Should I just Listen to you or Change your Mind too? Target's Perceived Efficacy of Agents'

Interpersonal Affect Improvement Strategies

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Abstract

People shape and influence others' emotions every day. If these attempts are perceived as successful they may have a positive effect on people's relationships and well-being. Across two studies, targets' perceived efficacy of regulation strategies to improve their sadness and anxiety/stress has been investigated. In Study 1, participants (n = 120) were provided with two scenarios depicting sadness and anxiety/stress and asked to imagine themselves in these situations. Afterwards, they were provided with different regulation strategies and asked to rate their perceived efficacy to down-regulate their sadness and anxiety. In Study 2, participants (n = 120) were asked to describe a situation where they felt sad and another one where they felt anxious. They were then provided with strategies aimed at reducing their sadness and anxiety. Results from both studies showed that whereas for sadness higher perceived efficacy was predicted by affective engagement, for anxiety/stress was predicted by cognitive engagement.

Keywords: interpersonal emotion regulation; regulation strategies; efficacy; sadness; anxiety.

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People spend a great deal of time and effort trying to change other people's moods (Williams & Emich, 2014). These active efforts may be due to different motivations ranging from self-interested (e.g., obtaining social recognition) to more altruistic reasons (e.g., increasing the other's well-being) (Batson, 2011; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). For example, employees may use 'humour' to make their superiors feel happy, in order to make them like them more (Cooper, 2005) or friends may try to reframe a painful event to bring relief to each other (Niven, Totterdell & Holman, 2009).

Research on interpersonal emotion regulation has highlighted the existence of different strategies to change others' affective states. For example, research on emotion management has identified 'humour', 'listening', and 'affirmation' as important interpersonal emotion regulation strategies (e.g., Cahill & Eggleston, 1994; Pierce, 1999), whereas literature on social support has highlighted strategies such as 'showing concern', 'valuing', and 'providing advice' (e.g., Henderson & Argyle, 1985; Kahn, 1993). Despite the efforts in classifying the wide range of strategies, little is known about how targets of the regulation process may perceive the efficacy of these strategies. The present research project will address this gap by investigating what strategies are perceived as more effective by people when recovering from a situation involving either sadness or anxiety/stress.

Interpersonal Emotion Regulation Strategies

Initial research on emotion regulation was mainly concerned about people's efforts to modify or inhibit their own emotional response (Gross, 2007). More recently, research started looking at how people may influence others' emotions (Zaki & Williams, 2013) and the motivations underlying such efforts (Tamir, 2016). Regarding the possible regulation

strategies, one of the first overarching classifications was the interpersonal *affect classification* (see Niven et al., 2009). In this classification, there is an initial distinction between whether people use specific emotion regulation strategies with the aim of *affect improvement* (i.e., any strategy to lighten others' mood) or *affect worsening* (i.e., any strategy to deteriorate others' mood). Within each of these regulation forms, there is a further distinction between primary and secondary means to separate the strategies (see Figure 1). For affect improvement, at the broadest level, the authors differentiated between the primary means of positive engagement (i.e., involving the target in his/her emotional situation to improve their emotional state) and acceptance (i.e., behaviours to communicate validation of the target). Within each primary mean, the authors distinguished two secondary means or specific strategies. Namely, within positive engagement, the authors made a distinction between *affective engagement* (i.e., engaging directly with the target's feelings) and *cognitive engagement* (i.e., changing the way a target thinks about a situation through highlighting others' support, rationalizing, etc.). Within acceptance, the authors differentiated between *humour* (i.e., improving the target's mood through acting silly, laughing, etc.) and *attention* (i.e., any action that implies giving the target consideration or diverting the target's attention). Finally, concerning affect worsening the model distinguishes between the primary means of *negative engagement* (i.e., making the target realize how they made others feel or what s/he did wrong) and *rejection strategies* (i.e., the snubbing of the target). Given that the purpose of the paper is on affect improvement, the specific strategies within each primary mean on affect worsening will not be discussed further but it can be seen in Figure 1.

Research on the use of interpersonal strategies has shown clear differences between strategies. For example, adults with Asperger's syndrome tend to engage less in affect improvement and tend to use less adaptive strategies (i.e., cognitive engagement and attention) compared to healthy controls (López-Pérez, Ambrona, & Gummerum, 2017). Furthermore,

the use of affect improvement has been linked (compared to worsening) to a higher personal well-being (Niven, Totterdell et al., 2012). Besides its differential effects, research has also looked at whether the use of different strategies across social contexts (e.g., family and work) may have distinct personal and social effects. The results showed that people who exhibited higher spin or variability in the use of regulation strategies across contexts reported lower positive mood, higher emotional exhaustion, and less close relationships (Niven, Macdonald, & Holman, 2012). Although generally true, we argue that not all the affect improvement strategies may be equally effective at lightening others' feelings, as it may depend on different factors such as the emotion displayed by the target (i.e., sadness, anger, fear, etc.) (Netzer, Van Kleef & Tamir, 2015). For example, research conducted in hospitals showed how 'dark' humour was appropriate between medical professionals to improve co-worker's feelings but not the feeling of patients (Francis, Monahan & Berger, 1999). Hence, the same strategy with different targets and/or emotional needs may have different effects.

Effective Emotion Regulation

Besides the research conducted on interpersonal emotion regulation, studies on intrapersonal emotion regulation have also shown that individuals greatly vary in their ability and propensity to implement regulatory processes (Gross & John, 2003); differing as well in the choice of strategies they use to change their own emotions (e.g., Garnefski & Kraaij, 2006). The emotion to regulate is one of the key factors in the selection of the strategy to implement. A research conducted by Dixon-Gordon, Aldao, and De Los Reyes (2015) has shown that people use different cognitive strategies to regulate their emotions of sadness, anxiety, and anger. Whereas for medium-intensity sadness the most preferred regulation strategy was problem-solving, for medium-intensity anxiety the most preferred strategies were acceptance, rumination, and problem-solving.

Perceived efficacy or individuals' beliefs about their capacity (Bandura, 1977) to change their own and others' mood may be also a critical component when selecting what emotion regulation strategy to use. In a study by Bigman, Mauss, Gross, and Tamir (2015) people who were led to believe they could be successful at changing their own emotions were actually better than those who were led to believe the opposite. In a subsequent study, people who believed emotions could be controlled (by them), were the most successful in emotion regulation (Gutentag, Halperinb, Porata, Bigmang, & Tamir, 2016). Hence, people's beliefs about emotion regulation efficacy can actually shape their emotion regulation efforts. Interestingly, the number of regulation strategies available seems to impair individuals' efficacy to regulate their own emotions (Bigman, Sheppes, & Tamir, in press).

Importance of Effective Interpersonal Emotion Regulation

Research on intrapersonal emotion regulation has shown the importance of displaying appropriate emotion regulation, by choosing the right strategy. In this sense, many studies have shown how appropriate intrapersonal emotion regulation was linked to lower experience of negative emotions without maladaptive physiological responding (e.g., Gross & John, 2003), whereas maladaptive intrapersonal emotion regulation was related to lower social support, and lower social satisfaction (e.g., Srivastava, Tamir, McGonigal, John, & Gross, 2009). However, research on interpersonal emotion regulation has still not looked at the different effects of distinct regulation strategies and how these strategies are perceived by the target of the regulation process. The target's perception is key because regardless of the agents' efforts, if the target does not perceive the strategy as effective a change in her/his emotional state might be less likely.

For agents, it is important to display a strategy that might be perceived as more effective, as they will more likely address the emotional need of the target. This may be especially relevant in parent-child relationships, as parents' sensitivity to the child constitutes

the foundation of secure attachment (Ainsworth, 1979; Weinfield, Sroufe, Egeland, & Carlson, 1999). Hence, if parents know what strategy/ies the child may perceive as more effective when comforting them, parents might be more attuned to their children's emotional needs, which may have a positive effect in the attachment bond (Diamond & Aspinwall, 2003). In the same vein, this may also have implications in the teacher-child interaction. Previous research has shown the importance of teachers' interactions for children's positive development (e.g., O'Connor & McCartney, 2000). In fact, responsive teaching has been linked with higher development in children's inhibitory control, language, and literacy skills (e.g., Hamre, Hatfield, Pianta, & Jamil, 2004). Hence, knowing what strategies might be perceived as more effective might have a positive effect in responsive teaching and in the child's positive development in the last instance. Finally, this may also have implications in general social interactions. Previous research has shown the link between being able to regulate one's own emotions and low interpersonal conflict (e.g., Coats & Blanchard-Fields, 2008). Hence, being able to anticipate what strategies the other person may perceive as more effective when trying to improve their mood might decrease the likelihood of interpersonal conflict.

The present research

Given that previous research from the domain of intrapersonal emotion regulation has highlighted the role of the emotion to regulate and the perceived efficacy as important factors in the selection of effective regulation strategies (Bigman et al., 2015; Dixon-Gordon et al., 2015), it was aimed to study whether similar effects may be found in the interpersonal domain.

The research was focused on the emotions of sadness and anxiety/stress as in a pilot study[1] (n = 90, 54% female; age range 18 to 74 years-old, $M = 35.91$; $SD = 12.69$; 80% White British, 10% White Other; and 10% Asian; Concerning education, 30% Secondary education, 20% A-levels, 30% Bachelor, and 20% Masters or Doctorate) when people were asked to describe a situation in which they aimed to improve another's mood, 63% described the target of the regulation process as experiencing sadness, and 37% as experiencing anxiety/stress.

It was hypothesized that different strategies might be perceived effective for improving sadness and anxiety/stress as these emotions differ in various domains. First, sadness and anxiety have been linked to different emotion goals (e.g., Tamir, 2016). Research on interpersonal emotion regulation has shown that people may wish to increase or decrease different emotions in others depending on the goal to achieve (López-Pérez, Howells, & Gummerum, 2017; Netzer et al., 2015). Thus, it is possible that one regulation strategy may be better than others to increase or decrease a specific emotional state and therefore promoting the desired goal attainment, which is likely to affect how people might perceive the different regulation strategies. Furthermore, sadness and anxiety are elicited by different emotional events. Whereas sadness is experienced in response to the loss of something or someone relevant to the person (Lazarus, 1991), anxiety is triggered when experiencing uncertainty over an outcome in which one feels that has low control (Frijda, Kuipers, & ter Shure, 1989). Following the affect-as-information-perspective (Schwarz, 2000) people experiencing these emotions may focus on different time frames of the emotional event,

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[1] Participants were recruited at the authors' institution through the participation pool system in exchange for course credit or £4.

whereas with sadness people are focused in a loss (past), with anxiety people think about the potential consequences (future). These differences may trigger a different perception of what strategy might be more effective. Given that there is no previous research on what strategy/ies might be more beneficial to change these emotions in others and how these strategies are perceived by the target of the regulation process, the obtained results will be explored and discussed in light to previous emotion research.

Study 1

The aim of the present study was to investigate whether different strategies might be perceived by targets as more effective for regulating sadness and anxiety/stress. Given that positive mood has been linked to higher perceived efficacy (e.g., Cervone, Kopp, Schaumann, & Scott, 1994; Tillema, Cervone & Scott, 2001), it was controlled by assessing participants' positive and negative affect.

Method

Participants. One-hundred and twenty participants (58% female) with an age range from 20 to 65 years-old ($M = 30.05$; $SD = 12.34$) took part in this study. Concerning participants' ethnic background, 85% were White, 10 % were Asian, 3% were Black, and 2% were Mixed. Regarding their education background, 20% had secondary education, 30% had A-level, 40% had Bachelor, and 10% Masters or Doctorate. Participants were recruited at the authors' university through the participation pool system (i.e., database with different research studies where students and the general public can sign up) in exchange of a course credit or £4. A power analysis in G*Power showed that for a multiple regression with seven predictors a minimum sample n = 103 was sufficient to detect a small-medium effect with a power of 0.80.

Procedure

Measures

Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). It consists of 20 terms to assess positive and negative affect. Participants indicated on a 5-point Likert scale (1 = not at all; 5 = extremely) to what extent they were feeling a certain emotion. Positive affect was calculated by averaging the following terms: *interested*, *excited*, *strong*, *enthusiastic*, *proud*, *alert*, *inspired*, *determined*, *attentive*, and *active*; α = .79. Negative affect was calculated by averaging the following terms: *distressed*, *upset*, *guilty*, *scared*, *hostile*, *irritable*, *ashamed*, *nervous*, *jittery*, and *afraid*; α = .81.

Design of the scenarios. Six different scenarios (i.e., three per emotion) were created to represent the emotions of sadness and stress/anxiety (see Appendix A). Forty-five participants (10 men, 35 women) with an age range from 19 to 60 years-old (*M* = 31.25, *SD* = 13.60) voluntarily took part in this pilot study. For each scenario, participants were asked to indicate which emotion the person in the scenario was feeling from the following options (presented in randomized order): sadness, anger, fear, stress/anxiety, happiness, and other. The results of the frequency analyses showed that at least two scenarios for each intended emotional state were correctly categorized by more than 75% of the sample (see Table 1) and thus were retained.

Application of the study. Participants were tested individually. After signing the informed consent form, participants indicated their age and gender. Then, they were asked to complete the PANAS and afterwards read some scenarios (in randomized order; 50% of the sample read first about scenarios A and 50% of the sample read about scenarios B). Regarding the scenarios, first participants were provided with two situations describing something that happened to another person portraying a different emotional experience (i.e.,

sadness and stress/anxiety). Once they had read the scenarios they were instructed to describe what they would do to improve that person's mood. This was used as the interpersonal affect improvement strategies for the next participant to read.

After this, participants were provided with two new scenarios written in the first person and depicting the same concrete emotions as before, in a randomized order (i.e., sadness and stress/anxiety). Participants were asked to read the scenarios and imagine that the situations had happened to themselves. After this, participants were provided with the strategies written by the previous participant. After reading how the other person would improve their mood, they indicated on a scale from 1 (not at all) to 5 (extremely) how effective they perceived the strategy was at improving their mood in each situation. Finally, participants were debriefed.

Coding. Two post-graduate students blind to the research hypotheses and with knowledge on interpersonal emotion regulation were asked to code the different strategies suggested by participants. Instead of generating a new classification through content analysis, the students were provided with four categories as suggested in the interpersonal affect classification (Niven et al., 2009). This model was used because previous models of emotion regulation that suggested specific strategies had either not been tested in the interpersonal domain (e.g., Process Model of Emotion Regulation; Gross, 2007) or if focused on the interpersonal domain, they were too broad suggesting two different dimensions (i.e., cognitive vs. behavioural and engagement vs. avoidance) rather than specific strategies (e.g., Parkinson & Totterdell, 1999).

Each participant's response was coded as *affective engagement* (i.e., any action that engages directly with the target's feelings), *cognitive engagement* (i.e., any action that engages with the target's cognitions in order to change their affect), *attention* (i.e., any action

that implies giving the target consideration or diverting their attention away); and/or *humour* (i.e., amusing the target to improve their mood through acting silly, laughing, etc.). When participants mentioned incidents that may fit into different categories the coders coded all the possible strategies mentioned by each participant. This procedure was in line with Bailey's (1994) recommendation of non-mutually exclusive coding. Appendix B summarizes the definitions and gives examples of responses coded within each category. The two coders were trained by providing them with examples of strategies and were asked to identify independently whether any of the four strategies was present in the different examples provided.

Once the five examples were coded, a kappa coefficient was calculated as indicator of inter-rater reliability (Cohen, 1960) since this index rules out chance agreement. Landis' and Koch's (1977) standard of values higher than .40 for an acceptable kappa was followed. Results from the initial coding showed a kappa of .65, which indicated a moderate agreement. The principal investigator then discussed with coders the possible disagreements. Given that the kappa was in the acceptable range, the coders coded the participants' responses. Inter-rater reliability was moderate-high for the four possible strategies (i.e., affective engagement, $K = .65$; cognitive engagement, $K = .60$, attention, $K = .50$; and humour $K = .65$).

Data analysis

To analyse the data, it was only considered each participant's answers, therefore, it only took into account the target's perspective of the regulation process. Although the data at the pair level was not the key point of the paper, an intra-class correlation (ICC) matrix was computed to test whether the variability in the number of mentioned strategies might vary across pairs. Results showed that the ICC for anxiety was 0.021 and for sadness was 0.007.

Given that the variability across pairs was quite low and that it was not important for the aim of the studies, this variable was not considered in the subsequent analyses.

Thus, for each participant there were the following variables: perceived efficacy, whether each of the four strategies was mentioned or not to them (i.e., if the strategy was suggested was coded as 1, if the strategy was not suggested was coded as 0), and the number of total strategies mentioned to them.

Results and Discussion

Efficacy and use of strategies. Overall, the efficacy assigned to the strategies suggested for the scenarios portraying sadness ($M = 3.22$, $SD = .99$) and the scenarios portraying stress/anxiety ($M = 3.02$, $SD = .98$) was medium-high, being significantly above the mid-point of the scale ($t(119) = 8.14$, $p = .001$ and $t(119) = 5.69$, $p = .001$, respectively). Regarding the number of mentioned strategies, it ranged from one to three strategies for both sadness ($M = 1.63$, $SD = 0.58$) and anxiety/stress ($M = 1.59$, $SD = 0.56$) scenarios. For the scenarios portraying sadness, most participants reported having used one (36%) or two (53%) strategies and very few mentioned three strategies (11%). For the scenarios portraying stress, most participants reported having used one (44%) or two (55%) strategies and again very few mentioned three strategies (3%). When focusing on the specific strategies for sadness 'affective engagement' (58%) and 'humour' (58%) were the most mentioned, followed by 'cognitive engagement' (48%), and finally 'attention' (15%). For scenarios portraying stress/anxiety, 'affective engagement' (58%) and 'cognitive engagement' (48%) were the most mentioned, followed by 'humour' (35%) and finally 'attention' (15%).

As participants only received one out of the two possible scenarios in the first person in order to rate what another participant wrote down to increase their positive mood in that

situation, it was tested whether the scores on efficacy were affected by the order of the scenarios. For the scenarios portraying sadness there were no significant differences in the perceived efficacy scores between the scenario A (i.e., break up story; $M = 3.30$, $SD = .96$) and scenario B (i.e., having moved to a new city; $M = 3.47$, $SD = .97$); $t(118) = -.95$, $p = .35$, $d = .17$. For the scenarios portraying stress/anxiety, there were also no significant differences in the perceived efficacy scores between scenario A (i.e., work tasks; $M = 3.48$, $SD = .77$) and scenario B (i.e., bad time with boss; $M = 3.23$, $SD = .81$); $t(118) = 1.73$, $p = .10$, $d = .31$.

Prediction of perceived efficacy in the scenarios depicting sadness and stress/anxiety. For each emotional episode (sadness and stress/anxiety), a linear-regression analysis was run entering targets' perceived efficacy as criterion and the number of strategies, whether each strategy was used (not used = 0, used = 1), and positive and negative affect as predictors.

For sadness, results showed that 'affective engagement' was a positive predictor of higher perceived efficacy. The strategies 'cognitive engagement', 'attention', and 'humour' and the number of strategies, and positive and negative affect were not significant predictors (Table 2). For anxiety/stress, results showed that 'cognitive engagement' was a positive predictor of higher perceived efficacy. The strategies 'affective engagement', 'attention', and 'humour' and positive and negative affect were not significant predictors. Finally, the number of strategies was a negative predictor such that the more strategies used the lower the perceived efficacy (Table 2).

'Affective engagement' was linked to higher perceived efficacy when the emotion to regulate was sadness. This result may be explained by people's lay beliefs about the benefits of talking and venting when feeling sad and hopeless (e.g., Littrell, 2008). Furthermore, 'cognitive engagement' was perceived as more effective to deal with anxiety/stress.

Anxiety/stress may be experienced depending on how an individual appraises the situation and their skills to deal with it (Lazarus & Folkman, 1984). Given that cognitive engagement targets people's appraisals it is not surprising that this strategy was therefore perceived as more effective. Interestingly, whereas the number of strategies was not a significant predictor for sadness, it was a negative predictor for stress. Although previous research found that higher variability in the use of different interpersonal emotion regulation strategies across contexts had negative effects for the agent of the regulatory process (Niven et al., 2012), the obtained results suggest that different strategies may be needed for different contexts in order to be successful at improving others' mood.

Study 2

In the previous study, it was assessed whether different strategies may be perceived as more effective by targets to have their emotions regulated by others. However, the experimental design presented some limitations. First, people were exposed to artificial scenarios that may not be personally relevant. Therefore, in Study 2 participants were asked to recall about two personal situations where the felt sad and anxious/stressed. Second, previous research showed that when manipulating people's efficacy beliefs about their regulatory skills these actually had an effect on their emotion regulation abilities (Bigman et al., 2015). Thus, it is possible that people's own perception of efficacy of their regulatory skills may influence their efficacy judgement for the different regulation strategies. In order to control for it, a questionnaire to assess participants' emotional regulatory self-efficacy was included.

Method

Participants. One-hundred and twenty participants (58% female) with an age range from 20 to 65 years-old (M = 30.05; SD = 12.34) took part in this study. Concerning participants' ethnic background, 82% were White, 15 % were Asian, and 3% were Black. Regarding their education background, 30% had secondary education, 35% had A-level, 20% had Bachelor, and 15% Masters or Doctorate. Participants were recruited at the authors' institution through the participation pool system in exchange of a course credit or £4. Participants could only take part in the study if they had not participated in the previous study. This was restricted in the participation pool system. A power analysis in G*Power showed that for a multiple regression with ten predictors a minimum sample n = 118 was sufficient to detect a small-medium effect with a power of 0.80.

Measures.

The Regulatory Emotional Self-Efficacy Scale (RESE; Caprara, Di Giuta, Eisenberg, Gerbino, Pastorelli, & Tramontano, 2008). It is a 12-item questionnaire that assesses in a 5-point Likert scale (1 = not very well at all to 5 = very well) participants' perceived capability to manage one's own positive affect (4 items; α = .77), depondency/distress (4 items; α = .78), and anger/irritation (4 items; α = .70)

Procedure

Participants were tested in pairs. Closeness between participants was controlled by making sure that participants did not know each other and by placing participants in separate cubicles so they could not see each other. Once each participant completed the PANAS (i.e., negative affect α = .71, and positive affect α = .73; Watson et al., 1988) and the RESE (Caprara et al., 2008) in a randomized order (i.e., 50% of the sample completed the PANAS first and the other 50% the RESE first; this was done through the randomization function of the software used to present the questionnaires on the computer), they were asked to describe

two situations: one where they felt sad and another one where they felt stressed/anxious (in a randomized order), they were happy to share with another participant. They were given 10 minutes to complete the task. After this, participants' descriptions were exchanged so the other participant could describe what they would do to improve the other participant's mood. Then, their description about what they would do (i.e., interpersonal emotion regulation strategies) were exchanged again so they had to rate from 1 (not effective at all) to 5 (extremely effective) whether they thought the described strategy by another participant would effectively improve their mood. Finally, as participants were asked to report about a negative personal experience, at the end of the study they watched a clip from the Junglebook, which has been proved to induce a positive mood (von Leupoldt, Rohde, Beregova, Thordsen-Sörensen, zu Nieden & Dahme, 2007). Before leaving the study participants were fully debriefed.

Coding. Participants' responses were coded into numerical values using the definitions of the different strategies as in Study 1 (Appendix C). Inter-rater reliability was moderate-high for the four possible strategies (i.e., affective engagement, $\kappa = .58$; cognitive engagement, $\kappa = .60$, attention, $\kappa = .55$; and humour $\kappa = .60$).

Results and Discussion

Efficacy and Use of Strategies. Overall, the efficacy assigned to the strategies suggested for improving sadness ($M = 4.01$, $SD = .73$) and stress/anxiety ($M = 4.03$, $SD = .88$) was medium-high, being significantly above the mid-point of the scale ($t(119) = 22.71$, $p = .001$ and $t(119) = 19.12$, $p = .001$, respectively). Regarding the number of mentioned strategies, it ranged from one to three strategies for both sadness ($M = 1.45$, $SD = 0.68$) and anxiety/stress ($M = 1.37$, $SD = 0.63$). For sadness, most participants reported having used one (66%) or two (23%) strategies and very few mentioned three strategies (11%). For

stress/anxiety, most participants reported having used one (72%) or two (20%) strategies and again very few mentioned three strategies (8%). When focusing on the specific strategies reported for improving sadness, 'affective engagement' (57%) and 'cognitive engagement' (34%) were the most mentioned, followed by 'attention' (12%), and finally 'humour' (11%). For stress/anxiety, 'affective engagement' (33%) and 'cognitive engagement' (35%) were the most mentioned, followed by 'humour' (20%), and finally 'attention' (18%).

Prediction of Perceived Efficacy in the Situations described as Sad and Stressful/Anxious. For each emotional episode described (sadness and stress/anxiety), a linear-regression analysis was run entering the score of perceived efficacy as criterion and the number of strategies, whether each strategy was suggested (0 = not suggested, 1 = suggested), the scores of regulatory emotional self-efficacy, and positive and negative affect as predictors.

For sadness improvement, results showed that 'affective engagement' and participants' perceived efficacy to manage depondency/distress were positive predictors of perceived efficacy. The number of strategies, the use of 'cognitive engagement', 'attention', or 'humour', positive and negative affect and perceived efficacy to manage positive affect and to manage anger/irritation were not significant predictors (Table 3). For anxiety/stress improvement, results showed that 'cognitive engagement' and positive affect were positive predictors of perceived efficacy. The number of strategies, the use of 'affective engagement', 'attention', and 'humour', as well as negative affect and perceived efficacy to manage positive affect, depondency/distress and anger/irritation were not significant predictors (Table 3).

As in Study 1, 'affective engagement' was perceived as more effective to improve sadness, whereas 'cognitive engagement' as more effective to improve stress/anxiety. Sadness and stress/anxiety constitute different emotional responses; therefore, it is likely that

the regulation processes and outcomes may be different (Rivers, Brackett, Katulak, & Salovey, 2007). Although previous research highlighted the importance of self-perceived efficacy in people's actual emotion regulation skills to change their own emotional response (e.g., Bigman et al., 2015), in the present study it was only found a significant effect for sadness. Namely, agents' higher perception of efficacy to deal with others' distress predicted higher efficacy scores rated by the targets for sadness improvement. However, there was any relation between efficacy to improve others' stress/anxiety and agents' emotional self-perceived efficacy. Therefore, future research may need to investigate whether there is a link between agents' emotional self-perceived efficacy and target's perceived efficacy of different regulation strategies. The results highlighted again the need to use different regulation strategies depending on the emotion displayed by the target, in order to be perceived as successful by the target of the regulation process. Therefore, although previous literature showed the negative effect of using multiple strategies across contexts and agents (Niven et al., 2012), the obtained results suggest that agents need to change the regulation strategy in order to modulate the different emotions displayed by the targets.

General Discussion

Effective emotion regulation is a key component in different domains such as mental health (Garnefski & Kraaij, 2006), appropriate social functioning (Eisenberg, Fabes, Richard, Guthrie, Ivanna, & Reiser, 2000), and early academic success during childhood (Graziano, Reavis, Keane, & Calkins, 2007). Although it has been widely studied in regards to how individuals regulate their own emotions, little is known about what strategies may be perceived as more effective to lighten others' emotions. Across two studies, two strategies have emerged consistently as being related to higher perceived efficacy for improving others' sadness and stress/anxiety.

Higher perceived efficacy for sadness improvement was linked to 'affective engagement', which entails listening to the target and allowing them to vent (Niven et al., 2009). These interpersonal behaviours have been classified in previous literature under the term *social sharing* as it involves talking about the emotional episode and sharing the emotional experience with another person (Rimé, 2009). Lay people hold strong beliefs about the relief function of venting (e.g., Littrell, 2008) and scientific evidence has indeed found social sharing as effective to regulate sadness by reducing a person's feelings of hopelessness (Brans, Van Mechelen, Rimé, & Verduyn, 2014). Furthermore, it is also possible that the use of affective engagement may fulfil fundamental needs related to emotional expression and social connectedness, as previous research has found that sadness may be related to connectedness and the recruitment of help from others (Clark, Oullette, Powell, & Millberg, 1987; Murray, 1979). Thus, these two possible accounts provide support for a possible link between target's higher perceptions of efficacy and 'affective engagement' when regulating sadness.

Higher perceived efficacy for stress/anxiety improvement was linked to 'cognitive engagement', which entails making the target view the situation from a different perspective and more objectively (Niven et al., 2009). This strategy has been defined by other models or approaches as *cognitive reappraisal* and it involves reframing an emotional event to diminish its emotional impact (Gross, 2007). Reappraisal is frequently used within Cognitive Behavioural Therapy (CBT; Beck, 1995) in order to change people's views and it has been found to be useful at reducing stress (Richards & Gross, 2000). A deficit in reappraisal or cognitive engagement strategies has been linked to anxiety disorders in adults (Campbell-Sills & Barlow, 2007). In fact, handling one's own anxiety with reappraisal has been proved not only to reduce physiological arousal, but also the subjective feelings of anxiety (Hofmann,

Heering, Sawyer, & Asnaani, 2009). Therefore, cognitive engagement may be effective at reducing others' stress or anxiety as it targets people's appraisals, which are crucial components in the stress process (Lazarus & Folkman, 1984). According to the Transactional Model of Stress (Lazarus & Folkman, 1984), people's stress reactions are determined by the evaluation they make about the importance of the stressor (primary appraisal) and the abilities/skills they have to deal with it (secondary appraisal). Thus, by making others change their view either about the stressor or their skills to deal with it, people may be more successful at down regulating others' stress or anxiety. Therefore, targets may perceive agents' efforts as more effective.

Although the obtained results may be supported by previous emotion research, the explanations provided are speculative. Furthermore, it is worth mentioning that participants used to the same extent the strategies of affective and cognitive engagement for the emotions of sadness and stress in both studies. However, only one of the two was perceived as effective. Therefore, future research should manipulate different factors of the emotional event (e.g., focus on a loss vs. future negative consequences) to test whether affective or cognitive engagement might be perceived effective to target sadness and anxiety, respectively.

Although the results did not point to attentional or humorous strategies to be perceived as effective at improving sadness and stress/anxiety, future research may need to investigate if there are other factors that may modulate the obtained effect, as for instance, humour has been found to be useful to down regulate one's own negative emotional experience (Samson & Gross, 2012). In this regard, it is possible that the connection between the agent and the target of the regulatory process, as well as the intensity of the emotional experience may play an important role in the efficacy of interpersonal affect improvement.

It is noteworthy that in this research people only identified putatively adaptive strategies to enlighten others' emotions. However, previous research on intrapersonal emotion regulation has shown how people indicated using maladaptive regulatory strategies to down-regulate their own sadness and anxiety (Dixon-Gordon et al., 2015). Findings from studying dyads' co-regulation also indicate the use of maladaptive strategies such as co-rumination (e.g., Rose, 2002). Therefore, future research may need to investigate what factors may lead to the use of maladaptive strategies when regulating others' feelings.

The obtained results showed that the number of strategies did not predict target's perceived efficacy of agents' efforts to improve their sadness and stress/anxiety, except in Study 1 for anxiety/stress. Regarding the number of strategies, previous literature on coping (i.e., down regulation of negative affect during longer periods of time; Gross & Thompson, 2006) has shown that the use of fewer coping strategies is generally more effective (Wright, Mohr, Sinclair, & Yang, 2015). In fact, it has been suggested that engaging in multiple coping efforts may lead to reduced effectiveness (Muraven & Baumeister, 2000). Similar findings have been found in the field of emotion regulation, as having more regulation strategies available may impair individuals' ability to regulate their emotions (Bigman et al., in press). Although in the current research the number of strategies was only a significant predictor for anxiety/stress in Study 1, future research may need to investigate further whether using a single strategy may be more effective than using multiple strategies.

Finally, concerning perceived self-efficacy, it was a positive predictor for sadness improvement but not for stress/anxiety improvement. Previous research on intrapersonal emotion regulation found that perceived self-efficacy actually impacted efficacy to change one's own mood (Bigman et al., 2015). The lack of effect for anxiety/stress may be explained as in interpersonal emotion regulation there are other variables which may have a

considerable impact on whether a certain strategy is perceived as effective, such as the target's feedback to the agent's strategies. Future research may need to investigate further this possible link.

Limitations and Future Research

Although the present research investigated which strategies may be perceived as more effective depending on the emotional tone of the situation there are some limitations. First, the agent and the target of the regulatory process did not know each other. However, most of interpersonal affect improvement attempts happen when the agent and the target have a relationship (Zaki & Williams, 2013). This therefore may have impacted on the strategies people selected for the other participant. In fact, the use of humour, which did not predict perceived efficacy for down regulating sadness and stress/anxiety, has been proved to be effective to comfort another in distress, when used between friends with a high quality relationship (Bippus, 2000). Besides closeness, social distance between the agent and the target of the regulation process may also have an impact on the regulation strategies used and how they are perceived. Previous research has shown that the strategies used between friends may differ from the ones used in an organizational setting, as the degree of closeness, intimacy, and goals to achieve by the target of the regulatory process may be completely different (Niven, 2016). Second, the present research is based on written reports of what people believe that they may do and this may not correspond to what people actually do in those situations. This procedure was chosen to maximise internal validity as similar studies did previously to study people's efficacy to regulate their own emotions in a controlled environment (e.g., Bigman et al., 2015; Gutentag et al., 2016). These procedures aim to study variables (i.e., perceived efficacy) that might be difficult to evaluate in a more naturalistic setting. However, future research may use a different methodology (e.g., observation of

interactions between friends or couples) to maximise the external validity of the present findings. Third, people's suggestions were considered exclusively rather than providing a systematic list of strategies. Thus, future research might consider providing participants a standardized set of strategies. Fourth, it was only tested efficacy for the negative emotions that were naturally mentioned by participants in a pilot study. However, future research may need to investigate what strategies may be more effective when dealing with others' negative emotions such as anger or fear and even what strategies people may use to keep or deteriorate others' positive moods. Furthermore, although the scenarios were selected based on the results obtained in a pilot study, future research should evaluate whether the used scenarios (Study 1) or making people recall a situation where they experienced sadness or anxiety (Study 2) actually trigger these emotional experiences. Fifth, variables that may be relevant in how people perceive the efficacy of different regulation strategies were not considered. For instance, depressive symptoms are mainly related to the use of maladaptive regulation strategies (e.g., expressive suppression; Flynn, Hollenstein, Mackey, 2010). Hence, it is possible that people who experience depressive symptoms may perceive others' regulation strategies efficacy differently. In the same vein, people who experience high levels of loneliness (i.e., subjective feelings of distress for not having one's own social needs met, Pinquart & Sorensen, 2010) tend to experience hypervigilance for social threats (Hawkley & Cacioppo, 2010) and hence this may affect how they perceive others' efforts to change their emotions. Another variable to consider is optimism as previous research has shown that it may trigger an optimistic bias (Carver, Scheier, & Sargestrom, 2010) which may lead people to interpret events in a more positive light (Shepperd, Waters, Weinstein, & Klein, 2015). Hence, people who are highly optimistic may be more likely to interpret others' regulation strategies as potentially more effective than they actually are. Finally, future research should also look at possible cultural differences in the perception of efficacy of different regulation

strategies. Such differences may exist as different cultures hold different perspectives about the utility of different emotions (Ma, Tamir, & Migamoto, 2017), which may affect to what extent they perceive the emotions need to be regulated and how. Furthermore, there is evidence on different regulation strategies (e.g., expressive suppression) having different effects depending on the cultural values (Butler, Lee, & Gross, 2007). Hence, the obtained findings might not be applicable across cultures.

Implications

Despite the different limitations, our research sheds light into what interpersonal emotion regulation strategies may be perceived as more effective when dealing with others' sadness and stress/anxiety. Knowing what strategy may be better perceived depending on the emotion displayed by the target can affect people's formation of attachment relationships and social interactions. This is may be key in parent-child relationships (Weinfield et al., 1999), teacher-student interactions (Hamre et al., 2004), and romantic relationships (Richards, Butler, & Gross, 2003). If agents of the regulation process know what strategies may be perceived as more effective by targets they might be able to be more attuned to the targets' emotional needs which may have a positive effect in the attachment bond (Diamond & Aspinwall, 2003) between the agent and the target of the regulation process. Being able to anticipate how the target of the regulation process might perceive the regulation efforts may buffer interpersonal conflicts, as previous research linked better emotion regulation with lower interpersonal conflict (Coats & Blanchard-Fields, 2008).

The obtained findings can also have important implications from a clinical perspective, by adding more information about psychological disorders which may include abnormalities in interpersonal regulatory mechanisms (Marroquín, 2011). Furthermore, it may also impact psychotherapy by providing clinical psychologists and counsellors with

more information about what strategies within therapy (e.g., listening vs. cognitive change) should be targeted for specific emotional states when dealing with patients and when training patients lacking interpersonal emotion regulation skills.

At a theoretical level, the obtained findings complement existing research on interpersonal emotion regulation by studying one of the factors that may affect the interpersonal emotion regulation process. Although previous models of interpersonal emotion regulation have highlighted the bidirectional character of the process (e.g., Zaki & Williams, 2013), it is important to study further what variables may modulate such process. Although there are some pending questions, such as the effect of the degree of proximity between the agent and the target, our research is a first attempt to explore what interpersonal regulation strategies can be perceived as more effective when aiming to improve another person's sadness and stress/anxiety. Thus, it opens a path for extending the sparse research conducted in the domain of interpersonal emotion regulation and to better understand the dynamics in social interaction.

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Table 1

Frequency Analyses for the Scenarios used in Study 1

	Sadness	Anger	Fear	Stress	Happiness	Other
Sadness scenarios						
Break up	37 (82.6%)	4 (8.7%)	0 (0%)	4 (8.7%)	0 (0%)	0 (0%)
Move to a new city	35 (78%)	0 (0%)	1 (2%)	9 (20%)	0 (0%)	0 (0%)
Party cancelled	21 (44%)	9 (20%)	0 (0%)	15 (36%)	0 (0%)	0 (0%)
Stress/Anxiety scenarios						
Work tasks	2 (5%)	3 (7%)	1 (2%)	39 (86%)	0 (0%)	0 (0%)
Issues at work	7 (15%)	5 (10%)	0 (0%)	33 (75%)	0 (0%)	0 (0%)
Family meeting	16 (38%)	10 (21%)	0 (0%)	19 (41%)	0 (0%)	0 (0%)

Table 2

Results of the Regression Analyses in Study 1

Predictor	B	β	SE	t	p
Sadness Scenarios					
Number of strategies	-.13	.22	-.08	-.61	.55
Affective engagement	.67	.27	.32	2.49	.01
Cognitive engagement	.17	.22	.09	.80	.43
Attention	.67	.51	.12	1.32	.19
Humour	-.13	.22	-.08	-.61	.55
Positive affect	-.18	.16	-.11	-1.18	.24
Negative affect	-.09	.17	-.05	-.55	.59
		$R^2 = .11*$			
Anxiety/Stress Scenarios					
Number of strategies	-.53	.23	-.29	-2.41	.02
Affective engagement	.20	.23	.10	.90	.37
Cognitive engagement	.97	.21	.48	4.65	.001
Attention	.70	.70	.09	.99	.32
Humour	.35	.26	.16	1.35	.18
Positive affect	-.24	.15	-.14	-1.62	.11
Negative affect	.05	.17	.03	.30	.76
		$R^2 = .14**$			

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

Table 3

Results of the Regression Analyses in Study 2

Predictor	B	β	SE	t	p
Sadness Scenarios					
Number of strategies	.11	.11	.09	1.01	.32
Affective engagement	.63	.20	.37	3.24	.002
Cognitive engagement	.27	.19	.15	1.41	.16
Attention	.33	.27	.12	1.21	.23
Humour	-.19	.28	-.07	-.68	.49
Positive affect	.001	.20	-.03	.01	.99
Negative affect	-.05	.16	.13	-.34	.74
Positive ER efficacy	.17	.15	.13	1.14	.26
Depondency ER efficacy	.34	.15	.30	2.21	.03
Anger ER efficacy	-.26	.16	-.20	-1.60	.11
		$R^2 = .20*$			
Anxiety/Stress Scenarios					
Number of strategies	-.14	.10	-.12	-1.43	.16
Affective engagement	.11	.15	.06	.73	.47
Cognitive engagement	.92	.15	.56	6.17	.001
Attention	.25	.18	.12	1.43	.16
Humour	-.05	.16	-.03	-.32	.75
Positive affect	.41	.16	.25	2.50	.01

Negative affect	-.05	.13	-.04	-.42	.68
Positive ER efficacy	.11	.12	.09	.91	.37
Depondency ER efficacy	-.18	.12	-.17	-1.44	.15
Anger ER efficacy	-.02	.13	-.02	-.17	.87

$$R^2 = .38**$$

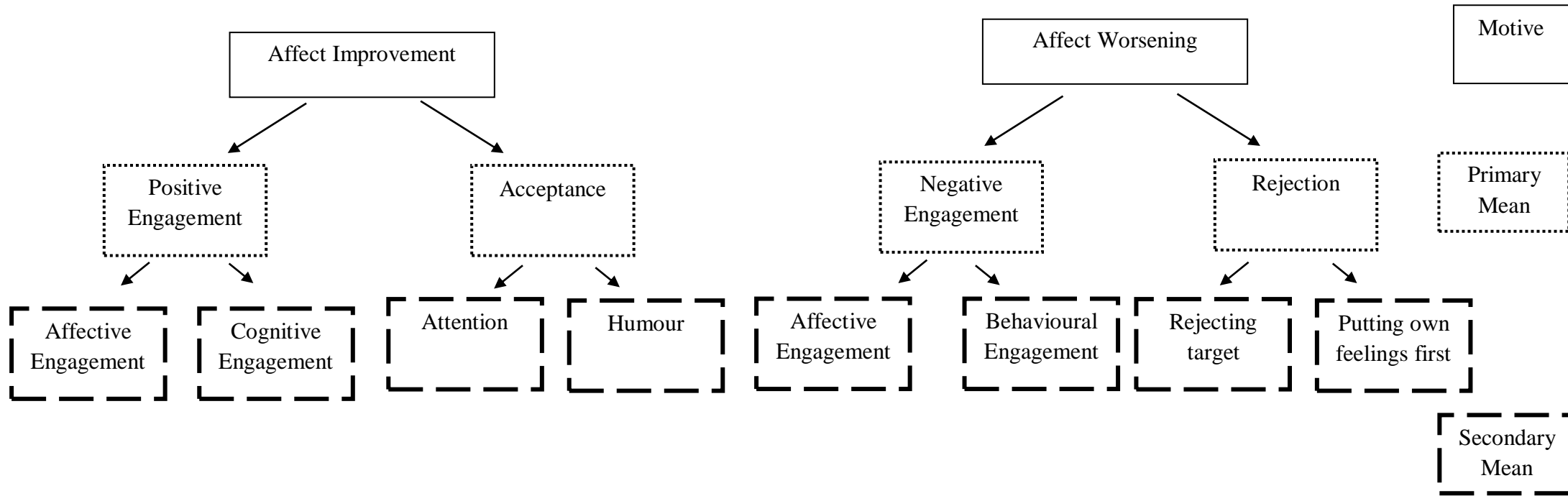*Note.* *$p < .05$, ** $p < .01$.

Figure 1. Interpersonal Affect Classification (Niven, Totterdell, and Holman, 2009)

Appendix A

Scenarios piloted to be used in Study 1

Sadness scenarios:

Break up story: after 5 years together someone decides to break up with his/her partner. Prior to the breakup everything seemed to be fine in their relationship. His/her partner was not expecting the breakup.

Move to a new city: someone has just moved to a new city where they do not know anyone yet. They do not like their new place and miss their previous place a lot.

Cancelled birthday party: someone has been preparing his/her birthday party for long time. They are looking forward to celebrating it but they get sick and they have to cancel it.

Stressful scenarios:

Works tasks: someone has to complete some important tasks at work by the end of the day; however, that person realizes that s/he doesn't have enough time to do it. S/he knows that she will be told off by her/his boss and may end up being sacked.

Issues at work: someone is having a lot of issues at work. Their work colleagues are not supportive and helpful and they are regularly told off by their manager. They have so much work to do that sometimes they do not even have time for lunch.

Family meeting: someone is supposed to be driving to see family who comes from abroad for a weekend but their car has broken down and they can't afford to fix. They have to call their family to cancel their meeting.

Appendix B

Examples of Coded Responses in Study 1

	Sadness scenarios	Stress/Anxiety Scenarios
Affective engagement	"I would try to listen to whatever they want to tell me about this situation"	"I would talk and let them talk about their job"
Cognitive engagement	"I would try to point the good things about it so he/she can see the situation from a different view"	"I would give them advice, for example, I would suggest to make a list of the urgent jobs so they can see the situation as not so stressful"
Attention	"I would take them out with a bunch of friends so they can forget about what happened"	"I would offer to meet to have a coffee"
Humour	"I would try to make them laugh about the situation"	"I would tell them something funny or make them see something funny about the situation to make them laugh"

Appendix C

Examples of Coded Responses in Study 2

	Descriptions about a Sad situation	Descriptions about a Stressful situation
Affective engagement	"I would have a supportive conversation about what makes them feel upset"	"I would express belief in their abilities to deal with the situation"
Cognitive engagement	"I would make them aware they are not alone to deal with the situation"	"I would try to make him see the situation objectively…every situation has a positive side"
Attention	"I would take him/her for a walk"	"I would take her out for a coffee"
Humour	"I would try to make them laugh by telling them something funny"	"I would joke to cheer him/her up"