Emotion Control Beliefs and Emotion Regulation Strategies in Response to Daily Negative Events

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Abstract

Being able to control emotions is associated with better mental health, well-being, and psychosocial functioning (De Castella et al., 2013; Bonanno & Burton, 2013; Aldao & Nolen-Hoeksema, 2010, 2012). Research has shown that emotion control beliefs (the extent to which one believes emotions are fixed or can be changed) influence choices of specific emotion regulation strategies, such as reappraisal (Kneeland et al., 2016b). As part of a larger study on the predictors of emotion regulation in everyday life, I assessed the role of emotion control beliefs in the choice of several emotion regulation strategies across multiple events over multiple days. Ninety-seven participants completed a questionnaire assessing malleability beliefs before responding to 7-10 days of assessments on their mobile device (up to 6 assessments a day). Each assessment comprised 30 items, including items assessing how much participants engaged in each of eight emotion regulation strategies in response to a recent negative event. I found no overall associations between emotion control beliefs and the use of adaptive and maladaptive strategies. I failed to replicate previous findings of an association between emotion control beliefs and reappraisal and cognitive change. Analyses of individual strategies indicated that the more participants believed they could change their emotions, the more likely they were to use distraction and the less likely they were to use learned helplessness. These findings highlight the importance of considering how emotion control beliefs interact with other predictors to predict emotion regulation.

Keywords: emotion regulation; emotion malleability beliefs

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You have a very important meeting with your boss. As you are walking up to the office, you trip and spill coffee all over your shirt. You are angry at yourself and find yourself fuming about it for the rest of the day. No matter what you do, you never seem to be able to control your emotions. Believing that emotions are changeable has implications for how we choose to regulate them. In turn, choosing appropriate emotion regulation strategies to react to environmental and social demands has been linked to better mental health, well-being, and psychosocial functioning (De Castella, Goldin, Jazaieri, Ziv, Dweck & Gross, 2013; Bonanno & Burton, 2013; Aldao & Nolen-Hoeksema, 2010, 2012; Gross & Thompson, 2007). In the current study, I proposed to examine the relation between beliefs about emotion control and the use of emotion regulation strategies in response to emotional events in everyday life.

Emotion regulation refers to the strategies that people use to decrease, maintain, or increase their emotions (Gross & Thompson, 2007). Over 20 strategies have been identified and widely studied in response to positive and negative events (Heiy & Cheavens, 2014). Overall, strategies can be categorized as adaptive or maladaptive, depending on their effectiveness and their outcomes for immediate and long-term well-being (Heiy & Cheavens, 2014). Specifically, strategies such as acceptance (accepting one's feelings), benefit-finding (thinking about what one can learn from a situation), perspective-taking (reminding oneself that things could be worse) and cognitive reappraisal (e.g. thinking about the event in a different way) have been associated with adaptive outcomes because they are associated with better mental health and tend to reduce the experience of negative affect in the short- and/or long-term (Aldao & Nolen-Hoeksema, 2010; Goldin, McRae, Ramel & Gross, 2007). Benefit-finding, perspective-taking and cognitive

reappraisal are all types of cognitive change strategies and have been shown to be effortful and active strategies (Goldin et al., 2007). On the other hand, some strategies may alleviate negative affect in the short-term (e.g. substance use) but may have severe consequences for long-term well-being and mental health (Heiy & Cheavens, 2014). Yet other strategies, like rumination (repetitive thinking about the situation), expression suppression (trying to hide one's feelings), and learned helplessness (thoughts about being unable to do anything about a situation) have been linked to negative outcomes such as impaired memory for the emotional event and worse mental health (Richards, Butler, & Gross, 2003; Hofman et al., 2005; Aldao & Nolen-Hoeksema, 2010). Even though strategies have been associated with different outcomes, there is more to emotion regulation than simply classifying each strategy as either adaptive or maladaptive. For example, it would not be a good idea to just use reappraisal all the time. Research has shown that reappraisal may be adaptive when the circumstances are uncontrollable but maladaptive when the person can change the situation (Troy, Shallcross, & Mauss, 2013). In order to cope successfully with everyday situations, previous work has demonstrated that flexibility in employing strategies may be most adaptive (Bonnano & Burton, 2013).

Given the broad array of different strategies, how do people choose one strategy over another? It is crucial to gain a better understanding of why people to choose to regulate their emotions in different ways since effective emotion regulation contributes to improved mental health and overall well-being (Bonanno & Burton, 2013). There are multiple predictors of emotion regulation. People may employ different strategies depending on several contextual variables, including individual goals (e.g. performing well on a task or wanting to feel better in the long run) and characteristics of the event itself (e.g. event intensity) (Richards et al., 2003;

Aldao & Nolen-Hoeksema, 2010; Heiy & Cheavens; 2014; Bonnano & Burton, 2013; Scheppes et al., 2011; Scheppes, Scheibe, Suri & Gross, 2011).

Another predictor of emotion regulation is emotion control beliefs (De Castella et al., 2013). Emotion control beliefs refer to the beliefs that emotions in general, or one's own emotions, specifically, are changeable or unchangeable (De Castella et al., 2013). Some people believe emotions are fixed and cannot be changed (entity theorists) while others believe emotions can be changed (incremental theorists). Previous work suggests a relationship between control beliefs and well-being outcomes of emotion regulation strategy choice (De Castella et al., 2013). However, beliefs of controllability as a predictor of emotion regulation strategy use remains relatively unexplored.

A small body of literature has shown that emotion control beliefs are linked to a variety of emotional, interpersonal, and clinical outcomes (De Castella et al., 2013; Howell, 2017; Ford et al., 2018; Ford & Gross, in press). Whether or not people believe emotions can be changed is important for social and emotional functioning and regulatory self-efficacy (De Castella et al., 2013). Emotion control beliefs also predict the subjective intensity of emotion and psychological health outcomes (Kappes & Schikowski, 2013; De Castella et al., 2013). For example, believing emotions are uncontrollable is correlated with worse psychological health, including lower well-being, depression and anxiety symptoms (Ford & Gross, in press; Ford et al., 2018, De Castella et al., 2013). Also, people are less likely to engage in challenging situations when they believe that emotions cannot be changed (Kneeland et al., 2016b). Overall, these findings indicate that emotion control beliefs are linked to mental health outcomes and social functioning.

Even though research propositions an association between emotion control beliefs and well-being, it is unclear how emotion regulation mediates this relationship. Recent research has

pointed out a connection between emotion controllability beliefs and specific emotion regulation strategies (Kneeland, Nolen-Hoeksema, Dovidio, & Gruber, 2016; Kneeland et al., 2016b; De Castella, Platow, Tamir & Gross, 2017). Combined findings suggest that the more someone believes that emotions can be changed, the more likely they are to engage in active regulation and to positively evaluate the usefulness of various emotion regulation strategies, such as reappraisal, acceptance, distraction, problem solving, perspective taking and benefit-finding (Kneeland et al., 2017; Ford & Gross, 2018). The more likely individuals are to believe emotions to be changeable, the more likely they are to engage in reappraisal when compared to individuals who believe emotions to be fixed (Kneeland et al., 2016). Furthermore, higher beliefs about the controllability of emotions predict increased use of effective strategies, such as cognitive change and attention reorientation (Ortner & Pennekamp, manuscript submitted for publication). On the other hand, beliefs about the controllability of emotions are negatively associated with the use of more maladaptive emotion regulation strategies (e.g. rumination, expression suppression and learned helplessness) (Kneeland et al., 2016). Some evidence also suggests a bidirectional relationship between control beliefs and emotion regulation: people holding entity beliefs are less likely to use reappraisal (thinking about something in a different way to change feelings) in everyday life, and, in turn, experience a perceived lack of control over emotions (Kneeland et al., 2016b). This pattern is associated with poorer psychological health and decreases the likeliness of seeking psychological help (Ford, Gentzler, Hankin & Mauss, 2018; De Castella et al, 2017). In contrast, people holding incremental beliefs are more likely to use reappraisal and, in turn, experience lower levels of negative affect and more adaptive outcomes (De Castella et al., 2013; Aldao & Nolen-Hoeksema, 2012; Kappes & Schikowski, 2013). However, work has also shown

that individuals who believe emotions are changeable are more likely to engage in self-blame, which has been identified to be maladaptive (Kneeland et al., 2016b).

Although the evidence shows a connection between emotion control beliefs and emotion regulation, the relationship has primarily been considered in laboratory settings or across a limited number of strategies (e.g., reappraisal and self-blame). There are relatively few studies that have examined the links between control beliefs and emotion regulation strategy use (Ford & Gross, in press). The role of emotion control beliefs in predicting choices of a broad range of emotion regulation strategies in everyday life settings has been understudied. Furthermore, the direction of the relationship between control beliefs and emotion regulation strategy selection is not clear. Although there is some experimental evidence suggesting that emotion regulation control beliefs predict emotion regulation strategy use (Kneeland et al., 2016b), the relationship may also go the other way: emotion regulation strategy use, and success, may be predictive of emotion regulation control beliefs.

The present study aimed to extend the current literature by examining participants' personal beliefs about emotion controllability and their emotion regulation choices in response to negative events in everyday life across different strategies. Specifically, I tested how beliefs about the controllability of emotions predict the use of the following strategies: distraction (shifting one's attention away from an unpleasant stimulus by changing one's thoughts or activity), problem solving (making a plan to make the situation better), cognitive change (reappraisal, perspective taking, acceptance, and benefit-finding) (thinking about the situation differently), rumination (repetitive thoughts about the event), learned helplessness, and expression suppression (suppressing one's emotional expressions) (Heiy & Cheavens, 2014). These strategies are widely studied and have been identified as adaptive or maladaptive based on

their immediate and long-term effects on emotion, behaviour, and cognition (Aldao & Nolen-Hoeksema, 2012). While distraction, problem solving and reappraisal, including perspective taking, acceptance, and benefit-finding, are considered to be adaptive, rumination, learned helplessness, and expression suppression are considered to be maladaptive. Additionally, these specific emotion regulation strategies are often used in everyday life (Heiy & Cheavens, 2014).

I assessed emotion regulation control beliefs both prior to (time 1) and after (time 2) participants reported on their use of emotion regulation strategies in response to multiple negative events experienced in daily life, over 7-10 days. Importantly, participants were asked about their use of multiple emotion regulation strategies several times per day over the course of several days, allowing me to collect data close in time to the moment of a negative event. I tested whether emotion regulation control beliefs at time 1 predicted emotion regulation strategy use. Furthermore, I planned to test whether emotion regulation strategy use predicted emotion regulation control beliefs at time 2, over and beyond emotion regulation control beliefs at time 1.

Based on previous research, I predicted that the choice of emotion regulation strategies in everyday life would depend on people's beliefs about emotion regulation. I expected to find that the more people believed that emotions could be changed, the more likely they were to use adaptive emotion regulation strategies and the less likely they were to use maladaptive emotion regulation strategies. I expected to find that the relationship between emotion regulation strategy use and emotion regulation control beliefs would be bidirectional. That is, I expected that emotion control beliefs at time 1 would be predictive of emotion regulation strategies and that emotion regulation strategies would be predictive of emotion regulation control beliefs at time 2, over and above emotion control beliefs at time 1.

Method

Participants

The research project was part of a larger study on the predictors of emotion regulation in everyday life. Participants were 97 adults (N = 97) aged 18-55 from the community of Kamloops, BC. Only 94 participants completed a number of 14 assessments and were included in the study. Participants ranged in age from 18 to 55 (M = 26.07, SD = 8.61) and identified as predominantly female (70.1%, 28.9% male). Participants were white (87.6%), black (1%), Asian (4.1%), First Nations (1%), Indian (2.1%), Middle Eastern (2.1%), Hispanic (1%), or other (1%). The Thompson Rivers University's Research Ethics Board approved the study. Participants gave informed consent and received a $30 grocery gift card upon completion of the study (See Appendix A for informed consent form).

Measures and Procedure

Participants completed an initial survey in the laboratory at Thompson Rivers University. The initial survey consisted of a battery of measures including, for the purpose of the current study, beliefs about emotion control. Subsequently, participants commenced 7-10 days of assessments on their mobile device, with up to six assessments a day.

Initial questionnaire. Participants completed a battery of measures assessing the predictors and outcomes of emotion regulation in daily life. For the purpose of this project, I focused on the following measures:

Emotion Control Beliefs (De Castella et al., 2013). Participants rated the extent to which they agreed with four statements about emotional control (e.g., "I can learn to control my emotions," "The truth is, I have very little control over my emotions"), on a scale from 1 (strongly disagree) to 5 (strongly agree) (See Appendix B). Two of the items were worded for believing emotions

are malleable and two of the items were worded for believing emotions are fixed. Items worded for believing emotions are fixed were reverse scored.

Survey Signal Measures

Participants were asked to respond to six assessments a day, with a minimum of 14 assessments total over the course of 7-10 days. The assessments comprised items assessing momentary affect, event specifics, emotion regulation, event implications, immediate and future regulation goals, and instrumental and hedonic goals. For the purpose of this project, I focused on the following:

Emotion Regulation Items. Participants rated how much they engaged in each emotion strategy from 0 (not at all) to 5 (very much). Strategies included acceptance (e.g. "Since the previous assessment I have allowed or accepted my feelings"), distraction (e.g. "… I found an activity or thought of something else to keep myself busy and distracted"), rumination (e.g. "…I thought over and over again about the situation or my feelings"), perspective taking (e.g. "…it could be worse"), benefit finding (e.g. "…I thought about how I could become stronger or learn from this"), learned helplessness (e.g. "…I can never do anything about my problems so I felt unable to deal with the situation"), expression suppression (e.g. "…I tried not to show my emotions"), and cognitive reappraisal (e.g. "…I thought about the situation in a different way"), problem solving (e.g. "…I made a plan to make the situation better"), social sharing (e.g. "…I talked about my feelings with someone else"), consequences (e.g. "…I thought about all the different things in my life that this situation would impact"), positive refocusing (e.g. "…I thought about something pleasant instead of what happened"), substance use (e.g. "…I smoked a cigarette/drank alcohol/got high"), denial (e.g. "…I acted like the situation never happened before), avoidance (e.g. "I avoided focusing on my thoughts or feelings about the situation). (See Appendix C).

Final questionnaire

Upon completion of the 14 assessments over the course of 7-10 days, participants returned to the laboratory to complete a final questionnaire. The final questionnaire comprised the same measures as the initial questionnaire. For the purpose of this study, I focused on measures of emotion control beliefs (See Appendix B).

Data analyses

I conducted statistical analyses with SPSS version 24. I was unable to examine control beliefs at time 1 over and above control beliefs at time 2 because the final questionnaire did not assess emotion control beliefs. I computed a mean across the four emotion control belief items, as well as an adaptive strategy use score (mean of acceptance, distraction, problem solving, benefit finding, cognitive reappraisal, positive refocusing, social sharing, perspective taking) and maladaptive strategy use score (mean of rumination, expression suppression, consequences, denial, avoidance, learned helplessness, substance use). I computed means for acceptance, reappraisal, distraction, rumination, problem solving, benefit finding, expression suppression and learned helplessness (see Table 1). I also computed individual means for perspective taking, social sharing, consequences, positive refocusing, substance use, denial and avoidance (see Table 2). Based on previous research, I computed a cognitive change score by computing the mean across acceptance, perspective taking, benefit finding and reappraisal and for attention reorientation by grouping distraction and positive refocusing (Goldin et al., 2007). I computed correlations between emotion control beliefs, and adaptive and maladaptive strategy use using Pearson's correlation coefficient. I also computed correlations between emotion control beliefs mean and cognitive change and attention reorientation. Finally, I computed correlations between

emotion regulation control beliefs and acceptance, reappraisal, distraction, rumination, problem solving, benefit finding, expression suppression and learned helplessness (see Table 1).

Results

There were no overall associations between emotion regulation control beliefs and the use of adaptive and maladaptive strategies, $r = .163$, *n.s.* and $r = -.047$, *n.s.* Analyses of individual strategies indicated that the more participants believed they could change their emotions, the more likely they were to use distraction, $r = .222$, $p = 0.05$, and the less likely they were to use learned helplessness, $r = -.339$, $p = 0.01$. All other correlations with specific strategies were not significant (all p's $< .058$) (see Table 1).

Discussion

This study aimed to examine why and how people regulate their emotions across personal experiences of negative events. I predicted that the more likely people were to believe that emotions are changeable, the more likely they would be to use adaptive strategies and the less likely they would be to use maladaptive strategies to regulate emotions. There was limited support for these predictions.

Contrary to my predictions, there was no overall association between emotion control beliefs and adaptive or maladaptive strategy use. These findings suggest that people draw on different regulatory strategies that may depend on the characteristics of the event, rather than emotional control beliefs predicting the use of adaptive and maladaptive strategies in general.

While my predictions did not include specific projections for individual emotion regulation strategies, I found that the more people believed they could change their emotions, the more likely they were to use distraction and the less likely they were to use learned helplessness. Antecedent-focused strategies like reappraisal have been positively associated with emotion

regulation control beliefs because they target emotional responses before they unfold (Ortner & Pennekamp, 2018; Kneeland, Dovidio, Joormann & Clark, 2016c). Distraction has been identified as having no negative consequences for mental health and is a preferred strategy when regulating emotions in response to high intensity events (De Castella et al., 2013; Sheppes et al., 2011). It may be that distraction, given that is generally considered to be adaptive and antecedent-focused, is positively associated with emotion control beliefs. This study is the first to demonstrate the relationship of distraction and emotion control beliefs. Learned helplessness, however, has been identified as a maladaptive strategy due to its negative implications for mental health (Bonanno & Burton, 2013). The more people believe emotions cannot be changed, the more likely they are to use learned helplessness (e.g. “I can never do anything about my problems, so I felt unable to deal with the situation”). The semantic overlap between the constructs of learned helplessness and fixed emotion control beliefs may explain this correlation. I failed to replicate previous work that found emotion control beliefs to be a predictor for reappraisal, rumination and expression suppression (Kneeland et al., 2016; Kneeland et al., 2016b; De Castella et al., 2017). Given my analyses across a large number of strategies, the specificity of association between strategies and emotion control beliefs may have been lost.

Previous research has demonstrated that strategy use varies within-person (Brans et al., 2013). Individuals may use different strategies depending on the context of an event, rather than consistently relying on one strategy or a set of strategies. It may also be the case that specific adaptive or maladaptive strategies are more closely associated with emotion control beliefs than others. Therefore, there is a need to measure people’s use of multiple individual strategies across multiple events in order to capture how contextual variables influence emotion regulation.

Previous work has found that intensity and importance of an event together interact with emotion control beliefs and strategy use (Ortner & Pennekamp, 2018). For example, findings suggest that as event importance and intensity increase so does use of maladaptive strategies (Ortner & Pennekamp, 2018). This may explain why there was no relationship between emotion control beliefs and adaptive and maladaptive emotion regulation strategy use: other predictors, such as event intensity and importance, might moderate the relationship between emotion control beliefs and strategy use. In other words, people differing in emotion control beliefs may respond differently to contextual variables, such as intensity and importance.

Limitations and Future Directions

This study adds to our knowledge as to why and how people regulate their emotions in response to daily events. However, there are some limitations that future research should address. First, the current study did not address any possible interactions with contextual variables (like intensity). I only examined emotional responses to negative events. Further studies should examine the role of emotion control beliefs in regulating emotions to positive events. Second, while I suggest that assessments about the event captured participants' feelings prior to any regulatory attempts, the experience sampling methodology may have influenced how people regulated their emotions. That is, drawing awareness to different emotion regulations strategies may have influenced participants' regulatory attempts as the event unfolded. Third, I assessed correlational associations between emotion regulation control beliefs and strategy use. I expected that emotion control beliefs would predict emotion regulation strategies, but the relationships may be bi-directional. In other words, it may be that emotion regulation strategy use predicts emotion control beliefs. Being able to successfully regulate one's emotions may influence one's beliefs about their controllability. Experimental research has found emotion control beliefs to be

predictive of specific strategies such as reappraisal and suppression (Kneeland et al, 2016; De Castella et al., 2017). Future research should build on these findings by assessing a broader array of strategies or considering moderating variables such as intensity. Experience sampling methodology allows for momentary and longitudinal assessments of emotion control beliefs. It is therefore important to consider how emotion control beliefs vary over time and how momentary emotion control beliefs predict emotion regulation for events. Future research should examine the variability in malleability beliefs across different occasions and how emotion control beliefs interact with other predictors to predict emotion regulation. This, in turn, will lead to a broader understanding of potential approaches to the improvement of mental health and well-being.

Conclusion

I examined emotion control beliefs in relationship to emotion regulation strategies. Findings suggest that the more people believe that they can change their emotions the more likely they are to use distraction and the less likely they are to use learned helplessness. I did not find an overall association between emotion control beliefs and adaptive and maladaptive emotion regulation strategy use. My findings extend previous research on emotion control beliefs and emotion regulation to add a more detailed examination of how control beliefs may predict emotion regulation in daily life. Using experience sampling methodology, I was able to capture how people regulated their emotions in response to daily negative events. Emotion regulation control beliefs and emotion regulation strategy use was assessed at the individual level: I examined how individuals responded across multiple emotional events. Contrary to previous research and expected results, I did not find an overall association between emotion control beliefs and use of other strategies such as reappraisal. A more fruitful avenue for future research

could be to explore other variables that may interact with emotion control beliefs to predict emotion regulation strategy choice.

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Appendix A

Informed Consent

Dear Participant,

You have been asked by Dr. Catherine Ortner or Pia Pennekamp of the Department of Psychology, Thompson Rivers University (telephone number 250 828 5497), to participate in a research project entitled *Emotions in Everyday Life*, which encompasses the following:

The purpose of the study is to assess how people respond in different emotional situations and their perceptions of emotional events. It is comprised of three parts:

1. **Questionnaires.** Today, you will answer some questions about your responses to emotional events in general and the ways you think about your life and the world. You will also register on SurveySignal, which is a platform that sends text messages at pre-determined times, with links to short surveys. This portion of the study will take approximately 45 minutes.
2. **Smartphone Surveys.** After registering on SurveySignal on your phone, you will receive six texts each day, each one with a link to a short survey on SurveyMonkey. The texts will start any time after 9am, and you will not receive any texts after 9pm. Each assessment will include items asking you about how you responded to a recent emotional event and will take a few minutes of your time. This portion of the study will last for seven to ten days. After you have completed at least seven days and about 21 assessments, you will receive an email inviting you to schedule the final questionnaires and wrap-up session. (If you have any questions during this time, please contact the primary researcher, Catherine Ortner, at cortner@tru.ca.)
3. **Final Questionnaires and Wrap-up.** You will return to the laboratory and answer a few questions about the way you think about your life. You will then be fully debriefed about the purpose of the study. A researcher will be able to answer any questions you may have. You will receive your payment of a $30 grocery store gift card as thanks for your participation. This portion of the study will take approximately 20 minutes.

Your responses will help us to find how people prefer to respond to different emotional situations.

During this study you will be documenting your responses to emotional situations as they arise. There is no discomfort or distress anticipated from your participation in the study.

No identifying information will be collected in the daily assessments. You will complete those surveys on SurveyMonkey, which stores the data securely on Canadian servers. SurveySignal (the platform that sends the text messages) will store your information (email and telephone number) on their secure servers and never share it with third parties. SurveySignal *may* send you email invitations to participate in other studies after this study is completed. You can choose to unsubscribe to those emails.

All the data collected for this study will remain confidential. No identifying information will be collected. The data will be used for research purposes only. Data from the study will be stored on the principal investigator's computer. The study results may be presented at a conference or in journal in aggregated form. The raw data from the study may be made publicly available on TRUSpace or another open access repository, but this will be in a manner that does not identify you. The study results may also be presented in summary format at conferences and/or published in scholarly journals.

You may refuse to participate or withdraw your participation in this project at any time without any negative consequences. You can indicate to the researcher that you do not wish to continue, and/or uninstall the app from your phone.

You may ask any questions or register any complaint you might have about the project with either the chief researcher named above or with the Dean of Arts, TRU (250-828-5000). If you have any questions or issues concerning this project that are not related to the specifics of the research, you may also contact the Chair of the Research Ethics Board – Human Participants (250-828-5000).

Copies of the results of this study, upon its completion, may be obtained by emailing the investigator, Dr. Catherine Ortner at cortner@tru.ca after August 2018.

We appreciate your effort and help in participating.

Your signature on this form indicates that you understand the information regarding this research project, including all procedures and the personal risks involved, that you voluntarily agree to participate in this project as a participant, and that you have received a copy of the consent form.

Name: (Please Print) _____

Participant's signature_____ Date _____

Investigator's signature_____Date_____

Appendix B

Measures (Emotion Control items, Emotion Regulation items)

Emotion control

Please rate the extent to which you agree with each of the following items:

If I want to, I can change the emotions that I have.

1	2	3	4	5
Strongly disagree				Strongly agree

No matter how hard I try, I can't really change the emotions that I have.

1	2	3	4	5
Strongly disagree				Strongly agree

I can learn to control my emotions.

1	2	3	4	5
Strongly disagree				Strongly agree

The truth is, I have very little control over my emotions.

1	2	3	4	5
Strongly disagree				Strongly agree

Appendix C

5. Emotion regulation

In response to this event… (adapted from Heiys & Cheavens and Brans et al.)

I accepted the situation and/or my emotions
I found an activity or thought of something else to keep myself busy and distracted
I thought over and over again about the situation or my feelings
I made a plan to make the situation better
I reminded myself that things could be worse
I talked about my feelings with someone else
I thought about how I could become stronger or learn from this situation
I thought about all the different things in my life that this situation would impact
I tried not to show my emotions
I thought of something pleasant instead of what happened
I thought about the situation in a different way
I smoked a cigarette/drank alcohol/got high
I acted like the situation had never happened at all
I avoided focusing on my thoughts or feelings about the situation
I can never do anything about my problems so I felt unable to deal with the situation

0 1 2 3 4 5
Not at all Very much

Appendix D

Debriefing

Thank you for completing the study. Your responses will help us understand how people choose to respond to different types of emotional situations.
It is really common to use lots of different strategies when trying to control your emotions and we are interested in finding out why people will choose to use different strategies in different situations. Previous research has shown that people who think about the future consequences of their actions choose different ways to regulate their emotions compared to those who do not think about the future consequences as much. We hope to build on those findings by showing that thinking about the present and future is an important variable predicting how people regulate their emotions in real life situations. Using smartphones to collect data allows us to capture this information much closer to when it happens, so we are not relying as much on people's memories of what happened and how they responded.

Table 1. Correlations between emotion control beliefs means and emotion regulation strategy use.

Emotion Regulation Strategy	Emotion Control Beliefs
Acceptance	.193
M	4.22
SD	.89
Distraction	.222*
M	3.29
SD	.95
Rumination	-.139
M	3.01
SD	1.01
Benefit finding	.106
M	2.74
SD	1.21
Problem solving	.097
M	3.29
SD	1.08
Expression Suppression	.048
M	3.31
SD	1.13
Reappraisal	.082
M	2.51

SD	1.11
Learned Helplessness	-.339**
M	1.82
SD	1.08

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Table 2. Means and standard deviations for other emotion regulation strategies.

Emotion Regulation Strategy	
Perspective Taking	
M	3.12
SD	1.44
Social Sharing	
M	2.42
SD	1.08
Consequences	
M	2.93
SD	.99
Positive Refocusing	
M	2.42
SD	1.12
Substance Use	
M	.95
SD	.72
Denial	
M	2.25
SD	.97
Avoidance	
M	2.84
SD	.97