

Running head: EMOTION GOALS IN BORDERLINE PERSONALITY

How Do I Want to Feel? The Link between Emotion Goals and Difficulties in Emotion
Regulation in Borderline Personality Disorder

Belén López-Pérez & Jane McCagh

Department of Psychology, Liverpool Hope University, UK

Correspondence should be addressed at Belén López-Pérez (lopezpb@hope.ac.uk) or
Jane McCagh (mccaghj@hope.ac.uk). Department of Psychology, Faculty of Science,
Liverpool Hope University; Taggart Avenue, L16 9JD, Liverpool, UK.

In press at *The British Journal of Clinical Psychology*. This is the authors' copy of the
accepted version of the manuscript, which has not yet been copy-edited, formatted or
proofed. This article may be used for non-commercial purposes in accordance with
Wiley Online Library Conditions for Self-Archiving

Abstract

Objectives: appropriate contextualized emotion goals (i.e., desired emotional end-points that facilitate goal attainment) are fundamental to emotion regulation, as they may determine the direction of regulation efforts. Given that difficulties in emotion regulation is prevalent in borderline personality disorder (BPD), we explored if BPD traits (Study 1) and BPD diagnosis (Study 2) presented specific contextualized emotion goals, and whether these emotion goals may be linked to difficulties in emotion regulation.

Methods: In Study 1, 358 individuals were recruited via Amazon Mechanical Turk and assessed on the presence of borderline traits, emotion regulation ability, general and contextualized emotional goals. In Study 2, these measures were employed in a sample of 35 people with BPD and 35 matched controls who were also assessed on their current mood state and screened for Axis I and II disorders of the DSM-IV.

Results: Study 1 showed that emotion dysregulation was positively predicted by borderline traits and contextualized emotion goals that impair goal attainment (i.e., greater preference for anger for collaboration and happiness for confrontation). Findings of Study 2 also showed that a higher preference for happiness for confrontation was linked to higher emotion dysregulation in both individuals with BPD and controls. Furthermore, individuals with BPD reported a lower preference for happiness for collaboration than controls.

Conclusions: these results support the importance of looking at emotion goals and its link with emotion dysregulation. Interventions targeting maladaptive contextualized goals may represent an important therapeutic window to enhance emotion regulation.

Keywords: borderline personality; emotion goals; emotion regulation; happiness; anger.

Practitioner Points

Clinical implications

- BPD individuals' emotion regulation is linked to maladaptive emotion goals
- Helping people at risk to manipulate their emotion goals to be more context sensitive may enhance well-being and serve as a therapeutic tool in practice

Limitations

- The present research only considered the context of collaboration and confrontation but other contexts more relevant for individuals with BPD (i.e., self-harm situations) might provide valuable information about their difficulties in emotion regulation
- To study contextualised emotion goals in clinical populations longitudinal rather than cross-sectional designs should be considered

How Do I Want to Feel? The Link between Emotion Goals and Emotion Dysregulation in Borderline Personality Disorder

Borderline Personality Disorder (BPD) is characterised as a pervasive pattern of instability in interpersonal relationships, identity, impulsivity and affect (DSM-5 American Psychiatric Association, 2013). BPD has a prevalence of between 15%-25% in psychiatric inpatients and 10% of outpatients (Gunderson, 2009).

Individuals with BPD have been described as exhibiting difficulties in understanding, responding and managing of emotional responses, which are core elements of emotion regulation (Gratz, Rosenthal, Zachary, Lejuez, & Gunderson, 2006). In fact, difficulties in emotion regulation are considered one of the core features of BPD (Linehan, 1993), which may result in marked impulsive behaviour (van Zutphen, Siep, Jacob, Goebel, & Arntz, 2015).

Studies using self-reports have found that individuals with BPD exhibited difficulties in different domains of emotion regulation such as lower emotional clarity (Leible & Snell, 2004), more emotional avoidance (Gratz, Tull, & Gunderson, 2008), and more difficulties in controlling their emotions when exposed to distress (Sinclair & Feigenbaum, 2012). Furthermore, individuals with BPD were found to use less adaptive (i.e., reappraisal and distraction) and more maladaptive (i.e., more rumination, catastrophizing, and self-blame) regulation strategies compared to controls (Sauer et al., 2016). Research using biological markers found that BPD individuals showed a unique pattern of brain activity when exposed to emotional stimuli (van Zutphen et al., 2018) and exhibited greater difficulties in modulating emotional arousal (Malhi et al., 2013).

Furthermore, individuals with BPD experience higher levels of negative emotions and higher variability in the experience of positive emotions (Russell, Moskowitz, Zuroff, Sookman, & Paris, 2007). Although Kuo and Linehan (2009) suggested that individuals with BPD might exhibit emotional hyperreactivity, this has not been confirmed in other studies (Jacob et al., 2009). Namely, different research studies have found that individuals with BPD do experience higher intensity only for negative emotions (e.g., Chu, Victor, & Klonsky, 2016). In fact, their experience and difficulties in the regulation of anger has been widely described in previous research (e.g., Koenigsberg et al., 2002). For instance, abrupt anger shifts have been linked to higher BPD symptomatology through daily diaries (Trull et al., 2008). Furthermore, individuals with BPD exhibit a higher anger bias (interpretation of stimuli as expressing more anger; Lobbestal & McNally, 2016) and their experience of anger is linked to lower interpersonal functioning (Ellison, Rosenstein, Chelminski, Dalrympe, & Zimmerman, 2015). Although these studies have provided relevant information, the difficulties BPD individuals exhibit in regulating their emotions should be considered in light of developments in emotion regulation research as this will help us to better understand emotional functioning in BPD.

Emotion Goals

Current research on emotion regulation has focused on *emotion goals*, that is, cognitive representations of desired emotional end-points (Mauss & Tamir, 2014). Emotion goals can determine the direction of emotion regulation (Millgram, Joormann, Huppert & Tamir, 2015) by increasing or decreasing pleasant and unpleasant emotions to bring them closer to the desired emotional experience (Wood, Heimpel, Manwell, & Whittington, 2009). Importantly, this change of emotional experience is not linked to

valence (i.e., whether an emotion is positive or negative) but the extent to which the emotion fits the context (Tamir, 2016). This context sensitivity has been found by exposing healthy adult participants to situations of collaboration and confrontation and evaluating their emotion goals to see whether they matched the emotions identified as adaptive for those contexts in previous research; that is, happiness for collaboration (e.g., Forgas, 1998) and anger for confrontation (e.g., Van Kleef, De Dreu, & Manstead, 2004). In fact, emotion goals research has confirmed that people are context sensitive, as they reported emotion goals congruent with what was expected from previous emotion research; when exposed to a collaboration context people reported a higher preference for experiencing happiness; whereas when exposed to a confrontation context they reported a higher preference for feeling anger (Ford & Tamir, 2012). Importantly, context sensitivity or being able to adapt emotion goals to different situations or contexts (i.e., collaboration vs. confrontation) has been linked to higher emotional intelligence (Ford & Tamir, 2012) and higher psychological well-being (Kim, Ford, Mauss, & Tamir, 2015).

Difficulties in Emotion Regulation and Emotion Goals

Previous research with healthy adults has shown that having unrealistic emotional goals for happiness reduces the chance that a person will experience happiness and increases the probability of experiencing negative emotions (Ford, Shallcross, Mauss, Floerke, & Gruber, 2014). Excessive valuing of happiness has been linked to higher levels of depressive symptoms in undergraduate students (Ford et al, 2014). Additionally, Ford, Mauss and Gruber (2015) found that the extreme valuing of happiness is linked with and can predict bipolar disorder.

Emotion goals have been further investigated in individuals suffering from depression, as a potential mechanism that may account for their difficulties in regulating emotions. Millgram et al., (2015) argued that individuals with depression may show a greater preference for sadness as they are more used to experiencing that emotion than positive emotions. Throughout three studies, they showed that individuals with depression not only indicated a higher preference for sadness but also selected to a greater extent sadness-inducing stimuli (i.e., sad images and sadness-inducing music clips). Furthermore, lower preference to experience happiness over time has been linked to more depressive symptoms (Millgram, Joorman, Huppert, Lampert, & Tamir, 2018). Overall, these findings with clinical samples (bipolar disorder and depression) suggest that the lack of context sensitivity in the preference for emotion goals (i.e., preferring an emotion that may not fit the context) is a risk factor not only for mood disturbances but also for more difficulties in emotion regulation.

The Present Research

Although previous research has investigated difficulties in emotion regulation in people with BPD (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), whether differences are also present at the level of emotion goals has not been evaluated. We argue BPD individuals may differ in their emotion goals compared to healthy controls for different reasons. First, previous research has found that individuals with BPD exhibit more difficulties in emotion regulation (e.g., Linehan, 1993). Given that emotion regulation efforts are highly linked to emotion goals (Tamir, 2016), it is possible therefore that the emotion regulation difficulties experienced by BPD individuals can also be reflected at the emotion goals level. Second, one's own emotional experience is highly linked to emotional goals (Ford & Tamir, 2014). Given that individuals with

BPD are characterized by heightened experience of negative emotions (Chu et al., 2016) and abrupt anger shifts (Trull et al., 2008) this is then likely to be reflected in their emotion goals. Finally, lower subjective well-being has been consistently linked with lack of context sensitivity in emotion goals (Ford et al., 2014; Tamir et al., 2019). As individuals with BPD experience lower levels of subjective well-being (e.g., Sinclair & Feigenbaum, 2012), it is likely this will also be translated in their emotion goals.

In order to evaluate whether individuals with BPD differ in their emotion goals compared to healthy controls and whether this difference is linked to more difficulties in emotion regulation we conducted two studies. Namely, in Study 1, we tested whether certain general and contextualised emotion goals were linked with borderline traits and difficulties in emotion regulation. In detail, based on previous research (e.g., Tamir, 2016), we evaluated if goal-impairing emotion goals (i.e., higher preference for anger in collaboration and happiness in confrontation) were linked to higher scores in borderline traits and more difficulties in emotion regulation. To address this, we tested the relationships relying on correlational and regression analyses. In Study 2, we compared people with borderline personality disorder and matched controls in their emotion goals, through a repeated measures ANCOVA. Finally, we explored whether the difference in emotion goals was linked to more difficulties in emotion regulation through a regression analysis.

Study 1

This study was designed to evaluate the relationship between borderline traits and general and contextualized emotion goals. Given that, general preference for happiness and lower preference for anger have been linked to higher well-being (Tamir & Ford, 2012), we hypothesized that these emotion goals would be linked to lower

borderline personality traits and less difficulties in emotion regulation. Concerning contextualized emotion goals, as previous research found that higher preference for happiness for confrontation and anger for collaboration were linked to lower well-being (e.g., Ford & Tamir, 2012), we expected such preferences to be linked to higher borderline traits and more difficulties in emotion regulation. Conversely, we hypothesized that higher preference for happiness for collaboration and anger for confrontation may be linked to lower borderline personality traits and less difficulties in emotion regulation.

Method

Participants

Three-hundred and fifty-eight participants¹ (42% female, 58% male) with an age range from 18 to 69 years ($M = 34.87$, $SD = 11.70$) were recruited from Amazon Mechanical Turk (<https://requester.mturk.com/>) and received a token payment of US\$0.30. The reliability of the Amazon Mechanical Turk participant sample has been validated by comparisons with other samples and recruitment methods (Mason & Suri, 2012; Paolacci & Chandler, 2014), even in clinical research (Shapiro, Chandler, & Mueller, 2013). Concerning their education level, 28% had basic or secondary education, 54% had a university degree, and 18% had a postgraduate qualification.

Measures

¹ Sample size was determined with a power analysis using G*power assuming a low correlation between variables based on previous studies ($r = .15$) and $\alpha = .005$. The total sample needed was 273. However, given the possibility of response biases and outliers (i.e., random responses, acquiescence) we decided to recruit some additional participants.

Personality Assessment Inventory-Borderline Features Scale (PAI-BOR; Morey, 1991). This 24-item scale evaluates severe personality pathology characteristics clinically associated with BPD on 4-point Likert scale, ranging from 0 = false to 3 = very true, across four different subscales: affective instability (i.e., mood shifts; e.g., “my mood is steady”; $\alpha = .78$), identity problems (i.e., changing attitudes towards self and feelings of emptiness; e.g. “I feel empty”; $\alpha = .75$), negative relationships (i.e., to what extent they experience social relationships as something negative; e.g., “my relationships have been stormy”; $\alpha = .80$), self-harm (i.e., acting impulsively and inflicting harm to oneself; e.g. “I’m a reckless person”; $\alpha = .72$). In this study, we calculated an overall index of borderline traits ($\alpha = .91$). In previous research, higher scores on the questionnaires have been found to correlate strongly with interview-based assessment of BPD (Kurtz & Morey, 2001). The scale has been used with clinical and non-clinical samples to evaluate the possible risk of having borderline traits (Trull, 2001).

Difficulties in Emotion Regulation Scale (Gratz & Roemer, 2004). This 36-item questionnaire evaluates whether people experience difficulties regulating their emotions on a 5-point Likert scale ranging from 1 = almost never to 5 = almost always. Thus, higher scores indicate higher dysregulation. The items are grouped in six different scales: *non-acceptance* (i.e., non-acceptance of emotion responses; e.g. “When I’m upset, I become angry with myself for feeling that way”; $\alpha = .94$); *awareness* (i.e., lack of emotional awareness; e.g. “I pay attention to how I feel”; $\alpha = .84$); *clarity* (i.e., lack of emotional clarity; e.g. “I have difficulty making sense of my feelings; $\alpha = .85$); *goals* (i.e., difficulties engaging in goal-directed behaviour when emotionally aroused; e.g., “When I’m upset I have difficulty focusing on other things”; $\alpha = .78$); *impulse* (i.e.,

impulse-control difficulties; e.g. “When I’m upset, I become out of control”; $\alpha = .85$); *strategies* (i.e., limited access to emotion regulation strategies; e.g., “When I’m upset, I know that I can find a way to eventually feel better”; $\alpha = .91$). In the current research, we computed an overall emotion dysregulation index by averaging the score across the different subscales ($\alpha = .95$).

General Emotion Goals (Tamir & Ford, 2012). Participants indicated on a 5-point Likert scale, ranging from 1 = not at all to 5 = extremely, to what extent they wanted to experience happiness and anger in four items. General happiness preference was calculated by averaging the responses to the terms *happy* and *cheerful* ($\alpha = .76$) and general anger preference by averaging the terms *angry* and *irritated* ($\alpha = .82$). The terms were presented in a random order.

Contextualised Emotion Goals (Tamir & Ford, 2012). Participants rated on a 5-point Likert scale, ranging from 1 = not at all to 5 = extremely, to what extent they wanted to feel happy, cheerful, angry, and irritated (in randomized order) if they were *collaborating with another person*, and *confronting someone who had cheated on them*. Contextualized emotion goals were calculated by averaging participants’ emotion responses for each goal scenario. Thus, we obtained participants’ preference for happiness for collaboration ($\alpha = .81$) and confrontation ($\alpha = .91$), and preference for anger for collaboration ($\alpha = .88$) and confrontation ($\alpha = .79$).

Procedure

A survey was set up on Online Survey where participants were asked to provide demographic information (age, sex, education) and complete the different questionnaires outlined above. The study was advertised on Mturk and participants had

to read an information page before consenting to take part. On completion of the survey participants were debriefed and asked to enter the Mturk worker number to check if they had answered correctly before being paid.

Results and Discussion

General and Contextualised Emotion Goals

Concerning general emotion goals, participants indicated a higher preference for happiness ($M = 4.01$, $SD = .86$) as compared to anger ($M = 2.11$, $SD = 1.08$), $t(357) = 23.25$, $p < .0001$. The obtained findings replicate previous research, which has shown that people have a general preference for positive over negative emotions (Ford & Tamir, 2012).

Regarding contextualized emotion goals, a repeated measures (rm) ANOVA with Goal (collaboration, confrontation) and Emotion (happiness, anger) as within subject-factors showed a main effect of Goal ($F(1, 357) = 51.39$, $p < .001$, $\eta^2_p = .13$) and Emotion ($F(1, 357) = 226.34$, $p < .001$, $\eta^2_p = .38$), and a significant interaction of Goal \times Emotion ($F(1, 357) = 341.13$, $p < .001$, $\eta^2_p = .49$). Pairwise comparisons showed that for collaboration, people indicated a higher preference for happiness as compared to anger ($d = 2.27$, $S.E. = .09$, $p < .001$); whereas for confrontation, people indicated a higher preference for anger as compared to happiness ($d = .43$, $S.E. = .10$, $p < .001$).

Link between General and Contextualised Emotion Goals, Borderline Traits and Difficulties in Emotion Regulation

The descriptive statistics as well as the correlation between the different variables in the study can be found in Table 1. Results showed, as expected, that borderline traits were very strongly linked to more difficulties in emotion regulation.

Importantly, higher general preference for happiness and higher preference for happiness for collaboration were negatively related to difficulties in emotion regulation and borderline traits. Furthermore, general preference for anger, higher preference for anger for collaboration, happiness for confrontation, and anger for confrontation were positively related to more difficulties in emotion regulation and borderline traits. Most of these results supported previous research where general preferences for happiness and happiness for collaboration were linked to higher well-being. In the same vein, higher general preference for anger, and anger for collaboration, and happiness for confrontation were negatively linked to well-being (Tamir & Ford, 2012). Albeit a weak relationship, higher preference for anger for confrontation was linked to more difficulties in emotion dysregulation and borderline traits. Although this may seem surprising considering that anger has been depicted in previous research as the right emotion to feel in confrontation contexts (Ford & Tamir, 2012; Netzer, Van Kleef & Tamir, 2015), clinical research has found that the experience of anger (Koenigberg et al., 2002) and more abrupt anger shifts (Trull et al., 2008) were linked to more BPD traits, which may explain the obtained results.

Prediction of Borderline Traits and Difficulties in Emotion Regulation

Given the high correlation between different variables in the study and to further explore the link between the general and contextualised emotion goals with borderline traits and difficulties in emotion regulation, we conducted different regression analyses. In detail, considering the high correlation between general and contextualized emotion goals and to avoid multicollinearity, we ran a set of three different multiple multivariate regressions entering difficulties in emotion regulation and borderline personality traits as outcome variables and the different emotion goals and sex as predictors. We

controlled for sex as previous research found sex differences linked to difficulties in emotion regulation (e.g., McRae, Oschner, Mauss, Gabrieli, & Gross, 2008).

Results of the first regression analysis showed that general preference for anger was a significant positive predictor for both difficulties in emotion regulation and borderline personality traits. Results of the second regression analysis showed the same pattern with a higher preference for anger for collaboration being a positive predictor of both difficulties in emotion regulation and borderline personality traits. Finally, the third analysis showed for both difficulties in emotion regulation and borderline personality traits that higher preference for anger and a higher preference for happiness for confrontation were positive predictors (Table 2)². Overall, the obtained results suggest that a higher preference for anger (irrespective of whether it is in general or across different contexts) is positively linked with difficulties in emotion regulation and borderline personality traits. This finding is in line with the literature that has linked BPD with a more intense experience of anger (Koenisberg et al., 2002) and more difficulties in regulating anger (Trull et al., 2008). Furthermore, for confrontation, the results also showed that a higher preference for happiness was also linked to difficulties in emotion regulation and borderline personality traits. Happiness has been described in previous emotion goals research as an emotion that may not fit that specific context (Tamir & Ford, 2012) and the fact that it is a positive predictor for both outcome

² Given the close link between borderline traits and difficulties in emotion regulation, we also tested whether the results were identical when running multiple regressions and considering borderline traits as predictors of difficulties in emotion regulation and the reverse pattern. Results for general emotion goals showed that even when controlling for both, a higher preference for anger was still linked to difficulties in emotion regulation ($\beta = .15, p < .001$) and borderline traits ($\beta = .09, p = .01$). For collaboration, a higher preference for anger was also linked to more difficulties in emotion regulation ($\beta = .14, p < .001$) and borderline traits ($\beta = .15, p < .001$). For confrontation, results also showed that higher preference for happiness and anger were linked to difficulties in emotion regulation ($\beta = .13, p < .001$; $\beta = .07, p = .03$, respectively) and borderline traits ($\beta = .14, p < .001$; $\beta = .09, p = .01$, respectively).

variables may provide some support for the instrumental approach to emotion regulation, which suggests that lack of context sensitivity might be linked to lower well-being (Tamir, 2016).

Study 2

Although findings in Study 1 highlighted the importance of emotion goals to be context sensitive, there were some limitations. First, participants did not constitute a clinical sample. Second, we did not control for participants' current mood, which may explain potential emotion preferences. Hence, this study will evaluate if BPD individuals differ from healthy controls in their emotion goals, through a repeated measures ANOVA. Furthermore, we will explore if the differences in emotion goals observed between groups can predict difficulties in emotion regulation through regression analyses. Given that people with BPD have been characterized as exhibiting difficulties in emotion regulation (Gratz et al., 2006; Mennin et al., 2007) and that they show a different emotional responding (i.e., higher intensity of negative emotions and higher variability in the experience of positive emotions (Russell et al., 2007; as well as more intense anger and more abrupt anger shifts, Trull et al., 2008), we hypothesized that they may differ from healthy matched controls in their emotion goals and this might be linked to more difficulties in emotion regulation.

Method

Participants

Thirty-five participants with BPD and 35 controls³ completed the study in exchange for £10. Three additional participants with BPD were excluded from the study as they did not have a formal diagnosis and five additional controls, as they scored above the threshold for some of the disorders in the SCID-I and SCID-II. Participants with BPD did not differ from the control group in age ($t(68) = .07, p = .95$), sex ($\chi^2(1) = 0.06, p = .82$, Cramer's $V = .02$), or education level ($\chi^2(2) = 0.09, p = .96$, Cramer's $V = .04$; Table 3). All participants with BPD had a diagnosis (ICD10; F60.3) confirmed by a referring psychotherapist or psychiatrist, and were receiving therapy in their respective mental health support associations.

Measures

All measures were identical to Study 1, except that participants did not complete the PAI-BOR in this study but answered the following measures:

Mental health condition diagnoses. In both groups, Axis I and Axis II disorders were assessed using the Structured Clinical Interview for DSM-IV (SCID-I and SCID-II: First, Spitzer, Williams, & Gibbon, 1996). These were administered by two trained postgraduate students ($Ks > .74$). To see current diagnoses and comorbidities please see Table 3.

Positive and negative affect schedule (PANAS; Watson, Clark & Tellegen, 1988). This 20-item self-report questionnaire measures current positive (e.g., enthusiastic, interested; $\alpha = .91$) and negative affect (e.g., upset, irritable; $\alpha = .85$) on a 5-point Likert scale ranging from 1 = not at all to 5 = extremely.

³ Sample size of 70 participants was determined through a power analysis in G*power, assuming an $f = .20$ ($\eta^2_p = .005$), power = .80, $r = .10$, and $\alpha = .005$.

Procedure

The study was advertised to different local associations providing support to individuals diagnosed with BPD. Those interested in participating contacted the investigators. Once we finished the data collection with participants with BPD, we matched healthy controls based on age, sex and education by advertising locally. All participants signed a consent form and were fully debriefed upon completion of the questionnaires. The clinical sample completed the study in their local association, whereas the control sample did so at the authors' institution.

Results and Discussion

Evaluation of Possible Differences in Prior Affect

To evaluate whether the groups may differ in their levels of prior affect we ran a 2x2 rm ANOVA with Prior Affect as within-subject factor (positive, negative) and Group as between-subject (BPD, control). Results showed a significant Prior Affect \times Group interaction ($F(1, 68) = 137.81, p < .001, \eta^2_p = .67$). Pairwise comparisons showed that control participants reported higher levels of positive ($d = 1.13, SE = .17, p < .001$) and lower levels of negative affect ($d = -1.55, SE = .18, p < .001$) compared to BPD individuals. The obtained results are in line with previous research, which suggest that individuals with BPD tend to experience higher levels of negative affect (Bottesi, Tesini, Cerea, & Ghisi, 2018). The fact that they also reported lower levels of positive affect can be explained by other findings, which suggest that BPD individuals tend to experience over-time mood instability (Carpenter & Trull, 2012). The main effects of Prior Affect ($F(1, 68) = 1.67, p = .19, \eta^2_p = .02$) and Group ($F(1, 68) = 2.47, p = .12, \eta^2_p = .04$) were not significant.

General and Contextualised Emotion Goals

A rm ANCOVA with General Emotion Goals as within subject factor (happiness $\alpha = .88$, anger $\alpha = .92$) and Group (BPD, control) as between-subject factor, and Prior Affect (positive, negative) as covariates showed a main effect of General Emotion Goals ($F(1, 68) = 34.74, p = .001, \eta^2_p = .35$). Pairwise comparisons showed that both control and BPD individuals reported a greater general preference for happiness as compared to anger ($d = 2.60, SE = .17, p < .001$). The main effect of Group ($F(1, 68) = .09, p = .76, \eta^2_p = .001$) and the interactions General Emotion Goals \times Group ($F(1, 68) = 22.02, p < .001, \eta^2_p = .20$), General Emotion Goals \times Positive affect ($F(1, 68) = 1.54, p = .22, \eta^2_p = .03$), and General Emotion Goals \times Negative affect ($F(1, 68) = 2.62, p = .11, \eta^2_p = .04$) were not significant (Table 3).

Regarding contextualized emotion goals, a rm measures ANCOVA with Context (collaboration, confrontation) and Emotion goals⁴ (happiness, anger) as within-subject factors, Group (BPD, control) as between-subject factor, and Prior affect⁵ (positive, negative) as covariates showed significant Emotion \times Group ($F(1, 68) = 7.47, p = .008, \eta^2_p = .10$) and Emotion \times Context ($F(1, 68) = 30.28, p = .001, \eta^2_p = .32$) interactions. For collaboration, pairwise comparisons showed that individuals with BPD indicated a lower preference for happiness for collaboration as compared to controls ($d = -.53, SE = .22, p = .02$). There were no differences between the groups for their preference for anger for collaboration ($d = -.26, SE = .27, p = .35$; Table 3). For confrontation, pairwise comparisons showed that individuals with BPD reported a greater preference

⁴ Reliabilities for emotion goals for collaboration (happiness $\alpha = .83$, anger $\alpha = .70$) and confrontation (happiness $\alpha = .78$, anger $\alpha = .75$) were in line with Study 1.

for anger than controls ($d = .99$, $SE = .39$, $p = .01$). There were no differences in their preferences for happiness ($d = .29$, $SE = .35$, $p = .39$). The main effect of Group ($F(1, 66) = .56$, $p = .46$, $\eta^2_p = .008$) and the interactions Context \times Emotion \times Group ($F(1, 68) = .58$, $p = .45$, $\eta^2_p = .009$), Context \times Positive affect ($F(1, 68) = 3.24$, $p = .08$, $\eta^2_p = .05$), Context \times Negative affect ($F(1, 68) = 1.83$, $p = .18$, $\eta^2_p = .03$), Emotion \times Positive affect ($F(1, 68) = .38$, $p = .54$, $\eta^2_p = .006$), and Emotion \times Negative affect ($F(1, 68) = .15$, $p = .70$, $\eta^2_p = .002$) were not significant (Table 3).

To rule out that the differences found between groups (BPD, controls) in contextualized emotion goals were driven by participants' general emotion goals, we ran another rm ANCOVA with Context (collaboration, confrontation) and Contextualised Emotion goals (happiness, anger) as within-subject factors, Group (BPD, control) as between-subject factor, and General emotion goals (happiness, anger) as covariates. Results showed significant Contextualised Emotion goals \times Group ($F(1, 68) = 14.16$, $p = .0001$, $\eta^2_p = .18$) and Contextualised Emotion goals \times Context ($F(1, 68) = 13.18$, $p = .001$, $\eta^2_p = .17$) interactions. Pairwise comparisons showed that for collaboration BPD participants indicated a higher preference for anger than controls ($d = -.26$, $SE = .27$, $p = .35$). There were no differences for happiness for collaboration ($d = -.23$, $SE = .11$, $p = .06$). For confrontation, participants with BPD indicated a lower preference for happiness ($d = -.46$, $SE = .21$, $p = .03$) and a higher preference for anger ($d = .57$, $SE = .24$, $p = .02$) compared to controls. Although there were no differences between the groups in their general emotion goals, when controlling for them, the obtained results supported the findings from Study 1 suggesting that a higher preference for anger (irrespective of the context of collaboration and confrontation) may be more evident in participants with BPD. Given that difficulties in regulating anger is one of the

main features of BPD (e.g., Trull et al., 2008), the obtained findings are in line with this literature.

Links between Difficulties in Emotion Regulation and Emotion Goals

An independent samples t-test showed that, as expected, individuals with BPD ($M = 3.93$, $SD = .60$) reported higher difficulties with emotion regulation than controls ($M = 2.22$, $SD = .57$), $t(68) = 12.24$, $p < .001$, $d = 1.71$. Correlation analyses showed that for controls there were no significant correlations between difficulties in emotion regulation and participants' general preference for happiness ($r(35) = .04$, $p = .80$) and anger ($r(35) = .14$, $p = .10$) and their preference for happiness for collaboration ($r(35) = -.13$, $p = .42$), anger for collaboration ($r(35) = .22$, $p = .19$), happiness for confrontation ($r(35) = -.18$, $p = .32$), and anger for confrontation ($r(35) = .28$, $p = .10$). However, for individuals with BPD a general preference for anger ($r(35) = .45$, $p = .006$) and a higher preference for anger for collaboration was linked to more difficulties in emotion regulation ($r(35) = .36$, $p = .03$). These results are in line with the findings obtained in Study 1, which suggested that a preference for anger was linked to more borderline personality traits. Given that BPD has been linked with more abrupt anger shifts and more difficulties in controlling anger (Trull et al., 2008), the obtained findings may add to this past literature suggesting that the difficulties in regulating that emotion may be also affected at the level of emotion goals. Furthermore, the fact that it is a higher preference for anger for collaboration that is linked with more difficulties in emotion regulation also seems to provide some support again to the notion of context sensitivity or preferring emotions that fit the context (Tamir, 2016). This context sensitivity was highlighted in previous clinical research as key for understanding difficulties in emotion regulation (Aldao, Sheppes, & Gross, 2015). The correlations

with higher preference for happiness for collaboration ($r(35) = -.14, p = .44$) and confrontation ($r(35) = -.30, p = .08$) and anger for confrontation ($r(35) = .02, p = .90$) were not significant.

Prediction of Difficulties in Emotion Regulation from Emotion Goals

To explore whether difficulties in emotion regulation could be predicted by participants' emotion goals, we ran a separate regression for each type of emotion goal (i.e., general, collaboration, and confrontation). For each regression analysis, we entered the independent variables of group (-1 BPD, 1 controls) and mean-centered preferences for happiness and anger at Step 1, and the interaction term of group and mean-centered preferences at Step 2 (see Aiken & West, 1991). For general emotion goals, results showed a significant effect of group and mean-centered general emotion preference for anger; that is, more difficulties in emotion regulation were linked to the BPD group and to a higher general preference for anger. For collaboration, emotion goals results showed a main effect of group (linked to BPD) and mean-centered preference for anger; that is, difficulties in emotion regulation were linked to a higher preference for anger for collaboration. Finally, for confrontation, there was only a main effect of group (Table 4), such that difficulties in emotion regulation were linked to BPD. Although we did not find any significant effects for confrontation emotion goals, the obtained results with collaboration suggest once more the importance of exhibiting context sensitive emotion goals and in detail, the potential higher preference for anger as an emotion goal in BPD individuals.

General Discussion

Previous studies demonstrated how one's own emotional experience was highly linked to their emotion goals (Ford & Tamir, 2014). Based on this finding, research started exploring how emotion goals might be different in people with depressive symptoms (Ford et al., 2014), general depression (Millgram et al., 2015), and bipolar disorder (Ford et al., 2015). Following this line of research, we explored if borderline personality traits (Study 1) and BPD diagnosis (Study 2) were linked to specific emotion goals, which could explain difficulties in emotion regulation.

Findings from Study 1 showed that difficulties in emotion regulation and borderline personality traits were positively predicted by a general and contextualised (both for collaboration and confrontation) preference for anger. Although previous research identified anger as the right emotion to feel in a confrontation context (Ford & Tamir, 2012; Tamir & Ford, 2012) the obtained results highlight that a preference for anger may not be as adaptive as found in previous research. Although this study was not conducted with a clinical sample, the significant association between anger goals and borderline personality traits is in line with research on anger regulation in BPD individuals. In detail, this line of research has found that individuals with BPD may experience a higher lability for anger (Koenisberg et al., 2002), more abrupt anger shifts (Trull et al., 2008) and more anger bias when exposed to ambiguous vignettes (Lobbestael & McNally, 2016), which may explain the obtained link. Furthermore, the obtained results also showed that a higher preference for happiness for confrontation was linked to more difficulties in emotion regulation and borderline personality traits. The obtained finding can be explained as happiness has been identified in emotion goals research as an emotion that may impair confrontation (Ford & Tamir, 2012) and is therefore maladaptive for that context (Tamir & Ford, 2012). This result may provide

some support for the instrumental approach to emotion regulation, which highlights the importance of exhibiting emotion goals that fit the context (Tamir, 2016). In our findings, these non-context sensitive goals would be translated into higher preference for anger for collaboration and happiness for confrontation, which in fact have been linked to more difficulties in emotion regulation and borderline personality traits. Hence, these findings are in line with previous research, which linked lack of context sensitivity in emotion goals to reduced well-being (Tamir & Ford, 2012) and lower emotional intelligence (Ford & Tamir, 2012).

In Study 2, we found that individuals with BPD indicated a higher preference for anger for confrontation and lower preference for happiness for collaboration than controls when controlling for prior affect. Interestingly, when controlling for general emotion goals, the results showed that BPD individuals indicated a higher preference for anger for both collaboration and confrontation, and a lower preference for happiness for confrontation. Overall, these findings support those obtained in Study 1 as higher preference for anger was more evident in participants with BPD than controls. Furthermore, participants with BPD as compared to controls exhibited a lack of context sensitivity (higher preference for anger in collaboration and happiness for confrontation). These results were further supported in the correlational and regression analyses in which a higher preference for anger in general and in collaboration were linked to more difficulties in emotion regulation. The obtained findings in Study 2 highlight once more the importance of holding emotion goals appropriate to the context, as indicated in the collaboration context results. Hence, the results suggest that difficulties in emotion regulation might not only be due to lack of context sensitivity in the selection of regulation strategies (Aldao et al., 2015), but also the emotions people

wish to feel for goal attainment. Overall, the findings of Study 2 also highlight once more that a higher preference for anger may be more evident in individuals with BPD and can partly explain the difficulties observed in emotion regulation in that group. Difficulties with anger regulation in individual in BPD is well documented in the literature (Koenisberg et al., 2002; Trull et al., 2008), however it is important to understand whether such difficulty comes from selecting a maladaptive regulation strategy or holding a specific emotion goal. Although in in this study we did not evaluate the use of adaptive and maladaptive regulation strategies, the obtained findings suggest that difficulties in emotion regulation can be linked to specific emotion goals.

Although instrumental approaches to emotion regulation emphasize the adaptive value of anger in confrontation contexts through daily diaries (Kim et al., 2015) and experimental studies (Tamir & Ford, 2012) the obtained results show that a preference for anger may not be as adaptive as suggested in these previous studies. It is important to acknowledge that this adaptive value was only found in normative samples. However, in Study 1, we found that a higher preference for anger was linked to difficulties in emotion regulation and borderline personality traits, therefore, challenging previous findings on the adaptive value of anger for confrontation in normative groups. Hence, future research may consider investigating at which point anger becomes maladaptive in a context of confrontation.

Limitations and Future Research

Although this research has shed some light on the link between difficulties in emotion regulation and emotion goals in BPD, it is not without limitations. First, the

two studies have only considered the contexts of collaboration and confrontation since they have been extensively investigated with healthy adults and could allow us to test whether the patterns obtained in BPD individuals were similar to the ones identified in previous literature (Ford & Tamir, 2012; Kim et al., 2015; Tamir & Ford, 2012); however, other contexts more relevant for individuals with BPD might provide valuable information about their difficulties in emotion regulation. For instance, many individuals with BPD engage in self-injurious behaviour (Klonsky, 2007); hence, studying what their emotion goals are in those situations may help to know what their emotional experience is to target this more effectively in therapy. Furthermore, given that the experience of anger in BPD individuals has been linked to lower interpersonal functioning (Ellison et al, 2015), future research may consider interpersonal contexts to evaluate whether a higher preference for anger also emerges in those contexts, as found in our studies. Second, our studies relied on self-report measures with a single time-point assessment. Given the importance of capturing context in the emotion regulation process (Aldao et al., 2015), future studies should consider conducting a longitudinal study with multi-point assessments that may help to capture emotion goals across situations. Third, Study 1 data was obtained in Mturk, which can have some limitations such as non-naivety of the sample. Despite this, research in personality disorders has suggested its potential to advance research on the topic (Miller, Crowe, Weiss, Lynam, & Maples-Keller, 2017). Fourth, it is possible that people's emotion goals may be driven by a valence-matching heuristic (positive for happiness-collaboration and negative for anger-confrontation). Although this might have biased our results, future research should consider evaluating more contexts and emotions to see whether the same effects are obtained. Finally, our studies focused on emotion goals but given that individuals with BPD experience negative emotions with higher intensity (Chu et al.,

2016), future research should consider discriminating between *what emotions* they aim to feel and the *intensity* they wish to experience for each emotion. Furthermore, it should also consider exploring further whether people with BPD can discriminate between *what they aim to feel* and *what is appropriate to feel* in those contexts.

Possible Implications and Applications

Current conceptualizations include intense anger and difficulty to control it as one of the symptoms of BPD. Our results showed that BPD traits were linked to a higher preference for anger (Study 1) and that a higher preference for anger was more evident in participants with BPD (Study 2). Although we cannot tell what comes first (anger preference or difficulties to regulate anger), the obtained findings and future studies on emotion goals can shed light on the emotion regulation difficulties experienced by individuals with BPD. If the current findings are confirmed this could possibly inform current interventions to help people at risk to manipulate their emotion goals to be more context sensitive, this in turn may enhance well-being and serve as a therapeutic tool in practice. For example, cognitive behaviour therapy (CBT) could be applied to help understand and challenge dysfunctional thought patterns in people with BPD via the use of a dysfunctional thought record to help reflect and evaluate emotion goals in different contexts. Alternatively, cognitive analytical therapy (CAT) could help people with BPD establish motivation, thoughts, emotions and maladaptive behavioural patterns that maintain emotion dysregulation and consequently impair well-being in relation to emotion goals. However, before such interventions could be applied more research is needed to confirm if anger emotion goals are more prevalent in individuals

with BPD and to study its impact in interpersonal functioning and their emotion regulation efforts.

Conclusion

Across two studies, we have found that borderline traits (Study 1) and borderline diagnosis (Study 2) are linked with a general and a contextualised preference for anger. Importantly, this preference was also linked to difficulties with emotion regulation across the two studies. Hence, the obtained results contribute to research looking at difficulties in emotion regulation in borderline personality disorder highlighting the role that emotion goals can have in such difficulties. Although the current research constitutes preliminary evidence, it opens the door to an exciting research programme that may help to advance our knowledge of difficulties in emotion regulation in borderline personality disorder.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA, US: Sage Publications.
- Aldao, A., Nolen-Hoeksema, S. & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, *30*, 217-237. <http://dx.doi:10.1016/j.cpr.2009.11.004>.
- American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.
- Bottesi, G., Tesini, V., Cerea, S. & Ghisi, M. (2018). Are difficulties in emotion regulation and intolerance of uncertainty related to negative affect in borderline personality disorder? *Clinical Psychologist*, *22*, 137-147. <http://dx.doi.org/10.1111/cp.12163>.
- Carpenter, R. W., & Trull, T. J. (2013). Components of emotion dysregulation in borderline personality disorder: A review. *Current Psychiatry Reports*, *15*, 1-8. <http://dx.doi:10.1007/s11920-012-0335-2>.
- Chu, C., Victor, S.E., & Klonsky, E.D. (2016). Characterizing positive and negative emotional experiences in young adults with borderline personality disorder symptoms. *Journal of Clinical Psychology*, *72*, 956-965. <http://dx.doi:10.1002/jclp.22299>.
- Ellison, W., Rosenstein, L., Chelminski, I., Dalrymple, K., & Zimmerman, M. (2016). The Clinical Significance of Single Features of Borderline Personality Disorder: Anger, Affective Instability, Impulsivity, and Chronic Emptiness in

Psychiatric Outpatients. *Journal of Personality Disorders*, 30(2), 261-270. doi: 10.1521/pedi_2015_29_193.

First, M. B., Spitzer, R., Gibbon, M., & Williams, J. (1996). *Structured clinical interview for axis I disorders-patient edition*. New York: Biometrics Research, New York State Psychiatric Institute.

Ford, B. Q., Mauss, I. B., & Gruber, J. (2015). Valuing happiness is associated with bipolar disorder. *Emotion*, 15, 211-222. [http://dx.doi: 10.1037/emo0000048](http://dx.doi.org/10.1037/emo0000048).

Ford, B. Q., Shallcross, A. J., Mauss, I. B., Floerke, V. A., & Gruber, J. (2014). Desperately seeking happiness: Valuing happiness is associated with symptoms and diagnosis of depression. *Journal of Social and Clinical Psychology*, 33, 890-905. [http://dx.doi: 10.1521/jscp.2014.33.10.890](http://dx.doi.org/10.1521/jscp.2014.33.10.890).

Ford, B. Q., & Tamir, M. (2012). When getting angry is smart: Emotional preferences and emotional intelligence. *Emotion*, 12, 685-689. [http://dx.doi: 10.1037/a0027149](http://dx.doi.org/10.1037/a0027149).

Ford, B. Q., & Tamir, M. (2014). Preferring familiar emotions: As you want (and like) it? *Cognition and Emotion*, 28, 311- 324. [http://dx.doi: 10.1080/02699931.2013.823381](http://dx.doi.org/10.1080/02699931.2013.823381).

Forgas, J. (1998). On feeling good and getting your way: Mood effects on negotiator cognition and bargaining strategies. *Journal of Personality and Social Psychology*, 74(3), 565-577. doi: 10.1037//0022-3514.74.3.565.

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the

difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26, 1-54.

<http://dx.doi.org/10.1023/B:JOBA.0000007455.08539.94>.

Gratz, K. L., Rosenthal, M. Z., Tull, M. T., Lejuez, C. W., & Gunderson, J. G. (2006).

An experimental investigation of emotion dysregulation in borderline personality disorder. *Journal of Abnormal Psychology*, 115, 850-

855. <http://dx.doi:10.1037/0021-843X.115.4.850>.

Gratz, K. L., Tull, M. T., & Gunderson, J. G. (2008). Preliminary data on the relationship

between anxiety sensitivity and borderline personality disorder: The role of experiential avoidance. *Journal of Psychiatric Research*, 42, 550–559.

<http://dx.doi.org/10.1016/j.jpsychires.2007.05.011>.

Gunderson, J. G. (2009). Borderline personality disorder: ontogeny of a

diagnosis. *American Journal of Psychiatry*, 166(5), 530-539. [http://dx.doi:](http://dx.doi:10.1176/appi.ajp.2009.08121825)

[10.1176/appi.ajp.2009.08121825](http://dx.doi:10.1176/appi.ajp.2009.08121825).

Jacob, G.A., Hellstern, K., Ower, N., Pillmann, M., Scheel, C.N., Rüsçh, N., & Lieb K.

(2009). Emotional reactions to standardized stimuli in women with borderline personality disorder: stronger negative affect, but no differences in reactivity.

Journal of Nervous Mental Disorders 197(11), 808-815. [http://dx.doi:](http://dx.doi:10.1097/NMD.0b013e3181bea44d)

[10.1097/NMD.0b013e3181bea44d](http://dx.doi:10.1097/NMD.0b013e3181bea44d).

Kim, M. Y., Ford, B. Q., Mauss, I., & Tamir, M. (2015). Knowing when to seek anger:

Psychological health and context-sensitive emotional preferences. *Cognition &*

Emotion, 29, 1126-1136. [http://dx.doi: 10.1080/02699931.2014.970519](http://dx.doi:10.1080/02699931.2014.970519).

Klonsky, D.E. (2007). The functions of deliberate self-injury: a review of the evidence.

Clinical Psychology Review, 27, 226-239. doi: 10.1016/j.cpr.2006.08.002

Koenigsberg, H., Harvey, P., Mitropoulou, V., Schmeidler, J., New, A., & Goodman,

M. et al. (2002). Characterizing Affective Instability in Borderline Personality Disorder. *American Journal of Psychiatry*, 159(5), 784-788. doi:

10.1176/appi.ajp.159.5.784.

Kuo, J. R., & Linehan, M. M. (2009). Disentangling emotion processes in borderline personality disorder: Physiological and self-reported assessment of biological vulnerability, baseline intensity, and reactivity to emotionally evocative stimuli. *Journal of Abnormal Psychology*, 118, 531-544.

<http://dx.doi.org/10.1037/a0016392>

Kurtz, J. & Morey, L. (2001). Use of structured self-report assessment to diagnose borderline personality disorder during major depressive episodes. *Assessment*, 8, 291-300. <http://dx.doi.org/10.1177/107319110100800305>.

Leible, T., & Snell, W. (2004). Borderline personality disorder and multiple aspects of emotional intelligence. *Personality and Individual Differences*, 37(2), 393-404.

doi: 10.1016/j.paid.2003.09.011.

Linehan, M. M. (1993). *Diagnosis and treatment of mental disorders. Cognitive-behavioral treatment of borderline personality disorder*. New York, NY, US: Guilford Press.

Lobbestael, J., & McNally, R. (2016). An Empirical Test of Rejection- and Anger-Related Interpretation Bias in Borderline Personality Disorder. *Journal of Personality Disorders*, 30(3), 307-319. doi: 10.1521/pedi_2015_29_194.

- Malhi, G., Tanius, M., Fritz, K., Coulston, C., Bargh, D., & Phan, K. et al. (2013). Differential engagement of the fronto-limbic network during emotion processing distinguishes bipolar and borderline personality disorder. *Molecular Psychiatry*, *18*(12), 1247-1248. doi: 10.1038/mp.2013.22.
- Mason, W. & Suri, S. (2011). Conducting behavioral research on Amazon's Mechanical Turk. *Behavior Research Methods*, *44*, 1-23. doi:10.3758/s13428-011-0124-6.
- Mauss, I. B., & Tamir, M. (2014). Emotion goals: How their content, structure, and operation shape emotion regulation. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 361-375). New York, NY, US: Guilford Press.
- McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J. D., & Gross, J. J. (2008). Gender differences in emotion regulation: An fMRI study of cognitive reappraisal. *Group Processes & Intergroup Relations*, *11*, 143–162. doi:10.1177/1368430207088035
- Mennin, D., Heimberg, R., Turk, C., & Fresco, D. (2005). Preliminary evidence for an emotion dysregulation model of generalized anxiety disorder. *Behaviour Research & Therapy*, *43*(10), 1281-1310. doi: 10.1016/j.brat.2004.08.008.
- Mennin, D. S., Holaway, R. M., Fresco, D. M., Moore, M. T., & Heimberg, R. G. (2007). Delineating components of emotion and its dysregulation in anxiety and mood psychopathology. *Behavior Therapy*, *38*(3), 284-302. [http://dx.doi: 10.1016/j.beth.2006.09.001](http://dx.doi.org/10.1016/j.beth.2006.09.001).
- Miller, J., Crowe, M., Weiss, B., Maples-Keller, J., & Lynam, D. (2017). Using online, crowdsourcing platforms for data collection in personality disorder research: The

example of Amazon's Mechanical Turk. *Personality Disorders: Theory, Research, and Treatment*, 8(1), 26-34. doi: 10.1037/per0000191.

Millgram, Y., Joormann, J., Huppert, J. D., & Tamir, M. (2015). Sad as a matter of choice? Emotion-regulation goals in depression. *Psychological Science*, 26(8), 1216-1228. <http://dx.doi.org/10.1177/0956797615583295>.

Millgram, Y., Joormann, J., Huppert, J., Lampert, A. and Tamir, M. (2018). Motivations to Experience Happiness or Sadness in Depression: Temporal Stability and Implications for Coping with Stress. *Clinical Psychological Science*, 7(1), 143-161. doi: 10.1177/2167702618797937.

Morey, L. C. (1991). *The Personality Assessment Inventory professional manual*. Odessa, FL: Psychological Assessment Resources.

Netzer, L., Van Kleef, G. & Tamir, M. (2015). Interpersonal instrumental emotion regulation. *Journal of Experimental Social Psychology*, 58, 124-135. <http://dx.doi.org/10.1016/j.jesp.2015.01.006>.

Paolacci, G. & Chandler, J. (2014). Inside the Turk. *Current Directions in Psychological Science*, 23, 184-188. <http://dx.doi.org/10.1177/0963721414531598>.

Russell, J. J., Moskowitz, D. S., Zuroff, D. C., Sookman, D., & Paris, J. (2007). Stability and variability of affective experience and interpersonal behavior in borderline personality disorder. *Journal of Abnormal Psychology*, 116(3), 578-588. <http://dx.doi.org/10.1037/0021-843X.116.3.578>. Sauer, C., Sheppes, G., Lackner, H., Arens, E., Tarrasch, R. and Barnow, S. (2016). Emotion regulation choice in female patients with borderline personality disorder:

Findings from self-reports and experimental measures. *Psychiatry Research*, 242, 375-384. doi: 10.1016/j.psychres.2016.04.113.

Shapiro, D., Chandler, J. & Mueller, P. (2013). Using Mechanical Turk to Study Clinical Populations. *Clinical Psychological Science*, 1, 213-220. <http://dx.doi.org/10.1177/2167702612469015>.

Sinclair, H., & Feigenbaum, J. (2012). Trait Emotional Intelligence and Borderline Personality Disorder. *Personality and Individual Differences*, 52(6), 674-679. doi: 10.1016/j.paid.2011.12.022.

Tamir, M. (2009). Differential Preferences for Happiness: Extraversion and Trait-Consistent Emotion Regulation. *Journal of Personality*, 77(2), 447-470. doi: 10.1111/j.1467-6494.2008.00554.x.

Tamir, M. (2016). Why do people regulate their emotions? A taxonomy of motives in emotion regulation. *Personality and Social Psychology Review*, 20(3), 199-222. doi: 10.1177/1088868315586325.

Tamir, M. & Ford, B. (2012). When feeling bad is expected to be good: Emotion regulation and outcome expectancies in social conflicts. *Emotion*, 12, 807-816. doi: 10.1037/a0024443.

Trull, T.J. (2001) Structural relations between borderline personality disorder features and putative etiological correlates. *Journal of Abnormal Psychology*, 110(3), 471-481. <http://dx.doi.org/10.1037/0021-843X.110.3.471>.

Trull, T., Solhan, M., Tragesser, S., Jahng, S., Wood, P., Piasecki, T., & Watson, D. (2008). Affective instability: Measuring a core feature of borderline personality

disorder with ecological momentary assessment. *Journal of Abnormal Psychology*, *117*(3), 647-661. doi: 10.1037/a0012532.

van Kleef, G., De Dreu, C., & Manstead, A. (2004). The Interpersonal Effects of Anger and Happiness in Negotiations. *Journal of Personality And Social Psychology*, *86*(1), 57-76. doi: 10.1037/0022-3514.86.1.57

van Zutphen, L., Siep, N., Jacob, G., Goebel, R., & Arntz, A. (2015). Emotional sensitivity, emotion regulation and impulsivity in borderline personality disorder: A critical review of fMRI studies. *Neuroscience & Biobehavioral Reviews*, *51*, 64-76. doi: 0.1016/j.neubiorev.2015.01.001.

van Zutphen, L., Siep, N., Jacob, G., Goebel, R., & Arntz, A. (2015). Emotional sensitivity, emotion regulation and impulsivity in borderline personality disorder: A critical review of fMRI studies. *Neuroscience & Biobehavioral Reviews*, *51*, 64-76. doi: 10.1016/j.neubiorev.2015.01.001.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070.
<http://dx.doi.org/10.1037/0022-3514.54.6.1063>.

World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines*. Geneva: World Health Organization.

Wood, J. V., Heimpel, S. A., Manwell, L. A., & Whittington, E. J. (2009). This mood is familiar and I don't deserve to feel better anyway: mechanisms underlying self-

esteem differences in motivation to repair sad moods. *Journal of Personality and Social Psychology*, 96(2), 363-380. doi: 10.1037/a0012881.

Table 1

Descriptive Statistics Study 1

	M (SD)	2	3	4	5	6	7	8
1 General Preference for Happiness	4.01 (0.86)	-.25**	.65**	-.14*	.06	.08	-.19**	-.13*
2 General Preference for Anger	2.11 (1.08)		-.28**	.82**	.43**	.36**	.54**	.52**
3 Happiness Preference for Collaboration	4.15 (0.88)			-.31**	-.08	-.09	-.20**	-.12*
4 Anger Preference for Confrontation	1.88 (1.16)				.54**	.34**	.58**	.58**
5 Happiness Preference for Confrontation	2.56 (1.36)					-.16**	.50**	.52**
6 Anger Preference for Confrontation	2.99 (1.16)						.12**	.18**
7 Difficulties in Emotion Regulation	2.52 (0.74)							.83**
8 Borderline Personality Traits	2.19 (0.59)							

Note. * $p < .05$; ** $p < .001$.

Table 2

Regression Analyses Study 1

Independent variables	Difficulties in Emotion Regulation			Borderline Symptoms		
General Emotion Goals	β	p	R^2	β	p	R^2
			.24			.20
Happiness	-.001	.79		-.02	.68	
Anger	.47	.0001		.43	.0001	
Sex	-.09	.07		-.06	.22	
Collaboration Emotion Goals	β	p	R^2	β	p	R^2
			.28			.23
Happiness	.03	.59		.06	.28	
Anger	.52	.0001		.49	.0001	

	β	p	R^2	β	p	R^2
Sex	-.06	.22		-.03	.49	
Confrontation Emotion Goals			.25			.22
Happiness	.48	.0001		.45	.0001	
Anger	.19	.001		.20	.0001	
Sex	-.04	.44		-.008	.88	

Table 3

Demographics and Descriptive Statistics for Study 2

	Individuals with BPD	Controls
Age	30.94 (10.78)	30.77 (10.90)
Sex	14% male 86% female	14% male 86% female
Education		
Basic	46%	43%
College	23%	26%
University	31%	31%
Current Axis I diagnoses		
Major depression	15%	0%
Anxiety disorders	4%	0%
Generalized anxiety	6%	0%
PTSD	13%	0%
Current Axis II diagnoses		
Borderline	100%	0%
Dissociative	2%	0%
Bipolar	4%	0%
General Preference for Anger	2.04 (1.09)	1.43 (.65)
General Preference for Happiness	4.11 (.86)	4.56 (.45)
Preference for Happiness for Collaboration	4.36 (.65)	4.74 (.39)
Preference for Anger for Collaboration	1.71 (.82)	1.23 (.48)
Preference for Happiness for Confrontation	1.85 (.71)	2.36 (.92)

Preference for Anger for confrontation	3.67 (0.95)	3.00 (.95)
----------------------------------------	-------------	------------

Table 4

Hierarchical Linear Regression

Independent variables	Difficulties in Emotion Regulation						
	R	R ²	R ² change	B	S.E.	β	<i>t</i>
General Emotion Goals							
Step 1	.85	.73					
Group				-.80	.07	-.77	-11.24**
Happiness				.12	.13	.08	.90
Anger				.27	1.0	.25	2.8*
Step 2	.85	.73	.004				
Group				-.81	.07	-.79	-11.00**
Happiness				.14	.14	.99	1.01
Anger				.25	.10	.22	2.39*
Happiness × Group				.01	.14	.01	.09
Anger × Group				-.08	.10	-.07	-.74
Collaboration Emotion Goals							
Step 1	.85	.72					
Group				-.77	.08	-.75	-10.30**
Happiness				-.11	.13	-.06	-.84
Anger				.26	.10	.17	2.48*
Step 2	.85	.72	.000				
Group				-.77	.08	-.75	-9.87**
Happiness				-.12	.15	-.07	-.80

	Anger				.25	.12	.17	2.10*
	Happiness x Group				-.02	.15	-.01	-.15
	Anger x Group				-.004	.12	-.003	-.04
<hr/>								
Confrontation Emotion								
Goals								
Step 1		.85	.72					
	Group				-.78	.07	-.76	-10.57**
	Happiness				-.12	.09	-1.0	-1.4
	Anger				-.13	.08	.12	1.63
Step 2		.85	.72	.003				
	Group				-.78	.08	-.75	-10.41**
	Happiness				-.14	.09	-.12	-1.52
	Anger				.12	.08	.12	1.6
	Happiness x Group				.08	.09	.06	.86
	Anger x Group				.03	.08	.02	.34
<hr/>								