheeler, Davidson, & Tomarken, 1993). Given that people who are reactive may experience emotions (a) in response to a wide array of stimuli, (b) strongly or intensely, and (c) for a prolonged period of time (Nock et al., 2008), they may derive particular benefit from emotion regulation strategies,

such as situation selection, that effectively preempt the unfolding of unwanted emotions, rather than attempting to regulate highly intense emotions as and when they arise.

People also differ in their competence at regulating emotions once they occur. Competence at regulating emotions is a subcomponent of emotional intelligence (Brasseur, Grégoire, Bourdu, Mikolajczak, & García, 2013; Mayer & Salovey, 1995; Scherer, 2007). Evidence suggests that people who are poor at emotion regulation find controlling their emotions depleting and effortful (Niven, Totterdell, Miles, Webb, & Sheeran, 2013). Using strategies that do not require regulation in the moment may thus be especially helpful for people who consider themselves to be poor at emotion regulation (also see Urry & Gross, 2010). Consistent with this idea, Rovenpor, Skogsberg, and Isaacowitz (2013) observed that young adults who felt less able to control their emotions chose to avoid viewing negative materials more so than those who felt better able to manage their emotions.

The present research

The present research evaluates the effects of situation selection relative to other frequently studied emotion regulation strategies (e.g. reappraisal, suppression) on emotional outcomes, and tests the moderating roles of reactivity and emotional competence. Our hypothesis is that situation selection will be a particularly effective strategy for regulating emotions among individuals who are reactive and/or poor at emotion regulation.

Study 1 measured participants’ use of emotion regulation strategies and emotional experiences in daily life. To do so, we developed a new self-report measure of the extent to which people select situations based on their likely emotional outcomes and examined the reliability and discriminant validity of the measure. We then investigated the relation between situation selection and a range of positive and negative emotional outcomes. Study 1 also provided an initial test of the idea that the impact of situation selection on outcomes might be moderated by reactivity and competence at emotion regulation.

Study 2 manipulated situation selection in a naturalistic context by asking participants to think ahead to the weekend and adopt the goal to select activities that they believed would make them feel good while avoiding doing things that they believed would make them feel bad. We then compared the

emotional experiences of participants who engaged in situation selection with those of participants in a control condition who were not asked to adopt the goal to select situations based on their likely emotional outcomes. As in Study 1, we also measured participants' reactivity and competence at emotion regulation and investigated whether each moderated the impact of situation selection on emotional outcomes.

Study 1

Participants were asked to complete an online questionnaire that measured their use of three different emotion regulation strategies (situation selection, reappraisal, and suppression) and a range of emotional outcomes (subjective well-being, happiness, positive and negative affect, and levels of depression and anxiety). In addition, we measured reactivity and how competent people generally are at regulating their emotions. We predicted that, as in published research (see Webb et al., 2012, for a review), the use of reappraisal would be associated with positive emotional outcomes, while the use of suppression would be associated with less positive outcomes. We also expected that selecting situations based on their likely impact on emotions would be associated with positive emotional outcomes. Our primary hypothesis is, however, was that situation selection would be a particularly effective strategy for regulating emotions for individuals who are reactive and/or who believe that they are not good at regulating their emotions.

Methods

Participants and procedure

Computations via G*Power using an alpha level of .05 (2-tailed), 90% power to detect an effect, and 7 predictors in a linear multiple regression model indicated that 190 participants would be required to detect a small effect size ($R^2 = 0.01$). $N = 329$ participants were therefore recruited via Amazon's Mechanical Turk and were each paid \$0.60 for completing an online questionnaire. Twenty-eight participants were excluded because they completed less than 90% of the measures, leaving $N = 301$ participants for analyses. Participants were aged between 18 and 75 years ($M = 36.22$, $SD = 12.63$) and most were female (62.9%), held a university degree (59.8%), and identified themselves as white/Caucasian (76.9%).

Measures

Use of situation selection

We designed six statements to measure the extent to which participants select situations in order to regulate their emotional experiences: (i) *I select activities that help me to feel good*, (ii) *If a situation makes me feel good, then I try to stick around*, (iii) *I gravitate towards people, situations, and activities that put me in a good mood*, (iv) *I keep doing something if it seems to be improving my mood*, (v) *I shy away from situations that might upset me*, and (vi) *I steer clear of people who put me in a bad mood*. Participants were asked to indicate the extent to which each statement reflected them on 5-point scale from *not at all like me* to *very much like me*.

Factor analysis was used to investigate the conceptual structure of the measure of situation selection. The Kaiser–Meyer–Olkin measure of sampling adequacy (0.84), and Bartlett's test of sphericity (647.91, $df = 15$, $p < .001$) indicated that the correlation matrix was appropriate for factor analysis (Dziuban & Shirkey, 1974; Kaiser, 1974). Kaiser's (1958) criterion supported a single factor solution (eigenvalue = 3.67) that explained 54.55% of the variance in participants' responses. The six items that comprised this factor were internally consistent ($\alpha = 0.82$) and responses were averaged to provide a measure of the extent to which people select situations and activities in an effort to regulate their emotions.

Use of reappraisal and suppression

We assessed use of reappraisal and suppression using 10 items from the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). Participants were asked to indicate the extent to which they agreed with six statements reflecting the use of reappraisal (e.g. *I control my emotions by changing the way I think about the situation I'm in*) and four statements reflecting the use of suppression (e.g. *I control my emotions by not expressing them*) on a 7-point scale anchored by *strongly disagree* and *strongly agree*. The two subscales were internally reliable (reappraisal: $\alpha = 0.88$, suppression: $\alpha = 0.81$) and responses were averaged.

Subjective well-being

We used the Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) to assess subjective well-being. Participants were asked to indicate the extent to which they agreed with five statements (e.g. *In most ways my life is close to my ideal*) on a

7-point scale anchored by *strongly disagree* and *strongly agree*. Responses were internally consistent ($\alpha = 0.91$) and were summed, such that high scores reflected greater satisfaction with life.

Happiness

We assessed happiness using Warr, Cook, and Wall's (1979) single-item measure: *taking all things together, how would you say things were these days? Would you say you were: 1 = not too happy, 2 = fairly happy, 3 = very happy?*

Levels of positive and negative affect

We measured levels of positive and negative affect using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Participants were presented with 20 adjectives describing different emotions (e.g. excited, distressed, upset, guilty) and asked to indicate the extent to which they felt each emotion yesterday² on a 5-point scale anchored by *very slightly or not at all* and *extremely*. The extent to which each participant experienced positive and negative emotions was then computed by averaging responses to positive and negative emotional adjectives ($\alpha = 0.92$ for both subscales).

Levels of anxiety and depression

We used the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983) to assess levels of anxiety and depression. The HADS contains 14 statements, half of which reflect anxiety (e.g. *Worrying thoughts go through my mind*) and half of which reflect depression (e.g. *I feel as if I am slowed down*). Participants were asked to choose the response that currently described their feelings. Scores for each subscale were computed in accordance with the recommendations of Zigmond and Snaith (1983) and both scales proved to be internally consistent ($\alpha = 0.85$ in both cases).

Competence at emotion regulation

To measure competence at emotion regulation, we used the 3-item scale developed and validated by Niven et al. (2013): (i) *How successful are you at controlling your emotions?* (ii) *How difficult do you find it to keep your feelings in check?* And (iii) *How good are you at keeping your feelings under control?* Participants were asked to indicate the extent to which each of the statements was generally true of them on a 7-point scale anchored by *not at all* and *very*. The items proved internally reliable ($\alpha = 0.79$).

Reactivity

We measured reactivity using the Emotion Reactivity Scale (Nock et al., 2008). The scale contains 21 statements reflecting the extent to which people experience emotions in response to a wide array of stimuli (e.g. *Other people tell me I'm overreacting*), strongly or intensely (e.g. *I experience emotions very strongly*), and for a prolonged period of time (e.g. *When something happens that upsets me, it's all I can think about for a long time*). Participants were asked to indicate the extent to which each statement described them on a 5-point scale anchored by *not at all like me* and *completely like me*. The items proved internally reliable ($\alpha = 0.96$) and an overall score was computed by taking a sum of the items.³

Results

Table 1 provides the descriptive statistics and correlations among the study variables. The use of situation selection had small-sized, but significant correlations with all of the emotional outcomes ($-0.20 < r < 0.16$), except anxiety ($r = -0.03$). The use of situation selection was significantly correlated with the use of reappraisal ($r = 0.37$), competence at emotion regulation ($r = 0.14$), but not with suppression ($r = -0.05$) or reactivity ($r = 0.08$). Reactivity and perceived competence at emotion regulation were correlated with use of reappraisal ($r_s = -0.26$ and 0.40 , respectively), but not suppression ($r_s = 0.06$ and 0.02 , respectively). Reactivity was negatively correlated with competence at emotion regulation ($r = -0.62$), suggesting some overlap between the measures, but also that they are sufficiently distinct to be treated as separate constructs in subsequent analyses – a conclusion that is supported by extant theorising on the constructs (e.g. Brasseur et al., 2013; Nock et al., 2008).

A series of hierarchical regressions were used to investigate (a) whether the use of situation selection was associated with emotional outcomes and (b) whether these associations were particularly strong among participants who are reactive and/or poor at emotion regulation. Each emotional outcome (subjective well-being, happiness, positive and negative affect, anxiety, and depression) was regressed on the use of the three focal emotion regulation strategies (i.e. situation selection, reappraisal, and suppression) in Step 1 and the interactions between use of the regulation strategies and either reactivity or competence at emotion regulation in Step 2. The results of these analyses are reported in Tables 2 and 3.

Table 1. Descriptive statistics and correlations between variables (Study 1).

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Use of situation selection	0.37***											
2. Use of reappraisal	-0.05	0.01										
3. Use of suppression	0.13*	0.21***										
4. Subjective well-being	0.13*	0.29***	-0.10									
5. Happiness	0.16**	0.37***	-0.17**	0.61***								
6. Positive affect	-0.19**	0.29***	-0.14*	0.41***	0.41***							
7. Negative affect	-0.20***	-0.29***	0.16**	-0.25***	-0.36***	-0.24***						
8. Depression	-0.03	-0.30***	0.25	-0.48***	-0.56***	-0.38***	0.48***					
9. Anxiety	0.08	-0.26***	0.14**	-0.35***	-0.44***	-0.32***	0.55***	0.58***				
10. Reactivity	0.14*	0.40***	0.06	-0.23***	-0.35***	-0.23***	0.42***	0.49***	0.63***			
11. Competence at ER	-0.06	0.03	0.02	-0.13*	0.32***	0.28***	-0.38***	-0.40***	-0.51***	-0.62***		
12. Age	0.09	-0.01	-0.25***	0.02	-0.01	0.12*	-0.22***	0.05	-0.19**	-0.17**	0.09	
13. Gender	3.91	4.96	3.71	20.74	2.01	-0.04	-0.10	-0.05	0.05	0.12*	-0.08	0.09
Mean	0.67	1.11	1.39	7.74	0.64	30.06	16.22	5.43	7.98	33.68	4.86	36.22
SD						9.33	7.31	4.24	4.41	19.87	1.35	12.63

Notes: ER = emotion regulation, SD = standard deviation.

* $p < .05$.

** $p < .01$.

*** $p < .001$. Gender is coded 1 = male and 2 = female.

Predictor variables were standardised prior to analysis and significant interactions were plotted using simple slopes (Aiken & West, 1991) (see Figures 1 and 2).

Association between the use of situation selection and emotional outcomes

The use of situation selection was directly associated with lower levels of negative affect and depression, but not the other emotional outcomes (see Table 2). As predicted, the interaction between the use of situation selection and reactivity was significantly associated with almost all emotional outcomes, including satisfaction with life, happiness, negative affect, depression, and anxiety. Simple slopes (see Figure 1) revealed that, for reactive participants (1SD above the mean), the use of situation selection was associated with greater subjective well-being ($B = 2.19, p < .001$), higher levels of happiness ($B = 0.17, p < .001$) and lower levels of negative affect ($B = -2.56, p < .001$), depression ($B = -1.54, p < .001$), and anxiety ($B = -0.89, p < .001$). For less reactive participants (1SD below the mean), on the other hand, situation selection was not related to these outcomes ($Bs = 0.01, 0.03, -0.69, -0.49, \text{ and } 0.26, ps = .989, .544, .192, .098, \text{ and } .359, \text{ respectively}$).

As predicted, the interaction between the use of situation selection and competence at emotion regulation was also significantly associated with multiple emotional outcomes including satisfaction with life, happiness, negative affect, and depression (the effects on positive affect were also marginally significant, $p = .06$). Simple slopes (see Figure 2) revealed that, for participants who were not competent at regulating their emotions (1SD below the mean), situation selection was associated with greater satisfaction with life ($B = 1.65, p < .01$), higher levels of happiness ($B = 0.11, p < .05$), and lower levels of negative affect ($B = -1.72, p < .01$) and depression ($B = -1.21, p < .001$). For participants who were competent at regulating their emotions (1SD above the mean), on the other hand, situation selection was not related to these outcomes ($Bs = -0.42, -0.01, -0.26, \text{ and } -0.01, ps = .486, .838, .637, \text{ and } .986, \text{ respectively}$).

Association between the use of reappraisal and suppression and emotional outcomes

As in previous research, the use of reappraisal tended to be associated with positive emotional outcomes, including higher levels of happiness and positive

Table 2. Regression of emotional outcomes on the use of emotion regulation strategies, reactivity, and interactions (Study 1).

Variable	SWL	Happiness	Positive affect	Negative affect	Depression	Anxiety
Use of situation selection (SS)	0.09	0.07	0.04	-0.16**	-0.19***	-0.02
Use of reappraisal	0.12	0.19**	0.31***	-0.11*	-0.09	-0.13**
Use of suppression	-0.07	-0.15**	-0.13*	0.12*	0.21***	0.09*
Reactivity	-0.23***	-0.33***	-0.15*	0.42***	0.48***	0.62***
SS × Reactivity	0.15*	0.13*	0.02	-0.13*	-0.11*	-0.11*
Reappraisal × Reactivity	-0.04	-0.09	0.00	0.02	-0.02	-0.03
Suppression × Reactivity	-0.04	0.03	-0.00	0.10	0.11*	-0.03
R^2	0.11	0.21	0.17	0.28	0.37	0.44
Model F	5.18***	11.14***	8.77***	16.22***	24.07***	33.50***

Notes: SWL: subjective well-being. Beta weights are from the final step of the analysis.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

affect, and lower levels of negative affect and anxiety. However, the use of reappraisal was not associated with subjective well-being or depression, nor did the use of reappraisal interact with either reactivity or competence at emotion regulation to predict emotional outcomes. Also consistent with previous research, suppression tended to be associated with negative emotional outcomes, including lower levels of happiness and positive affect, and higher levels of negative affect, depression, and anxiety. For the most part, suppression did not interact with either reactivity or competence at emotion regulation to predict emotional outcomes, although the interaction between suppression and reactivity was significantly associated with levels of depression. Simple slopes revealed that the use of suppression was more strongly related to depression among participants who were more reactive (1SD above the mean, $B = 1.39$, $p < .01$) than among those who were less reactive (1SD below the mean, $B = 0.48$, $p = .095$). The interaction between suppression and competence at emotion regulation was significantly associated with levels of negative affect, such that the use of

suppression was more strongly related to negative affect among participants who were not good at regulating their emotions (1SD below the mean, $B = 2.20$, $p < .001$) than among those who were better (1SD above the mean, $B = 0.56$, $p = .263$).

Discussion

Study 1 found that the use of situation selection was associated with lower levels of negative affect and depression, but there was less consistent evidence that the use of situation selection was directly associated with positive outcomes such as increased satisfaction with life, happiness or positive affect (the use of situation selection was correlated with these outcomes, but was not directly predictive of the outcomes in multiple regressions when entered alongside reactivity, competence, and the other regulation strategies). It may be that measures specifically concerned with how people seek to promote positive affect (e.g. by prioritising positive events; Catalino, Algor, & Fredrickson, 2014) better predict such outcomes. As predicted, however, we

Table 3. Regression of emotional outcomes on the use of emotion regulation strategies, competence at emotion regulation, and interactions (Study 1).

Variable	SWL	Happiness	Positive affect	Negative affect	Depression	Anxiety
Use of situation selection (SS)	0.04	0.00	0.00	-0.08	-0.09	0.11*
Use of reappraisal	0.10	0.19**	0.30***	-0.13*	-0.11	-0.14*
Use of suppression	-0.09	-0.18**	-0.15**	-0.19***	0.27***	0.17**
Competence at emotion regulation	0.23***	0.27***	0.18**	-0.35***	-0.38***	-0.49***
SS × Competence	-0.17**	-0.15*	-0.11	0.12*	0.16**	0.09
Reappraisal × Competence	0.03	0.10	0.06	-0.04	-0.02	0.05
Suppression × Competence	-0.09	-0.02	0.00	-0.11*	-0.09	-0.04
R^2	0.12	0.18	0.19	0.22	0.28	0.32
Model F	5.84***	9.42***	9.60***	12.02***	16.41***	19.70***

Note: SWL: subjective well-being. Beta weights are from the final step of the analysis.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

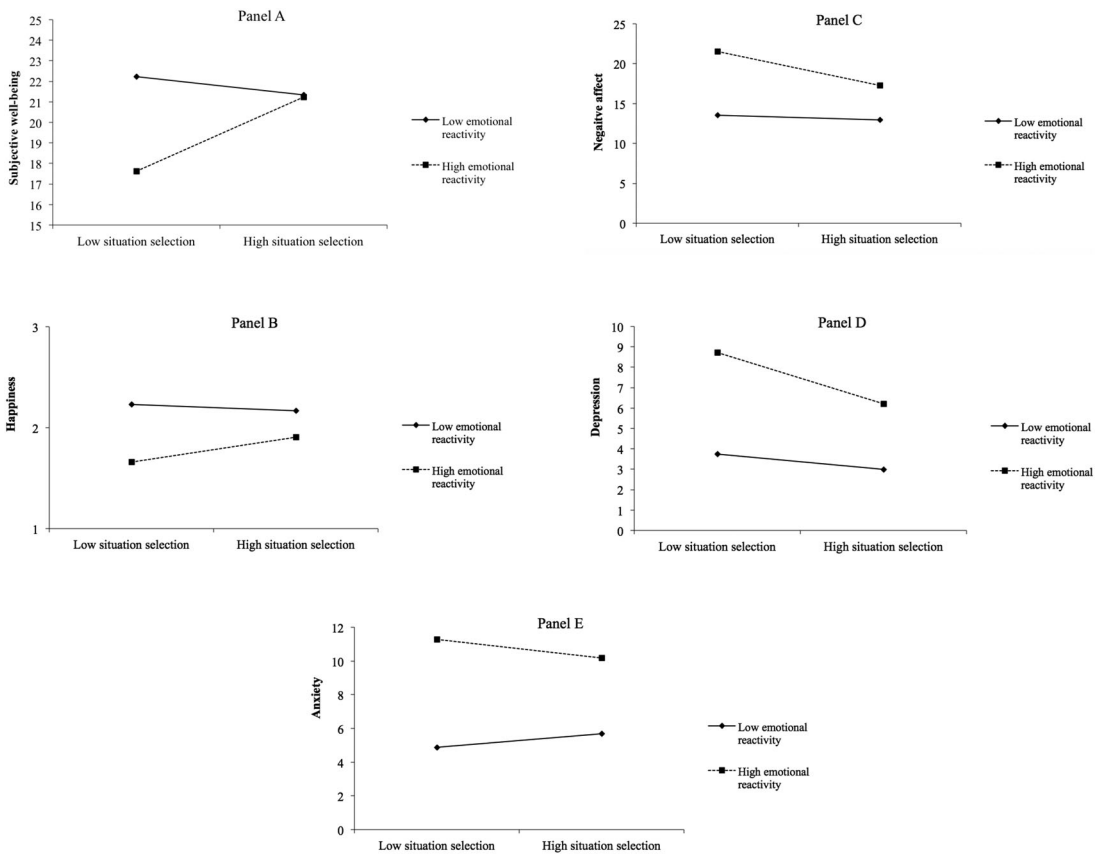


Figure 1. Simple slopes for the interaction between the use of situation selection and reactivity on subjective well-being (Panel a), happiness (Panel b), negative affect (Panel c), depression (Panel d), and anxiety (Panel e) (Study 1).

Note. These figures were drawn using the spreadsheets provided by Dawson (www.jeremydawson.co.uk/slopes.htm).

found that situation selection was more strongly associated with emotional outcomes such as satisfaction with life, happiness, negative affect, anxiety, and depression among participants (a) with high levels of reactivity and (b) who do not consider themselves to be competent at emotion regulation. Although preliminary, these findings suggest that situation selection is an effective way to regulate emotions, especially for those who most need to be able to do so (i.e. people who experience strong, long-lasting emotions that they struggle to control). Indeed, previous research suggests that appropriately selecting which emotional situations to engage in is related to greater emotional intelligence (Ford & Tamir, 2012), psychological health, and well-being (Kim, Ford, Mauss, & Tamir, 2014; Tamir & Ford, 2012).

As in prior work, we found that reappraisal had a positive effect on emotional outcomes, while

suppression had a negative effect (see Webb et al., 2012, for a review). The finding that reappraisal had a positive effect regardless of participants' level of reactivity and competence at regulation warrants comment. Prior work suggests that people may avoid reappraisal in highly evocative emotional situations (Sheppes et al., 2011) and our bivariate correlations suggest that relatively reactive participants were less likely to use reappraisal. However, the finding that the impact of reappraisal on emotional outcomes was not moderated by reactivity or emotion regulation competence suggests that it is an effective strategy even when individuals who are highly reactive or not competent at regulating their emotions choose to use it. An interesting avenue for future research would be to understand when highly reactive individuals and/or those who are low at regulation competence choose to employ this strategy over others.

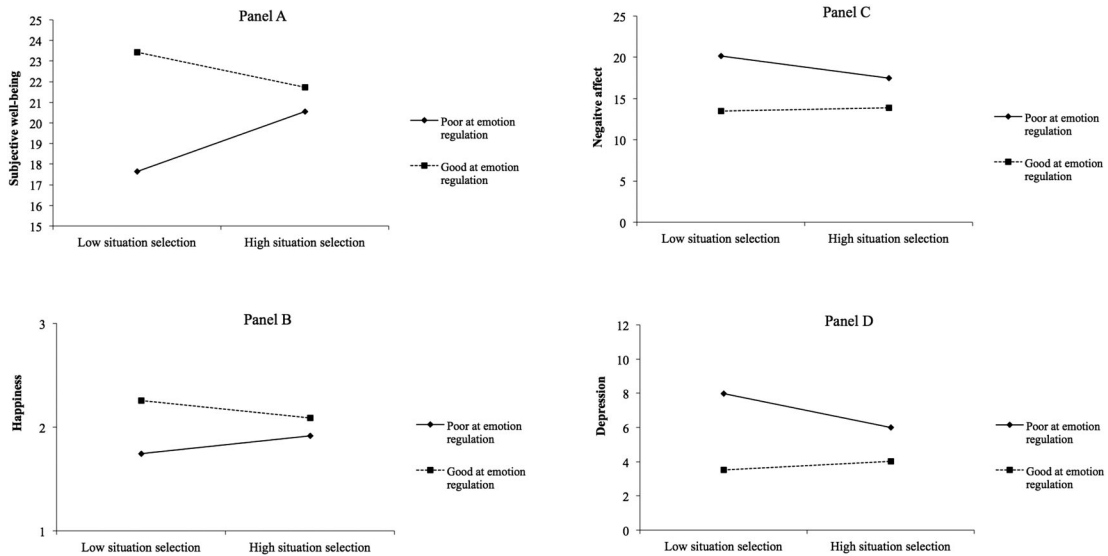


Figure 2. Simple slopes for the interaction between the use of situation selection and competence at emotion regulation on subjective well-being (Panel a), happiness (Panel b), negative affect (Panel c), and depression (Panel d) (Study 1).

Note. These figures were drawn using the spreadsheets provided by Dawson (www.jeremydawson.co.uk/slopes.htm).

Study 2

Study 1 provided one of the first tests of the moderating role of reactivity and competence at emotion regulation on the relationship between situation selection and affective outcomes. However, the test was correlational and cross-sectional. Study 2, therefore, sought to provide an experimental and prospective test of the effects of situation selection on emotional outcomes. Participants completed a questionnaire on a Friday that asked them to adopt the goal to select activities during the weekend that they believed would make them feel good, while avoiding doing things that they believed would make them feel bad. We then compared the emotional experiences of participants with the goal to engage in situation selection, with those of participants in a control condition who were not asked to use this strategy. As in Study 1, we predicted that situation selection would be a particularly effective strategy for individuals who are high in reactivity and were not competent at emotion regulation.

Methods

Participants

Using the average R^2 value that we observed for the effect of situation selection on emotional outcomes

in Study 1 ($R^2 = 0.26$), an alpha level of .05 (two-tailed), 90% power to detect an effect, and 4 predictors in the linear multiple regression model, G*Power indicated that at least 49 participants would be required to detect an effect of similar magnitude. $N = 129$ participants were recruited via Prolific Academic and paid \$8.00 for taking part in a study with two parts. Four participants failed a check to ensure that they were paying attention⁴ and were excluded from subsequent analyses. Thus, the final sample included 125 participants. Participants were aged between 18 and 60 ($M = 28.19$, $SD = 8.68$) and were predominantly male (57.6%), identified themselves as white/Caucasian (70.4%), and held an undergraduate degree (56.0%).

Procedure

Baseline questionnaire

The first part of the study was completed on a Friday. Participants completed the same measures of use of situation selection ($\alpha = 0.71$), reappraisal ($\alpha = 0.86$), and suppression ($\alpha = 0.75$) as in Study 1, along with the same measures of reactivity ($\alpha = 0.97$) and competence at emotion regulation ($\alpha = 0.78$). To investigate the extent to which participants responded in a socially desirable manner, participants also completed a shortened version of the Balanced Inventory of

Desirable Responding (BIDR-6; Bobbio & Manganeli, 2011). The BIDR-6 consists of 16 items measuring self-deception (e.g. *I am a completely rational person*, 8 items, $\alpha = 0.77$) and impression management (e.g. *I sometimes tell lies if I have to*, 8 items, $\alpha = 0.57$).⁵

Manipulation of situation selection

After completing the baseline questionnaire, participants were randomly assigned to a condition. Those in the experimental condition were asked to make an if-then plan (or “implementation intention”; Gollwitzer, 1999; Gollwitzer & Sheeran, 2006) for the upcoming weekend: *If I am deciding what to do this weekend, then I will select activities that will make me feel good and avoid doing things that will make me feel bad!* They were asked to repeat the plan to themselves three times and fully commit to carrying it out. Participants in the control condition were not asked to formulate a plan to consider how activities and situations might make them feel when deciding how to spend the weekend.⁶

Follow-up questionnaire

Participants completed the second part of the study on the following Monday. As a check on our manipulation and to provide further evidence for the validity of our new measure of situation selection, participants started by completing the measure of situation selection developed in Study 1 – this time with respect to the weekend (e.g. *During the weekend, I selected activities that helped me to feel good*, $\alpha = 0.84$). After this, participants indicated what they did over the weekend using an adaptation of the day reconstruction method (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). Participants were asked to think of each day as a continuous series of scenes or episodes and to provide a list of (up to 10) separate episodes on Saturday and Sunday. For each episode, participants indicated how they felt using a 9-point scale depicting five self-assessment manikins ranging from happy to sad (Bradley & Lang, 1994). A measure of participants’ emotional experience over the weekend was computed by averaging ratings of emotions across the different episodes that they listed.

Results

Randomisation check

MANOVA revealed no significant differences between the conditions in age, use of situation selection,

reappraisal, suppression, reactivity, competence at emotion regulation, or on the self-deception or impression management subscales of socially desirable responding, $F(8, 113) = 0.86$, $p = .55$, $\eta^2 = .06$. Thus, randomisation was successful.

Manipulation check

Next, we examined whether the intervention was successful at increasing situation selection for emotion regulation over the course of the weekend. As predicted, participants in the experimental condition were more likely to report having selected activities for the weekend that they believed would make them feel good while avoiding doing things that they believed would make them feel bad ($M = 4.14$, $SD = 0.75$) than were participants in the control condition ($M = 3.71$, $SD = 0.63$), $F(1, 123) = 11.97$, $p = .001$, $\eta^2 = .09$.

Impact of the situation selection intervention on affect experienced during the weekend

Table 4 presents the descriptive statistics and correlations among the study variables. Similar to Study 1, emotional reactivity and perceived competence at emotion regulation were correlated with the use of reappraisal ($r_s = -0.30$ and 0.44 , respectively, $p_s < .001$), but not the use of suppression ($r_s = -0.00$ and 0.11 , respectively) or situation selection ($r_s = -0.03$ and 0.15 , respectively). The self-deception subscale of the BIDR (but not the impression management subscale) was significantly correlated with affect experienced over the weekend ($r = 0.29$, $p < .001$). We therefore controlled for self-deception in subsequent analyses.

ANCOVA indicated that participants in the experimental condition experienced more positive affect over the weekend ($M = 6.67$, $SD = 0.79$) than did participants in the control condition ($M = 6.17$, $SD = 0.75$), $F(1, 121) = 13.28$, $p < .001$, $\eta^2 = .10$. Equivalent findings were observed without the covariate, $F(1, 122) = 13.49$, $p < .001$, $\eta^2 = .10$.

Is situation selection particularly effective for participants who are reactive or poor at emotion regulation?

As in Study 1, reactivity and competence at regulating emotions were correlated ($r = -0.76$, $p < .001$, see Table 4) but were treated as separate constructs in subsequent analyses. Hierarchical regression was used to test whether the effect of situation selection

Table 4. Descriptive statistics and correlations between variables (Study 2).

Variable	1	2	3	4	5	6	7	8	9	10	11
Baseline											
1. Use of situation selection	—	—	—	—	—	—	—	—	—	—	—
2. Use of reappraisal	0.38***	—	—	—	—	—	—	—	—	—	—
3. Use of suppression	-0.01	0.14	—	—	—	—	—	—	—	—	—
4. Reactivity	-0.03	-0.30**	-0.00	—	—	—	—	—	—	—	—
5. Competence at ER	0.15	0.44***	0.11	-0.76***	—	—	—	—	—	—	—
6. Self-deception	0.22*	0.35***	0.10	-0.17	0.35***	—	—	—	—	—	—
7. Impression management	0.17	0.08	-0.04	0.04	0.05	0.12	—	—	—	—	—
8. Age	-0.03	0.05	-0.02	-0.04	-0.06	-0.03	-0.17	—	—	—	—
9. Gender	-0.05	-0.17	-0.31***	0.33***	-0.37***	-0.06	-0.13	0.18*	—	—	—
Follow-up											
10. Use of situation selection	0.26**	0.23*	-0.10	-0.19*	0.23**	0.25**	0.10	-0.07	0.14	—	—
11. Valence of affect	0.04	0.23*	0.04	-0.31**	0.38***	0.29**	-0.12	-0.09	-0.05	0.39***	—
Mean	3.94	4.94	4.15	37.90	4.61	4.55	3.90	28.19	—	3.92	6.42
SD	0.57	0.98	1.22	20.77	1.17	0.95	1.05	8.68	—	0.73	0.80

Notes: ER: emotion regulation; *SD* = standard deviation. Gender is coded 1 = male and 2 = female.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

on affect experienced during the weekend was moderated by reactivity (see Table 5). The predictors were standardised prior to analysis and, as before, we controlled for levels of self-deception. The main effects of condition, reactivity, and self-deception on affect experienced over the weekend were statistically significant (β s = 0.27, -0.36, and 0.26, respectively, p s < .01). The interaction between condition and reactivity was marginally significant ($\beta = 0.20$, $p = .084$). As in Study 1, simple slopes (see Figure 3) indicated that for highly reactive participants (1SD above the mean), situation selection was associated with experiencing more positive affect ($B = 0.33$, $p < .001$). However, among less reactive participants (1SD below the mean), situation selection had no effect ($B = 0.10$, $p = .251$).

Table 5. Regression of affect experienced during the weekend on situation selection (Condition), reactivity, and their interaction (Study 2).

Variable	Affect
Condition	0.27**
Reactivity	-0.36**
Self-deception	0.26**
Condition \times reactivity	0.20 ^a
R^2	0.24
Model <i>F</i>	9.55***

Notes: Beta weights are from the final step of the analysis.

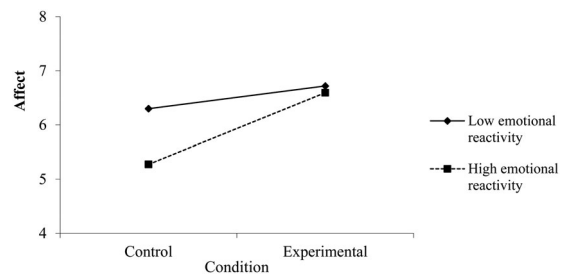
^a $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

The equivalent moderated regression analyses for competence at emotion regulation (see Table 6) revealed significant main effects of condition, competence at emotion regulation, and self-deception on affect experienced over the weekend (β s = 0.28, 0.45, and 0.20, respectively, p s < .02). There was also a significant interaction between condition and competence at emotion regulation ($\beta = -0.25$, $p = .026$). Again, as in Study 1, simple slopes (see Figure 4) indicated that, for participants who were not competent at emotion regulation (1SD below the mean), situation selection was associated with experienced affect ($B = 0.36$, $p < .001$). However, among participants who were competent at emotion regulation (1SD above the mean), situation selection had no effect ($B = 0.08$, $p = .374$).

**Figure 3.** Simple slopes for the interaction between situation selection (Condition) and reactivity on affect experienced during the weekend (Study 2).

Note. This figure was drawn using the spreadsheets provided by Dawson (www.jeremydawson.co.uk/slopes.htm).

Table 6. Regression of affect experienced during the weekend on situation selection (condition), competence at emotion regulation, and interactions (Study 2).

Variable	Affect
Condition	0.28**
Competence at emotion regulation	0.45***
Self-deception	0.20*
Condition × competence	−0.25*
R^2	0.28
Model F	11.32***

Note: Beta weights are from the final step of the analysis.

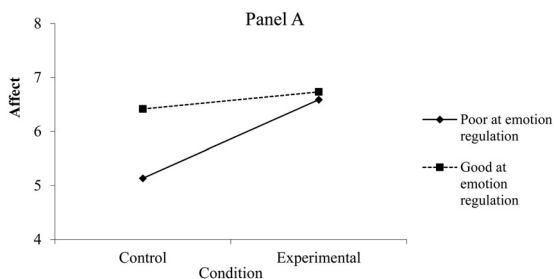
* $p < .05$.

** $p < .01$.

*** $p < .001$.

Discussion

Study 2 provided an experimental test of the impact of situation selection on day-to-day affective outcomes in the field. The findings support those of Study 1 and point to a causal relationship between the use of situation selection and emotional experiences. Participants who formed the goal to select activities that they believed would make them feel good (and avoid those that they believed would make them feel bad) were more likely to report having done so than participants who were not given these instructions. Not only does this provide evidence that our manipulation was successful in prompting people to select situations, it also suggests that our new self-report measure is sensitive to changes in the use of the strategy, thus, starting to build evidence for the validity of the measure. Our findings also suggest that people are able to successfully employ situation selection when they are asked to do so. Critically, as in Study 1, situation selection was not only an effective strategy overall, but proved to be particularly effective for individuals who were emotionally reactive and/or who were not otherwise competent in regulating their emotions.

**Figure 4.** Simple slopes for the interaction between situation selection (Condition) and competence at emotion regulation on affect experienced during the weekend (Study 2).

Note. This figure was drawn using the spreadsheets provided by Dawson (www.jeremydawson.co.uk/slopes.htm).

General discussion

The present research demonstrated that situation selection is an effective strategy for regulating emotions, particularly among individuals who are reactive and/or who are poor at emotion regulation. Using a new self-report measure of the use of situation selection, we found evidence that (a) people deliberately choose activities based on their emotional impact (average levels of situation selection in both studies were about 4 on a 5-point scale), (b) relatively simple instructions can be used to prompt people to engage in greater situation selection, (c) situation selection is effective at altering emotions, particularly reducing negative affect; and, critically, (d) situation selection is especially advantageous for those who most need help regulating their emotions. The finding that situation selection is particularly effective for those who are poor at regulating their emotions resonates with Rovenpor et al.'s (2013) observation that young people who lacked confidence in regulating their emotions were less likely to view negative material than their peers.

Consistent with past research (Webb et al., 2012), we found that reappraisal and suppression have positive and negative effects on affective outcomes, respectively, regardless of peoples' levels of reactivity and competence. We found some evidence that individuals who are highly reactive may use reappraisal less. However, our findings suggest that when they did use this strategy, it was as effective for them, as it was for less reactive participants. This finding suggests that there may be situational differences that drive highly reactive individuals' use of reappraisal that would be interesting to explore in future research.

Situation selection also proved advantageous for all participants, but our findings suggest that situation selection particularly benefits those who are reactive and/or who are not competent at dealing with their emotions as they arise. Reappraisal may be effective for people who are less reactive and/or competent at regulating their emotions because they can implement cognitive regulation strategies in a relatively effortless, automatic fashion (Niven et al., 2013; Williams, Bargh, Nocera, & Gray, 2009). However, situation selection provides an alternative strategy for individuals that does not rely on in-the-moment cognitive resources, and allows reactive and/or less competent individuals to tune their environment in order to promote certain emotional outcomes.

Limitations and future directions

As with any new programme of research, the present work has limitations that should be acknowledged. First, the two factors that we found moderated the impact of situation selection on emotional outcomes – namely, reactivity and competence at emotion regulation – were correlated ($r_s = -0.62$ and -0.76 in Studies 1 and 2, respectively) suggesting that there is some overlap between the measures. Reactivity and competence are defined differently in that reactivity refers to the *generation* of emotions (e.g. how strongly do people react to emotional events?), while competence refers to peoples' ability to *regulate* their emotions as and when they arise. However, despite the face validity of this distinction, there is debate over the extent to which the process of emotion generation can be distinguished from that of emotion regulation (e.g. Gross & Feldman Barrett, 2011) and the relatively high correlations between the measures of reactivity and competence in the present research suggest that people who are reactive are also likely to struggle to control their emotions. Whether being reactive is a determinant or consequence of difficulties regulating emotions is a question for future research – our findings simply suggest that both challenges can be addressed by selecting situations based on their likely affective impact.

Another limitation is that we relied exclusively on measures of reactivity and did not measure other relevant constructs such as trait negative affect or neuroticism. We thus cannot speak to the extent that reactivity reflects other related constructs. However, other studies have considered the relationship between reactivity and trait levels of negative affect. For example, Nock et al. (2008) found that reactivity was correlated with trait levels of negative affect among adolescents and young adults ($r = 0.61$ with depression, $r = 0.53$ with frustration, and $r = 0.30$ with aggression) and also differed between participants with and without a mood disorder. It will therefore be important for future research investigating how reactivity influences the use and impact of situation selection to include measures of trait negative affect and neuroticism and to investigate whether only reactivity moderates the relations and, if so, why.

Third, both of the studies reported here relied on self-report measures of situation selection, moderators (reactivity and competence), and outcome variables. We believe that this approach was justified for several reasons. First, developing a self-report

measure of the use of situation selection was one of the primary aims of our research (although there are self-report measures of the use of other strategies for regulating emotions, to our knowledge there are currently no self-report measures of the extent to which people select situations based on their likely affective impact). Second, we employed self-report measures with established reliability and validity (e.g. Diener et al., 1985; Gross & John, 2003; Niven et al., 2013; Nock et al., 2008; Warr et al., 1979; Watson et al., 1988; Zigmond & Snaith, 1983). Third, insofar as this was the first test of the role of situation selection, starting by examining the putative relations using self-measures report seemed a reasonable first step in what is likely to become a longer research programme. Nonetheless, future research might usefully investigate the reliability and validity of the new measure of situation selection in larger samples and in different contexts, as well as seek to manipulate variables such as emotional reactivity (e.g. by depriving participants of sleep, Rosales-Lagarde et al., 2012) and employ measures of outcomes that do not rely on self-reports (e.g. physiological measures of arousal, peer-reports) or retrospective recall (e.g. ecological momentary assessment, Shiffman, Stone, and Hufford, 2008). So doing would further allay concerns about retrospective reporting biases and demand effects (Orne, 1962). However, we would point out that our effects held even after controlling for self-deception and we did not always find effects that are consistent with peoples' beliefs (e.g. evidence suggests that people believe that suppression is a useful emotion regulation technique, despite evidence that it causes objective increases in physiological responding and stress; Butler et al., 2003; Gross & Levenson, 1993). We similarly found that use of suppression was associated with adverse self-reported emotional outcomes.

The present findings also raise questions that should be considered in future research. For example, there are a number of different ways to select situations and experiences in order to shape emotional outcomes – people can approach situations that they believe will make them feel good (e.g. decide to go to a party) or avoid situations that they believe will make them feel bad (e.g. decide not to pick a fight with an aggrieved colleague). Furthermore, this can be achieved by striving to maintain the current situation (e.g. staying at a party because one is having a good time) or by leaving the situation (e.g. leaving a party to avoid a confrontation with said

colleague, see Vujovic, Opitz, Birk, & Urry, 2014). It would be interesting to systematically manipulate these different strategies in future research and examine the outcomes of each.

Similarly, it is currently unclear whether people select situations based on their short- or long-term affective impact. Classic dilemmas of self-control often require that people engage in aversive activities (e.g. painstakingly avoiding eating a desirable marshmallow) in order to achieve positive outcomes in the future (e.g. eating two marshmallows) (e.g. Mischel, 2014). Therefore, some people may select situations that they know will make them feel bad in the short term, because they anticipate that so doing will lead to positive feelings in the future. On the other hand, people notoriously engage in short-term mood repair in the face of negative affect (Tice, Bratslavsky, & Baumeister, 2001), suggesting that at least some individuals are likely to focus on engaging in situations that make them feel good in the short term. Future research might thus examine how these different time horizons interact with the use of situation selection and how individual differences dictate which types of goals and situations people select.

It would also be interesting to investigate whether individuals' ability to forecast their future emotional states (Wilson & Gilbert, 2003, 2005) interacts with their use of situation selection. More broadly, it would be interesting to examine how conceptual knowledge about emotions and emotional situations (Lindquist & Barrett, 2008) and the ability to use that knowledge to plan behaviours, influences the success of efforts to regulate emotional experiences by selecting situations. There is little point in trying to regulate emotional experiences by, for example, avoiding a particular activity if, in fact, it might actually make one feel better. Physical activity is a good example; people (especially those who exercise relatively infrequently) tend to believe that physical activity will be unpleasant, when in fact they often feel better when they exercise (Loehr & Baldwin, 2014). Taken together with evidence that older adults are more likely to use situation selection because they are able to predict how they will feel in different situations (Nielsen et al., 2008; Scheibe et al., 2011), it seems likely that the ability to accurately predict emotional reactions to future events will influence both the likelihood of using situation selection to regulate emotions and the efficacy of using this strategy (Urry & Gross, 2010). It is also possible that people who are reactive may be better at predicting how they

will feel when compared to people who are less reactive (although to our knowledge this hypothesis has not yet been investigated). If so, then this may go some way towards explaining why people who are emotionally reactive seem to particularly benefit from situation selection. Future studies might investigate these ideas by measuring skill at affective forecasting (e.g. Dunn, Brackett, Ashton-James, Schneiderman, & Salovey, 2007).

Finally, as situation selection is only adaptive when used flexibly, it will be interesting in future research to examine which sorts of situation selection are adaptive and which are not. Aldao and Christensen (2015) recently described a "three-level model of emotion regulation"; that might be a useful framework for evaluating the extent to which different forms of situation selection are adaptive. The model suggests that affective outcomes (i.e. whether one feels good or bad) only represent the first, and proximal, level of outcomes. In order to determine whether the resultant affect (e.g. feeling angry) is adaptive or not, one needs to also consider the behaviours that are motivated by such affect and the outcomes of these behaviours; where the latter likely depends on a myriad of contextual factors and individual differences. For example, deciding to confront someone and feeling angry as a result may be adaptive in some contexts (e.g. the person who is confronted becomes aware of how important the issue is), but less adaptive in other contexts (e.g. for people who then struggle not to translate feelings of anger into aggression, or when the expression of such feelings prompts the person who is confronted to be aggressive).

Conclusion

In conclusion, the present research offers new correlational and experimental evidence concerning the use of situation selection as a strategy for regulating emotions. We observed that situation selection leads to improved emotional outcomes, and is particularly effective in improving emotional outcomes among people who struggle to regulate their emotions effectively (emotionally reactive people, individuals who see themselves as less competent at managing their feelings). Notwithstanding the limitations of the studies reported here, the present research underlines the potential for using situation selection to successfully navigate emotional life and suggests several directions for future studies on this relatively under-researched emotion regulation strategy.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

1. Hereafter, we refer to this construct merely as 'reactivity'. Reactivity encompasses the idea of affect intensity (i.e. stable individual differences in the magnitude of emotional responses, Larsen & Diener, 1987), but also reflects individual differences in peoples' sensitivity to emotions and the duration of emotional responses (Nock et al., 2008).
2. We asked participants to focus on the day before to ensure that participants reported on a full day's worth of emotions. We chose not to focus on the present day's emotions since this was an online study and participants could have responded at any time of the day, possibly before experiencing many emotions (e.g. if responding very early in the morning).
3. Participants also completed the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) and the COPE Inventory (Carver, Scheier, & Weintraub, 1989). The questions were presented in a random order, both within and between measures, with the exception of the ERQ because the first and third items define positive and negative emotion, respectively (i.e. "When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about and When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about").
4. Participants were asked to select a specific response to the statement *I manage my emotions by playing tennis* that was presented along with the statements comprising the Emotion Regulation Questionnaire (Gross & John, 2003).
5. The data for Study 2 come from a larger research project. Participants also completed the DERS and self-assessment manikins for arousal. However, as the manipulation of situation selection used in Study 2 focused on the valence of emotional outcomes and our predictions concerned reactivity and competence at emotion regulation, these measures are not discussed further. As in Study 1, with the exception of the ERQ, the questions were presented in a random order, both within and between measures.
6. Note that the instructions provided to participants in the experimental condition involved both (i) instructions to consider the affective impact of various activities and situations when deciding whether or not to engage in them and (ii) forming a plan to support this intention. Although such instructions essentially manipulate both goal and implementation intentions, given the oft-cited gap between (goal) intentions and action (e.g. Sheeran, 2002; Webb & Sheeran, 2006) our priority was to ensure that our manipulation of situation selection was as effective as possible. Future work might consider also having participants in the control condition form a comparable goal intention (i.e. to consider the effect of activities

and situations on their emotions) in order to test the specific effect of if-then planning.

References

- Aiken, L. S., & West, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Aldao, A., & Christensen, K. (2015). Linking the expanded process model of emotion regulation to psychopathology by focusing on behavioral outcomes of regulation. *Psychological Inquiry*, 26, 27–36. doi:10.1080/1047840X.2015.962399
- Aldao, A., Sheppes, G., & Gross, J. J. (2015). Emotion regulation flexibility. *Cognitive Therapy and Research*, 39(6), 263–278. doi:10.1007/s10608-014-9662-4
- Aronson, K. R., Barrett, L. F., & Quigley, K. (2006). Emotional reactivity and the over-report of somatic symptoms: Somatic sensitivity or negative reporting style? *Journal of Psychosomatic Research*, 60, 521–530. doi:10.1016/j.jpsychores.2005.09.001
- Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121, 417–436. doi:10.1037//0033-2909.121.3.417
- Bobbio, A., & Manganelli, A. M. (2011). Measuring social desirability responding: A short version of Paulhus' BIDR 6. *Testing, Psychometrics, Methodology in Applied Psychology*, 18, 117–135.
- Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. *Perspectives on Psychological Science*, 8, 591–612. doi:10.1177/1745691613504116
- Bradley, M. M., & Lang, P. J. (1994). Measuring emotion: The Self-Assessment Manikin and the semantic differential. *Journal of Behavior Therapy and Experimental Psychiatry*, 25, 49–59. doi:10.1016/0005-7916(94)90063-9
- Brasseur, S., Grégoire, J., Bourdu, R., Mikolajczak, M., & García, O. (2013). The profile of emotional competence (PEC): Development and validation of a self-reported measure that fits dimensions of emotional competence theory. *PLoS ONE*, 8, e62635. doi:10.1371/journal.pone.0062635
- Butler, E. A., Egloff, B., Wilhelm, F. H., Smith, N. C., Erickson, E. A., Gross, J. J., & Wilhelm, F. H. (2003). The social consequences of expressive suppression. *Emotion*, 3, 48–67. doi:10.1037/1528-3542.3.1.48
- Carstensen, L. L., Gross, J. J., & Fung, H. H. (1997). The social context of emotional experience. *Annual Review of Gerontology and Geriatrics*, 17, 325–352.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56, 267–283. doi:10.1037/0022-3514.56.2.267
- Catalino, L. I., Algor, S. B., & Fredrickson, B. L. (2014). Prioritizing positivity: An effective approach to pursuing happiness? *Emotion*, 14, 1155–1161. doi:10.1037/a0038029
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71–75. doi:10.1207/s15327752jpa4901_13
- Duckworth, A. L., Gendler, T., & Gross, J. (2016). Situational strategies for self-control. *Perspectives on Psychological Science*, 11(1), 35–55.
- Dunn, E. W., Brackett, M. A., Ashton-James, C., Schneiderman, E., & Salovey, P. (2007). On emotionally intelligent time travel:

- Individual differences in affective forecasting ability. *Personality and Social Psychology Bulletin*, 33, 85–93. doi:10.1177/0146167206294201
- Dziuban, C. D., & Shirkey, E. C. (1974). When is a correlation matrix appropriate for factor analysis? Some decision rules. *Psychological Bulletin*, 81, 358–361. doi:10.1037/h0036316
- Erber, R., Wegner, D. M., & Theriault, N. (1996). On being cool and collected: Mood regulation in anticipation of social interaction. *Journal of Personality and Social Psychology*, 70, 757–766. doi:10.1037//0022-3514.70.4.757
- Ford, B. Q., & Tamir, M. (2012). When getting angry is smart: Emotional preferences and emotional intelligence. *Emotion*, 12, 685–689. doi:10.1037/a0027149
- Goetz, A. R., Davine, T. P., Siwec, S. G., & Lee, H. J. (2016). The functional value of preventive and restorative safety behaviors: A systematic review of the literature. *Clinical Psychology Review*, 44, 112–124. doi:10.1016/j.cpr.2015.12.005
- Gollwitzer, P. M. (1999). Implementation intentions: Strong effects of simple plans. *American Psychologist*, 54, 493–503. doi:10.1037//0003-066X.54.7.493
- Gollwitzer, P. M., & Sheeran, P. (2006). Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology*, 38, 69–119. doi:10.1016/S0065-2601(06)38002-1
- Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology & Behavioral Assessment*, 26(1), 41–54.
- Gray, J. A. (1987). The neuropsychology of emotion and personality. In S. M. Stahl, S. D. Iversen, & E. C. Goodman (Eds.), *Cognitive neurochemistry* (pp. 171–190). Oxford: Oxford University Press.
- Gross, J. J. (1998a). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology*, 74, 224–237. doi:10.1037/0022-3514.74.1.224
- Gross, J. J. (1998b). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2, 271–299. doi:10.1037/1089-2680.2.3.271
- Gross, J. J. (1998c). Sharpening the focus: Emotion regulation, arousal, and social competence. *Psychological Inquiry*, 9, 287–290. doi:10.1207/s15327965pli0904_8
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26, 1–26. doi:10.1080/1047840X.2014.940781
- Gross, J. J., & Feldman Barrett, L. (2011). Emotion generation and emotion regulation: One or two depends on your point of view. *Emotion Review*, 3, 8–16. doi:10.1177/1754073910380974
- Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348–362.
- Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology*, 64(6), 970–986.
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). New York, NY: Guilford Press.
- Helbig-Lang, S., & Petermann, F. (2010). Tolerate or eliminate? A systematic review on the effects of safety behavior across anxiety disorders. *Clinical Psychology: Science and Practice*, 17, 218–233. doi:10.1111/j.1468-2850.2010.01213.x
- Hofmann, W., Schmeichel, B. J., & Baddeley, A. D. (2012). Executive functions and self-regulation. *Trends in Cognitive Sciences*, 16, 174–180. doi:10.1016/j.tics.2012.01.006
- Jacobson, N. S., Martell, C. R., & Dimidjian, S. (2001). Behavioral activation treatment for depression: Returning to contextual roots. *Clinical Psychology: Science and Practice*, 8, 255–270. doi:10.1093/clipsy.8.3.255
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). A survey method for characterizing daily life experience: The day reconstruction method. *Science*, 306 (5702), 1776–1780.
- Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, 23, 187–200. doi:10.1007/BF02289233
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39, 31–36. doi:10.1007/BF02291575
- Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical Psychology Review*, 30, 865–878. doi:10.1016/j.cpr.2010.03.001
- Kim, M. Y., Ford, B. Q., Mauss, I., & Tamir, M. (2014). Knowing when to seek anger: Psychological health and context-sensitive emotional preferences. *Cognition and Emotion*, 12, 1061–1070. doi:10.1080/02699931.2014.970519
- Kross, E., & Ayduk, Ö. (2011). Making meaning out of negative experiences by self-distancing. *Current Directions in Psychological Science*, 20, 187–191. doi:10.1177/0963721411408883
- Larsen, R. J., & Diener, E. (1987). Affect intensity as an individual difference characteristic: A review. *Journal of Research in Personality*, 21, 1–39. doi:10.1016/0092-6566(87)90023-7
- Lindquist, K. A., & Barrett, L. F. (2008). Emotional complexity. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (3rd ed., pp. 813–830). New York, NY: Guilford Press.
- Livingstone, K. M., & Isaacowitz, D. M. (2015). Situation selection and modification for emotion regulation in younger and older adults. *Social Psychological & Personality Science*, 6, 904–910. doi:10.1177/1948550615593148
- Loehr, V. G., & Baldwin, A. S. (2014). Affective forecasting error in exercise: Differences between physically active and inactive individuals. *Sport, Exercise, and Performance Psychology*, 3, 177–183. doi:10.1037/spy0000006
- Mayer, J. D., & Salovey, P. (1995). Emotional intelligence and the construction and regulation of feelings. *Applied and Preventive Psychology*, 4(3), 197–208.
- Mischel, W. (2014). *The marshmallow test: Understanding self-control and how to master it*. New York, NY: Random House.
- Mrazek, P. J., & Mrazek, D. A. (1987). Resilience in child maltreatment victims: A conceptual exploration. *Child Abuse and Neglect*, 11, 357–366. doi:10.1016/0145-2134(87)90009-3
- Nielsen, L., Knutson, B., & Carstensen, L. L. (2008). Affect dynamics, affective forecasting, and aging. *Emotion*, 8, 318–330. doi:10.1037/1528-3542.8.3.318
- Niven, K., Totterdell, P., Miles, E., Webb, T. L., & Sheeran, P. (2013). Achieving the same for less: Improving mood depletes blood

- glucose for people with poor (but not good) emotion control. *Cognition and Emotion*, 27(1), 133–140.
- Nock, M. K., Wedig, M. M., Holmberg, E. B., & Hooley, J. M. (2008). The Emotion Reactivity Scale: Development, evaluation, and relation to self-injurious thoughts and behaviors. *Behavior Therapy*, 39(2), 107–116.
- Orne, M. T. (1962). On the social psychology of the psychological experiment – with particular reference to demand characteristics and their implications. *American Psychologist*, 17, 776–783. doi:10.1037/h0043424
- Parkinson, B., & Totterdell, P. (1999). Classifying affect-regulation strategies. *Cognition & Emotion*, 13, 277–303. doi:10.1080/026999399379285
- Powers, M. B., & Emmelkamp, P. M. G. (2008). Virtual reality exposure therapy for anxiety disorders: A meta-analysis. *Journal of Anxiety Disorders*, 22, 561–569. doi:10.1016/j.janxdis.2007.04.006
- Rachman, S. J., Craske, M., Tallman, K., & Solyom, C. (1986). Does escape behavior strengthen agoraphobic avoidance? A replication. *Behavior Therapy*, 17, 366–384. doi:10.1016/S0005-7894(86)80069-7
- Rosales-Lagarde, A., Armony, J. L., Del Río-Portilla, Y., Trejo-Martínez, D., Conde, R., & Corsi-Cabrera, M. (2012). Enhanced emotional reactivity after selective REM sleep deprivation in humans: An fMRI study. *Frontiers in Behavioral Neuroscience*, 6, 25. doi:10.3389/fnbeh.2012.00025
- Rovenpor, D. R., Skogsberg, N. J., & Isaacowitz, D. M. (2013). The choices we make: An examination of situation selection in younger and older adults. *Psychology and Aging*, 28, 365–376. doi:10.1037/a0030450
- Salkovskis, P. M. (1991). The importance of behavior in the maintenance of anxiety and panic – a cognitive account. *Behavioural Psychotherapy*, 19, 6–19. doi:10.1017/S0141347300011472
- Salkovskis, P. M. (1996). *Trends in cognitive and behavioural therapies*. Chichester: Wiley.
- Scheibe, S., Mata, R., & Carstensen, L. L. (2011). Age differences in affective forecasting and experienced emotion surrounding the 2008 U.S. Presidential election. *Cognition and Emotion*, 25, 1029–1044. doi:10.1080/02699931.2010.545543
- Scherer, K. R. (2007). Componential emotion theory can inform models of emotional competence. In G. Matthews, M. Zeidner, & R. Roberts (Eds.), *The science of emotional intelligence: Knowns and unknowns* (pp. 101–126). New York, NY: Oxford University Press.
- Sheeran, P. (2002). Intention-behaviour relations: A conceptual and empirical review. *European Review of Social Psychology*, 12, 1–36. doi:10.1002/0470013478.ch1
- Sheppes, G., & Gross, J. J. (2011). Is timing everything? Temporal considerations in emotion regulation. *Personality and Social Psychology Review*, 15, 319–331. doi:10.1177/1088868310395778
- Sheppes, G., Scheibe, S., Suri, G., & Gross, J. J. (2011). Emotion regulation choice. *Psychological Science*, 22(11), 1391–1396. doi:10.1177/0956797611418350
- Sheppes, G., Scheibe, S., Suri, G., Radu, P., Blechert, J., & Gross, J. J. (2012). Emotion regulation choice: A conceptual framework and supporting evidence. *Journal of Experimental Psychology: General*, 143, 163–181. doi:10.1037/a0030831
- Shiffman, S., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology*, 4, 1–32. doi:10.1146/annurev.clinpsy.3.022806.091415
- Sims, T., Hogan, C. L., & Carstensen, L. L. (2015). Selectivity as an emotion regulation strategy: Lessons from older adults. *Current Opinion in Psychology*, 3, 80–84. doi:10.1016/j.copsyc.2015.02.012
- Tamir, M. (2016). Why do people regulate their emotions? A taxonomy of motives in emotion regulation. *Personality and Social Psychology Review*, 20(3), 199–222.
- Tamir, M., & Ford, B. Q. (2009). Choosing to be afraid: Preferences for fear as a function of goal pursuit. *Emotion*, 9, 488–497. doi:10.1037/a0015882
- Tamir, M., & Ford, B. Q. (2012). Should people pursue feelings that feel good or feelings that do good? Emotional preferences and well-being. *Emotion*, 12, 1061–1070. doi:10.1037/a0027223
- Tamir, M., Mitchell, C., & Gross, J. J. (2008). Hedonic and instrumental motives in anger regulation. *Psychological Science*, 19, 324–328. doi:10.1111/j.1467-9280.2008.02088.x
- Thayer, R. E., Newman, J. R., & McClain, T. M. (1994). Self-regulation of mood: Strategies for changing a bad mood, raising energy, and reducing tension. *Journal of Personality and Social Psychology*, 67, 910–925. doi:10.1037//0022-3514.67.5.910
- Tice, D. M., Bratslavsky, E., & Baumeister, R. F. (2001). Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *Journal of Personality and Social Psychology*, 80, 53–67. doi:10.1037/0022-3514.80.1.53
- Urry, H. L., & Gross, J. J. (2010). Emotion regulation in older age. *Current Directions in Psychological Science*, 19, 352–357. doi:10.1177/0963721410388395
- Van Dillen, L. F., & Koole, S. L. (2007). Clearing the mind: A working memory model of distraction from negative emotion. *Emotion*, 7, 715–723. doi:10.1037/1528-3542.7.4.715
- Vohs, K. D., & Heatherton, T. F. (2000). Self-regulatory failure: A resource-depletion approach. *Psychological Science*, 11, 249–254. doi:10.1111/1467-9280.00250
- Vujovic, L., Opitz, P. C., Birk, J. L., & Urry, H. L. (2014). Cut! that's a wrap: Regulating negative emotions by ending emotion-eliciting situations. *Frontiers in Psychology*, 5, 165. doi:10.3389/fpsyg.2014.00165
- Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52, 129–148. doi:10.1111/j.2044-8325.1979.tb00448.x
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070.
- Webb, T. L., Miles, E. M., & Sheeran, P. (2012). Dealing with feeling: A meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological Bulletin*, 138, 775–808. doi:10.1037/a0027600
- Webb, T. L., & Sheeran, P. (2006). Does changing behavioral intentions engender behavior change? A meta-analysis of the experimental evidence. *Psychological Bulletin*, 132, 249–268. doi:10.1037/0033-2909.132.2.249
- Wells, A., Clark, D. M., Salkovskis, P., Ludgate, J., Hackmann, A., & Gelder, M. (1995). Social phobia: The role of in-situation safety behaviors in maintaining anxiety and negative beliefs.

- Behavior Therapy*, 26, 153–161. doi:10.1016/S0005-7894(05)80088-7
- Wheeler, R. E., Davidson, R. J., & Tomarken, A. J. (1993). Frontal brain asymmetry and emotional reactivity: A biological substrate of affective style. *Psychophysiology*, 30, 82–89. doi:10.1111/j.1469-8986.1993.tb03207.x
- Williams, L. E., Bargh, J. A., Nocera, C. C., & Gray, J. R. (2009). The unconscious regulation of emotion: Nonconscious reappraisal goals modulate emotional reactivity. *Emotion*, 9, 847–854. doi:10.1037/a0017745
- Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. *Advances in Experimental Social Psychology*, 35, 345–411. doi:10.1016/S0065-2601(03)01006-2
- Wilson, T. D., & Gilbert, D. T. (2005). Affective forecasting – knowing what to want. *Current Directions in Psychological Science*, 14, 131–134. doi:10.1111/j.0963-7214.2005.00355.x
- Zigmond, A. S., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, 67(6), 361–370. doi:10.1111/j.1600-0447.1983.tb09716.x