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Stop crying! The impact of situational demands on interpersonal emotion regulation

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ABSTRACT

Crying is a common response to emotional distress that elicits support from the environment. People may regulate another's crying in several ways, such as by providing socio-affective support (e.g. comforting) or cognitive support (e.g. reappraisal), or by trying to emotionally disengage the other by suppression or distraction. We examined whether people adapt their interpersonal emotion regulation strategies to the situational context, by manipulating the regulatory demand of the situation in which someone is crying. Participants watched a video of a crying man and provided support by recording a video message. We hypothesised that when immediate down-regulation was required (i.e. high regulatory demand), participants would provide lower levels of socio-affective and cognitive support, and instead distract the crying person or encourage them to suppress their emotions, compared to when there is no such urgency (i.e. low regulatory demand). As predicted, both self-reported and behavioural responses indicated that high (as compared to low) regulatory demand led to a reduction in socio-affective support provision, and a strong increase in suppression and distraction. Cognitive support provision, however, was unaffected by regulatory demand. When the context required more immediate down-regulation, participants thus employed more regulation strategies aimed at disengaging from the emotional experience. This study provides a first step in showing that people take the context into account when attempting to regulate others' emotions.

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Emotion regulation; context; socio-affective support; cognitive support; suppression; distraction

When others cry, many of us feel impelled to attend and respond to them. Crying has a social function: It communicates distress and thereby elicits support from the environment (Gracanin, Bylsma, & Vingerhoets, 2017; Hendriks, Nelson, Cornelius, & Vingerhoets, 2008; Van Kleef, 2016). A prominent type of response to displays of distress consists of trying to regulate the expresser's emotions. Such interpersonal emotion regulation can take different forms, with some strategies revolving around different ways of engaging with the emotional situation and other strategies hinging on ways of disengaging from the emotional situation (Parkinson & Totterdell, 1999).

Research on the social sharing of emotions has distinguished two primary forms of support that are directed at engaging with the emotional situation (Rimé, 2009): People may offer socio-affective support, which includes providing comfort, care and validation, or cognitive support, which is directed at altering cognitions related to the emotional experience by recreating meaning and reappraisal. Other work has identified strategies that are directed at disengaging from the emotional situation. In particular, people who are confronted with a person in distress may try to distract that person from the emotional situation or encourage them to suppress their emotions (Gross, 1998).

These various strategies come with different costs and benefits. For instance, whereas socio-affective support temporarily alleviates emotional distress, cognitive support is presumed to be more effective in bringing about long-term recovery (e.g. Nils & Rimé, 2012; Rimé, 2009). Furthermore, research on intrapersonal emotion regulation has shown that whereas suppression is effective for reducing emotional expressions (rather than reducing the intensity of emotional experience), distraction is more effective in bringing about immediate relief (see Webb, Miles, & Sheeran, 2012, for a review). The question then is what determines which type of regulation strategy people choose?

According to the Social Regulatory Cycle (SRC) specified by Reeck and colleagues (Reeck, Ames, & Ochsner, 2016), regulating others' emotions follows an iterative and dynamic cycle that includes four steps. First, support providers need to identify the other's distress - a step that is clearly facilitated by crying behaviour. Crying is a strong emotional response, indicating that one is suffering, vulnerable and powerless, and thereby visibly communicates emotional distress (Gracanin et al., 2017; Hendriks et al., 2008). Second, people need to evaluate the need for regulation by assessing the discrepancy between the other's current emotional state and desired end state. Third, people have to select a strategy, after which the implementation of the selected strategy follows (step 4). While abundant research has examined the consequences of several regulation strategies, very little empirical research has examined towards what desired emotional state people try to regulate others' emotions (step 2; Campos, Walle, Dahl, & Main, 2011), as well as how they decide what type of strategy to select in order to achieve this goal (step 3; Reeck et al., 2016).

We propose that contextual demands play an important role in the process of regulating others' emotions, determining the desired emotional end state for regulation as well as the type of strategy that would be optimal for achieving the desired goal. The idea that context matters for one's own emotion regulation has been put forward by Parrott (2001), who argued that emotions are functional only to the extent that they reflect a prioritisation of goals that corresponds to what is actually important in the situation at hand. Consequently, the effectiveness of different emotion regulation strategies depends on the context and its situational demands (see Aldao, 2013; Bonanno & Burton, 2013; Haines et al., 2016; Kashdan & Rottenberg, 2010; Troy, Shallcross, & Mauss, 2013). People indeed seem to be aware of this functionality of emotions, as evidenced by the fact that people not only regulate their emotions in order to feel better (i.e. hedonic goals), but also in ways that help them to achieve other short or long-term goals (i.e. instrumental goals; Tamir, 2009; Tamir & Millgram, 2017).

Furthermore, there is evidence that people are context-sensitive in the strategies they choose to employ to regulate their own emotions (Bonanno & Burton, 2013). For example, a daily-diary study by English and colleagues (English, Lee, John, & Gross, 2017) showed that people suppressed their emotions more when others - especially non-close others were present. Similarly, in the presence of non-close others (e.g. their boss), people preferred suppression and distraction compared to expression, whereas the opposite was true when they were with close others (Martini, 2011). Martini further showed that these different social contexts were associated with different goals, which motivated people to regulate their emotions in ways that facilitate those goals. Self-oriented goals, such as impression management or avoiding negative consequences, were more endorsed in the presence of authority figures, which may explain the greater use of suppression and distraction in those particular contexts.

Underlying many of these instances of emotion regulation choice seems to be a context-dependent willingness to engage in emotional processing (Sheppes, Scheibe, Suri, & Gross, 2011; Sheppes et al., 2014). Sheppes and colleagues found that when focused on immediate relief, individuals preferred distraction - a disengagement strategy that brings about short-term benefits through relatively easy regulatory processes. However, when long-term goals were activated, participants used more reappraisal - a highly engaging strategy that requires attending to and elaborating on the emotional situation to change its meaning, and thereby fosters long-term recovery. These findings suggest that people are sensitive to the costs and benefits that are associated with the use of different regulation strategies in different contexts.

The above findings regarding regulatory flexibility pertain to the regulation of one's own emotions. We propose that when regulating others' emotions, people may similarly determine - on behalf of the expresser - how the expresser's emotions should be optimally regulated in relation to the relevant

context. To our knowledge, no research has examined how situational demands affect attempts to regulate others' emotions. Given that different regulation strategies may bring about differentially effective consequences, it is important to gain insight into different contexts that would lead to different regulatory responses to others' emotions.

The aim of the present study is to examine whether people provide context-sensitive social support. As when regulating their own emotions, people may also regulate others' emotions in a way that they consider helpful for achieving a relevant goal. Notably, the goals underlying interpersonal emotion regulation may also be selfish: People may regulate others' emotions in ways that are beneficial to achieving their own goals (e.g. winning a game; Netzer, van Kleef, & Tamir, 2015). In the present study, however, we focus only on pro-social goals, that is, how support providers regulate the sharer's emotions in order to facilitate fulfilment of the sharer's goals. Oftentimes in real life, situations may demand immediate down-regulation of emotions because the emotions impede other relevant goals, such as performance, impression management, or the preservation of others' feelings (Parrott, 2001). In the present study, we use the term regulatory demand to denote the extent to which a situation calls for immediate downregulation of negative emotions. This urgency implied by high regulatory demand is expected to lead to a prioritising of short-term over long-term effectiveness. Extending previous intrapersonal research on the effects of situational demands on preferences to engage with versus disengage from the emotional situation (English et al., 2017; Sheppes et al., 2014) to the interpersonal level, we develop the hypothesis that a context posing greater regulatory demand engenders a greater use of disengaging regulation strategies, and a decreased use of engaging strategies.

More specifically, we reasoned that high (compared to low) regulatory demand would lead to increased use of suppression and distraction, given that short-term effectiveness is prioritised. Both strategies are directed at disengaging from the emotional experience. While ineffective in the long term, suppression and distraction may facilitate short-term down-regulation of the emotional expression (suppression) and experience (distraction; Gross, 2002; Kross & Ayduk, 2008; Sheppes & Meiran, 2008; Webb et al., 2012).

Second, we predicted that high regulatory demand would decrease the provision of socio-affective and cognitive support, compared to a situation posing low regulatory demand that would allow for engagement with the emotional experience and situation. While socio-affective support may bring about shortterm feelings of relief and closeness, its engaging nature also bears the danger of leading to co-rumination, given that the sharer and support provider are concentrating on the emotional experience, while validating and thereby potentially dwelling on the negative emotions (Curci & Rimé, 2012). Therefore, socioaffective support may be less appropriate when immediate down-regulation is required. Similarly, cognitive support is characterised by a high level of engagement with the emotional situation. It is directed at changing the way the other thinks about the situation by recreating meaning and reappraisal, which requires elaborate cognitive processing (Rimé, 2009; Sheppes & Meiran, 2008). Thus, while fostering more long-term recovery, cognitive support provision is also less suitable when short-term effectiveness is prioritised (McRae, 2016).

To test these hypotheses, we manipulated the regulatory demand of the situation in which a protagonist was crying over an unfaithful partner by inducing a more pressing concern (i.e. a job interview), which rendered the emotional distress particularly dysfunctional for the current situation. Participants first read a short vignette about what happened to a person they were about to watch, and then watched a video in which they saw a person crying. Afterwards, they provided support by recording a video message. This allowed us to test whether participants provided different levels of socio-affective support, cognitive support, suppression and distraction depending on whether immediately effective down-regulation was required, compared to when there was no such imminent need. Thus, in terms of the Social Regulatory Cycle, we manipulated the need for regulation (step 2) in order to examine its impact on strategy selection (step 3).

Methods

Participants

A total of 181 participants participated in the study for course credit or monetary compensation. Four participants dropped out (two refused to record a video message, one became too upset due to a personal experience similar to the vignette, and one provided no reason). This resulted in a sample of 177 participants (82% women, mean age 23.8 years).¹

Procedure

After signing consent forms, participants first completed a practice video recording of maximally three minutes with the experimenter present, in which they spoke casually to an imagined friend. Next, they read a vignette describing that their friend had just discovered that their fiancée had cheated on them, which also included the manipulation of regulatory demand (see below). Then, in order to fully immerse themselves in this situation, participants watched a one-minute film clip of a young man crying, whom they were asked to imagine was their friend. Afterwards, they recorded a video message to their crying friend, which constituted our behavioural measure of interpersonal emotion regulation. Participants were simply asked to respond in a way they normally would have if this had been their friend crying. Finally, participants filled out several questionnaires (see Materials) and left their e-mail address if they wished to receive a debriefing message once data collection had been completed. The study protocol was approved by the local ethics committee of the Department of Psychology of the University of Amsterdam.

Materials

Regulatory demand

We manipulated the need for immediate down-regulation (i.e. regulatory demand) by varying their friend's situation as described in the vignette: Their friend was either home alone with plenty of time (low regulatory demand) or was home alone, needing to leave for an important job interview in half an hour (high regulatory demand). By introducing an additional, more pressing concern in the high regulatory demand condition, we aimed to induce a more short-term focus directed at immediate down-regulation of the sharer's experience and/or expression of emotional distress. Indeed, participants in the high regulatory demand condition perceived a greater need for immediate down-regulation compared to those in the low regulatory demand condition (i.e. they perceived it to be a worse moment to cry, and perceived the sharer to have a greater desire to stop crying, see Supplemental Materials for more details). Participants were randomly assigned to experimental conditions.

Film clips

Participants watched a video of a distressed person who was genuinely crying about a personal experience. They were asked to imagine that this was a friend of theirs. Participants were randomly assigned to one of two film clips. These clips were enacted by two different young men, aged 20 and 23, respectively, and varied somewhat in the specific ways in which the person cried (e.g. intensity). This allowed us to examine the robustness of any effects across different models and different ways of crying. For screenshots of the videos, see Appendix A.²

Self-reported interpersonal emotion regulation strategies

Participants reflected on their own interpersonal emotion regulation strategies by rating on a 7-point Likert scale ranging from 1 (not at all) to 7 (very much) the extent to which they provided twelve different types of regulatory responses in their video message. Four items tapped Socio-Affective Support (α = .78; e.g. "To what extent did you want to comfort him?"), four items assessed Cognitive Support ($\alpha = .78$; e.g. "To what extent did you want to help him look at the situation from a different perspective?"), two items tapped Suppression ($\alpha = .81$; e.g. "To what extent did you want to help him suppress his emotions?"), and two items measured Distraction (α = .83; e.g. "To what extent did you want to help him think about something else?"). All items can be found in Appendix B.³

Observed interpersonal emotion regulation strategies

All participants' video messages were transcribed. The anonymized texts were coded for the frequency of socio-affective support, cognitive support, suppression and distraction. Six naïve research assistants were trained to code the data.4 First, 10% of the material was coded by all coders to establish sufficient inter-rater reliability. Following Hallgren (2012), inter-rater reliability was measured using a two-way mixed, absolute agreement, single-measures intra-class correlation coefficient (ICC: McGraw & Wong, 1996) assessing the degree to which coders agreed on the frequency of each category across subjects. Given that ICCs reflected good inter-rater reliability (see Table 1), the remaining 90% of the data was divided over three pairs of coders, for which average-measures ICCs were calculated (see below).

Socio-affective support (ICC = .94) was comprised of eight subcategories: validation, empathy, and understanding (e.g. "I totally understand"), conveying

Table 1. Mean Frequencies (M) and Standard Deviations (SD) of the Coded Emotion Regulation Strategies, including Inter-Rater Reliability Reflected by Two-Way Mixed, Absolute Agreement, Single and Average-Measures Intra-Class Correlation Coefficients (ICCs).

Emotion Regulation Strategy	<i>M (SD)</i> All Data	Single-Measures ICC First 10% of Data	Average-Measures ICC First 10% of Data	Average-Measures ICC ~ 90% of Data
Socio-Affective Support	11.19 (6.17)	.84	.97	.94
Vicarious Aggression	0.23 (0.76)	.92	.99	.95
Availability	3.38 (0.52)	.80	.96	.95
Esteem Support	0.52 (1.20)	.58	.89	.87
Love/Intimacy	0.21 (0.77)	.99	1.00	.92
Similar Experience	0.13 (0.67)	NA	NA	.84
Social Companionship	0.53 (1.01)	.73	.94	.91
Understanding/Validation	5.71 (3.77)	.93	.97	.93
Expressions of Sympathy	0.49 (0.90)	.74	.94	.85
Cognitive Support	2.36 (3.23)	.79	.96	.94
Positive Reappraisal	1.10 (1.97)	.35	.77	.90
Putting Situation into Perspective	1.23 (1.70)	.74	.94	.73
Reappraisal Mixed	0.04 (0.16)	NA	NA	NA
Suppression	1.14 (1.52)	.60	.90	.76
Suppression of Thoughts	0.29 (0.64)	.75	.95	.81
Suppression of Feelings	0.06 (0.24)	.06	.15	.74
Suppression of Expressions	0.15 (0.49)	.64	.91	.90
Suppression Mixed	0.65 (1.06)	.22	.63	.75
Distraction	2.05 (2.53)	.76	.95	.84
N Participants	177	20	20	149
N Coders per Participant		6	6	2

Note: Following Hallgren's guidelines (2012), inter-rater reliability was assessed using a single-measures intra-class correlation coefficient (ICC; McGraw & Wong, 1996) to assess the degree to which coders agreed upon the absolute frequency of each category across subjects. The single-measures ICC in its current form is calculated based on the first 10% of participants coded by all six coders and denotes the interrater reliability meant to generalise to subjects being rated by one coder. Given that these were sufficiently high for all three main categories, the remaining participants were coded by a subset of the coders. These remaining participants included slightly less than 90% of the data, given that a part of the data was used for training. The average-measures ICCs reflect the inter-rater reliabilities averaged across multiple coders, and thus reflect the reliability of the categories as they were used for hypothesis testing. According to Cicchetti's (1994) guidelines, inter-rater reliability is considered fair for ICC values between .40 and .59, good for values between .60 and .74, and excellent for values between .75 and 1.00. NA indicates that the frequency of the coded category was too low to calculate the ICC.

love or intimacy (e.g. "I wish I could give you a hug right now"), availability (e.g. "I'm there for you"), esteem support (e.g. "You're a great guy"), vicarious aggression (e.g. "What a bitch"), social companionship (e.g. "Maybe we can grab a coffee together?"), similar experience (e.g. "My partner also once cheated on me"), and expressions of sympathy (e.g. "Take care"). Cognitive support (ICC = .94) included positive reappraisal, which were attempts to interpret the situation from a more positive perspective (e.g. "Maybe it's better that it happened now than later when you'd have children"), putting the situation in perspective (e.g. "You will get over this eventually"), and a mixed category when the reappraisal fit both categories (e.g. "Your relationship wasn't so stable anymore anyway"). Distraction (ICC = .84) included only one category reflecting any attempt to divert attention away from the emotional situation, for example by suggesting unrelated topics or activities (e.g. "Try to think about something else"). Suppression (ICC = .76) was comprised of suppression of thoughts (e.g. "Try not to think about her for now"), suppression of feelings (e.g. "Don't let your emotions take over"), suppression of expression (e.g. "Dry your tears"), and a mixed category of suppression in case of ambiguity (e.g. "Get yourself together"; see Supplement 1 for the complete coding scheme, and Supplement 3 for more details on the interrelations between the different types of regulation strategies).⁵

Results

Self-reported interpersonal emotion regulation strategies

To test our hypotheses regarding the effect of regulatory demand and potential moderation by film clip on self-reported regulation strategies, a Repeated Measures ANOVA was conducted with Regulatory Demand (high vs. low) and Film Clip (1 vs. 2) as between-subjects variables, and Self-Reported Regulation Strategy (socio-affective support, cognitive support, suppression and distraction) as within-subjects variable. All means and standard deviations are presented in Table 2. Mauchly's test indicated that the assumption of sphericity had been violated,

 $\chi^2(5) = 38.82$, p < .001. Therefore, degrees of freedom were corrected using Huynh-Feldt estimates of sphericity ($\varepsilon = .90$).

First, a main effect of Self-Reported Regulation Strategy appeared (F[2.69, 466.00] = 109.37, p < .001, η_p^2 = .39). Participants overall indicated to have provided more socio-affective support compared to cognitive support (F[1, 173] = 229.07, p < .001, $\eta_p^2 = .57$), suppression (F[1, 173] = 242.33, p < .001, $\eta_p^2 = .58$), and distraction ($F[1, 173] = 141.22, p < .001, \eta_p^2 = .45$). Suppression was provided least frequently compared to all other strategies (distraction: F[1, 173] = 17.27, p $<.001, \eta_p^2 = .09$, cognitive support: F[1, 173] = 5.18, p= .024, η_p^2 = .03). Finally, there was no difference between the degree of cognitive support and distraction (F[1, 173] = 0.86, p = .355, η_p^2 = .01).

Second, as predicted, there was a significant interaction effect between Self-Reported Regulation Strategy and Regulatory Demand (F[2.69, 466.00] = 38.15, p < .001, $\eta_p^2 = .18$). Bonferroni-corrected pairwise comparisons showed that, in line with our first hypothesis, regulatory demand significantly increased the selfreported use of suppression (F[1, 173] = 82.83, p<.001, η_p^2 = .32) and distraction (*F*[1, 173] = 16.48, *p* < .001, η_p^2 = .09). Furthermore, in line with our second hypothesis, those in the high regulatory demand condition reported to have provided less socio-affective support compared to those in the low regulatory demand condition (F[1, 173] = 8.79, p= .003, η_n^2 = .05). However, Regulatory Demand did not affect self-reported cognitive support (F[1, 173] = 0.06, p = .804, η_p^2 < .001). Finally, there were no significant effects of Film Clip, nor did it moderate any of the other effects (all ps > .221).

Observed interpersonal emotion regulation strateaies

Because the observed regulation strategies concern frequencies, forming a Poisson distribution, the assumptions of normality, homogeneity of variances, and sphericity were violated. Therefore, as a preliminary analysis, we conducted a Friedman's ANOVA to test whether we would replicate the observed main effect of self-reported regulation strategies on a behavioural level. Indeed, there was a significant difference in the observed use of the four regulation strategies, $\chi^2(3) = 307.77$, p < .001. Bonferroni-corrected pairwise comparisons showed that, overall, participants provided more socio-affective support compared to cognitive support (T = 1.68, p < .001), suppression (T = 2.07, p < .001), and distraction (T =1.70, p < .001). Furthermore, suppression was provided least frequently compared to all other strategies (cognitive support: T = 0.39, p = .029, distraction: T = -0.37, p = .045). Finally, there was no significant difference between the provision of cognitive support and distraction (T = 0.20, p = 1.000). Thus, these behavioural results fully replicate the differences observed in participants' self-reported regulation strategies. All means and standard deviations are presented in Table 2.

Next, to test our hypotheses, we conducted four separate negative binomial regression analyses using the summed frequencies observed by the two coders. Regulatory Demand, Film Clip and their interaction term were included as predictors of socioaffective support, cognitive support, suppression and distraction. To control for the total number of words participants used, a log linear function of the word count was included as an offset variable, treating word count as a covariate.

In line with our first hypothesis, participants in the high regulatory demand condition employed more suppression (RR = 2.92, p < .001) and distraction (RR = 2.00, p < .001) compared to those in the low regulatory demand condition. The Relative Risk (RR) indicates the relative probability of the occurrence of the dependent measure. Thus, for example, it reflects that participants in the high regulatory demand condition are predicted to engage in 2.92 times more suppression attempts compared to those in the low regulatory demand condition. Supporting second hypothesis, participants in the high regulatory demand condition provided less socio-affective support than those in the low regulatory demand condition (RR = 0.69, p < .001). Contrary to our hypothesis, Regulatory Demand did not affect the provision of cognitive support (RR = 0.98, p = .945). Finally, replicating the self-report findings, Film Clip did not have a significant effect, nor did it interact with Regulatory Demand to predict any of the outcomes (all ps > .05).

Discussion

Main findings and theoretical implications

We examined whether the regulatory demand of a situation impacts the way others regulate the emotions of those who cry. Self-report and behavioural data converged to show that, as hypothesised, when regulatory demand was high, requiring

Table 2. Means (M) and Standard Deviations (SD) of Self-Reported and Observed Socio-Affective Support, Cognitive Support, Suppression and Distraction, split by Regulatory Demand and Film Clip.

	Socio-Affective Support <i>M (SD)</i>	Cognitive Support <i>M (SD)</i>	Suppression <i>M (SD)</i>	Distraction M (SD)
Self-Reported Regulation Strategies				
Low Regulatory Demand				
Film Clip 1	6.21 (0.91)	4.12 (1.40)	2.48 (1.39)	3.74 (1.88)
Film Clip 2	6.20 (0.83)	4.11 (1.40)	2.81 (1.67)	3.63 (1.83)
High Regulatory Demand				
Film Clip 1	5.69 (0.78)	4.14 (1.56)	5.14 (1.78)	4.77 (1.70)
Film Clip 2	6.01 (0.62)	3.99 (1.44)	4.70 (1.79)	4.78 (1.74)
Total	6.03 (0.81)	4.09 (1.44)	3.76 (2.01)	4.22 (1.86)
Observed Regulation Strategies				
Low Regulatory Demand	44.40 (4.50)	4 =0 (0.40)	0.04 (0.50)	()
Film Clip 1	11.18 (6.58)	1.79 (2.40)	0.21 (0.58)	0.61 (1.61)
Film Clip 2	12.40 (6.73)	2.66 (4.39)	0.68 (1.31)	0.77 (1.67)
High Regulatory Demand				
Film Clip 1	9.40 (5.40)	2.26 (2.83)	1.52 (1.47)	3.52 (2.85)
Film Clip 2	11.72 (5.70)	2.69 (3.02)	2.22 (1.67)	3.41 (2.17)
Total	11.19 (6.17)	2.36 (3.23)	1.14 (1.52)	2.05 (2.53)

Note: Self-reported regulation strategies were rated on a scale from 1 (not at all) to 7 (a lot). Observed regulation strategies denote the frequency of the observed employment of the different regulation strategies, averaged across coders.

immediate down-regulation, participants provided less socio-affective support, but made more attempts to help the other disengage from the emotional experience by encouraging suppression and distraction. Cognitive support provision, however, was unaffected by regulatory demand. We replicated these effects across two different film clips of crying episodes, suggesting that the effect does not depend on the specific way in which a person cries.

These findings extend a growing body of research showing that individuals are context-sensitive in the strategies they choose to employ to regulate their own emotions (e.g. Aldao & Nolen-Hoeksema, 2012; Bonanno & Burton, 2013; English et al., 2017; Troy et al., 2013). The current results show that people also take the context into account when trying to regulate others' negative the emotions. Furthermore, present findings suggest that the motivation to engage with, or disengage from, the emotional situation may underlie these effects. Greater regulatory demand increased the use of disengaging strategies, and reduced the provision of socio-affective support, a highly emotionally engaging strategy. The fact that regulatory demand did not affect cognitive support provision may be explained by a greater importance of the nature of the emotion-eliciting event (e.g. controllability), which may have masked any potential effects of regulatory demand (see Troy et al., 2013). Furthermore, the general level of cognitive support provision was relatively low, which may be due to participants' limited background information

about the protagonist and the event, rendering reappraisal of the situation more challenging.

These findings have implications for effective regulation of others' emotions. On the one hand, the fact that participants adapted their regulation strategies to situational demands suggests that participants were aware of situation-dependent goals, and attuned their response accordingly. Given that we did not assess participants' regulatory goals, future research is needed to establish whether the prioritisation of short-term over long-term goals is actually underlying such effects. Our manipulation check did show that participants indeed perceived a greater need for immediate down-regulation in the high regulatory demand condition. The increased use of disengaging strategies (i.e. suppression and distraction) and decreased use of socio-affective support under high regulatory demand may facilitate more instrumental goals (e.g. making a good impression at a job interview), which are impeded by focusing on the experience of negative emotions.

On the other hand, while distraction seems effective in bringing about immediate relief (Webb et al., 2012), suppression may work counterproductively. Research on intrapersonal emotion regulation has shown that suppression is effective in down-regulating the expression of negative emotions, but it is ineffective in reducing the experience of negative emotions (Webb et al., 2012). In addition, it appears to negatively impact interaction partners, for example, by increasing their physiological arousal (Butler et al., 2003). Furthermore, the use of

disengagement comes with long-term costs. Neither suppression nor distraction allow for emotional processing, and thereby impair memory of the emotioneliciting event and impede long-term emotional recovery (Gross, 2002; Kross & Ayduk, 2008; Sheppes & Meiran, 2008).

Similarly, encouraging others to engage in suppression has been argued to be the most detrimental interpersonal emotion regulation strategy for the sharer (Reeck et al., 2016). Interpersonal suppression can leave the sharer feeling worse (Little, Kluemper, Nelson, & Ward, 2013). Specifically, they may conclude that their emotions are not welcome or inappropriate, which may impede effective coping behaviour in the long run (e.g. reduced acknowledgement and reflection, and increased avoidant coping; Eisenberg, Cumberland, & Spinrad, 1998; Eisenberg, Fabes, & Murphy, 1996). The reduced socio-affective support provision under high regulatory demand observed in the current study could even aggravate these effects, given the additional lack of validation, which may reduce feelings of social connection (Pauw, Sauter, Van Kleef, & Fischer, 2018b). It should be noted, though, that the overall levels of socio-affective support were still very high, which could buffer some of the potential negative impact of increased suppression.

While the use of disengaging emotion regulation strategies carries a danger of impeding long-term recovery, we believe that disengagement need not always be maladaptive (cf. Le & Impett, 2013; McRae, 2016). Instead, its effectiveness depends on the situational demands and the regulatory goal that is adopted (e.g. immediate versus long-term down-regulation of negative effect, impression management, preservation of relational harmony; Aldao, 2013; Bonanno & Burton, 2013; Kashdan & Rottenberg, 2010; Le & Impett, 2013; Sheppes & Gross, 2012). Furthermore, the observed use of both engaging and disengaging strategies may, in fact, be a healthy approach: Stroebe and Schut (1999) have proposed a dual process model of healthy grieving that includes the flexible oscillation between confronting and avoiding stressors associated with bereavement. Similarly, Bonanno and Burton (2013) have argued that regulatory flexibility consists of several components, including sensitivity to context, availability of a diverse repertoire of regulatory strategies and responsiveness to feedback (see also Kashdan & Rottenberg, 2010). The current study shows that - at least across participants - providers seemed sensitive to context,

and employed a wide variety of regulation strategies. While participants could not adjust their support in response to the sharer's feedback, these findings hint at a potential for interpersonal regulatory flexibility.

Strengths, limitations and future directions

Overall, participants provided more socio-affective support compared to cognitive support, suppression, and distraction. These findings are in line with the idea that regulating others' emotions may often disproportionally centre around socio-affective support. This may undermine long-term recovery due to its failure to effectively change the experienced emotions (Pauw, Sauter, Van Kleef, & Fischer, 2018a; Pauw et al., 2018b; Rimé, 2009). Nonetheless, these findings should be interpreted with caution, as the abundance of socio-affective support in the present study may have been inflated by a higher number of subcategories for socio-affective support compared to the other categories. Furthermore, experimental constraints such as the absent opportunity to engage in an actual interaction, as well the lack of background information on the protagonists' situation may have favoured certain regulation strategies over alternatives that would be accessible in real life (e.g. physical contact). Finally, social desirability may also have contributed to the high level of socio-affective support provision, given that it is considered a normative response (see Brans, Van Mechelen, Rimé, & Verduyn, 2013).

Another limitation of the present study is the use of an imaginary context, which may have impacted participants' emotion regulation strategies in several ways. First, the support behaviours may have been limited to the specific context of infidelity. People's regulation preferences differ depending on the emotion that the shared situation elicits (Pauw et al., 2018b) - something support providers may be aware of and tune their support to. It should be noted, however, that the current situation in fact elicited a wide range of emotions as perceived by the participant (e.g. sadness, despair, worry), and thus should have invited a relatively broad scope of regulation strategies. Second, participants considered the situation a highly appropriate reason to cry. Consequently, the current findings may not generalise to situations in which crying is deemed less appropriate. In such cases, support providers may be less motivated to provide socio-affective support, and instead

stimulate greater disengagement (cf. Fischer, 2006; Hendriks et al., 2008). Importantly, however, while the specific theme of the situation may have shaped the baseline levels of support provision in the current study, our results speak to an effect of regulatory demand on the relative use of the different forms of support. Future research should replicate the current findings in a more naturalistic interactive setting, ideally across a wider range of emotional situations.

Furthermore, future research examining multiple modalities of support provision is warranted. The present study focused on verbal support provision, which has been found to be a more important predictor of positive outcomes of support interactions than non-verbal support (Bodie, Vickery, Cannava, & Jones, 2015; Jones & Guerrero, 2001). Nevertheless, studying tone of voice and other non-verbal behaviours (e.g. physical touch, nodding) may further elucidate the nuances of support provision, as well as perceptions of supportive behaviour. For example, silence on the part of the support provider may be experienced as very supportive when accompanied by eye contact, nodding, and other cues indicating active listening (Bodie & Jones, 2012; Bodie, Vickery, & Gearhart, 2013; Coan & Gottman, 2007).

Finally, it should be noted that the nature of our sample was restricted to mainly women, whereas our videos depicted men crying. Despite conventional wisdom suggesting gender effects regarding both the target of support provision, as well as the provider of support, we do not believe the unbalanced gender distribution (which is quite common in studies involving psychology students as participants) threatens our interpretation of the current findings for several reasons. First, participant (i.e. "provider") gender was equally distributed across the experimental conditions, precluding gender to form an alternative explanation of the observed effects. Second, participant gender did not moderate any of the observed effects, suggesting that regulatory demand similarly impacted men and women's use of interpersonal emotion regulation strategies. Third, while women reported to have provided somewhat more socioaffective support and less distraction, behavioural observations in fact evidenced no difference, suggesting that if anything, gender-stereotypical beliefs guided participants' self-reports, but not their behaviours. Finally, regarding the support target's gender, recent research suggests that context and appropriateness of the crying are more important than gender in determining how people respond to those who cry (Vingerhoets & Bylsma, 2016; Warner & Shields, 2007). More specifically, people consider it equally appropriate for men and women to cry in response to severe situations, such as the break-up of a romance (Fischer, Manstead, Timmers, & Valk, 2004; Zammuner, 2000). The extremely high levels of perceived appropriateness of crying in the present study further underline our belief that the gender of the support target does not threaten the generalizability of our findings.

Importantly, despite the limitations associated with the experimental nature of the present study, we also believe its strengths merit some attention. With the current approach, we aimed to combine the best of both worlds. On the one hand, we manipulated the regulatory demand of the situation, a methodological approach we deemed necessary in order to study the interpersonal emotion regulation strategies that people employ in response to a particular context, yet in the absence of the support seeker's responsive behaviours. On the other hand, to increase ecological validity, we used videos showing people naturally crying. Furthermore, we had participants actually provide support, albeit in a lab-based setting, and coded their actual use of different emotion regulation strategies; thereby going beyond frequently employed methods such as self-reported past or imagined emotion regulation.

Concluding remarks

In conclusion, while previous research has shown that context impacts the strategies people choose to employ when regulating their own emotions (e.g. English et al., 2017), the present study contributes to the literature on emotion regulation by showing that context also shapes the way people try to down-regulate others' negative emotions. Despite the overall effectiveness associated with the different types of regulation strategies, individuals seem to be aware that what works in one situation may not work in another, and act accordingly.

Notes

- 1. A power analysis was difficult to perform, as the interrelations of our newly developed behavioural dependent measures were not known. Therefore, we aimed for 45 participants per cell to ensure sufficient power.
- 2. Gender was equally distributed across the four experimental conditions, χ^2 (3) = 4.80, p = .187.

- 3. Originally, we had conceptualised suppression and distraction to fall into one category reflecting disengagement (4 items tapping into each category). An exploratory factor analysis confirmed this factor structure. However, as the editor correctly noted, suppression and distraction theoretically constitute two different constructs. Therefore, we analysed these two factors separately throughout the present study. Analysing suppression and distraction as one construct (disengagement) yields the same pattern of results.
- 4. Half of the messages were transcribed by a naive research assistant, the other half were transcribed by the coders. Importantly, these transcriptions were based on the extracted audio (thereby considered anonymous) and coders never coded texts that they had previously transcribed.
- 5. For completeness, we additionally coded informational support, instrumental support, and concentration (on feelings, causes, and implications), based on Gross' (1998) process model and the literature on social support (Cohen & Wills, 1985; Rimé, 2009). These categories fall beyond the scope of this article, but the data are available upon request. Furthermore, participants also reported on the emotions they thought their imagined friend was feeling (i.e. inferred emotions) as well as the emotions they experienced themselves (see Supplement 2). Related analyses are reported in Supplement 3 and 4.
- 6. Controlling for gender yields the same pattern of findings, both when analysing self-reported and behavioural support provision. See Supplement 3 for additional analyses regarding the effect of gender.
- 7. To overcome the problem of overdispersion (i.e. variance larger than the mean) observed for socio-affective support, cognitive support, suppression and distraction, a set of negative binomial regression analyses was conducted (see Coxe, West, & Aiken, 2009). For suppression and distraction, a zero-inflated model was used, as Vuong's test indicated that a zero-inflated negative binomial regression model fit the data better than a negative binomial regression model (suppression: z = 2.38, p = .009, distraction: z = -2.67, p = .004). This was not the case for socio-affective support (z = -0.48, p = .316) and cognitive support (z = -1.68, p = .046). Additional indicators of model fit supported this conclusion. Finally, because the negative binomial distribution is only suitable for count variables and thus integers, the regression analyses were conducted using the summed (rather than averaged) frequencies observed by the two coders.

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Appendices

Appendix A: crying stimuli



Figure A1. Screenshot of film clip 1.



Figure A2. Screenshot of film clip 2.

Appendix B: self-reported support provision

In order to assess self-reported support provision, participants were given the following instructions: "Looking back at what you said and how you responded, to what extent did you want to...", after which rated 12 items tapping into socio-affective support, cognitive support, suppression and distraction. A promax rotated exploratory factor analysis using principle axis factoring indeed yielded three factors. All items including

their component loadings are presented in Table B1 below. Please note that these concern translations of the originally Dutch items.

Table B1. Factor loadings of all items assessing self-reported support provision loading above .3 onto three factors: disengagement, cognitive support and socio-affective support.

cognitive support and	cognitive support and socio-affective support.					
	Factor 1: Disengagement	Factor 2: Cognitive support	Factor 3: Socio- affective support			
Help him to think about something else	.86	04	.04			
2. Tell him not to think about it	.84	03	06			
3. Distract him	.79	02	.09			
4. Help him to suppress his emotions	.67	.05	04			
5. Help him to obtain a different perspective on the situation	.15	.80	04			
6. Put what occurred into perspective	<.01	.69	04			
7. Provide an outside perspective	.12	.68	.03			
8. Help him to find meaning in what occurred	28	.63	.09			
9. Provide support	.09	02	.72			
10. Show empathy	02	06	.71			
11. Comfort him	.01	.05	.70			
12. Convey understanding	05	.06	.64			