



# Emotion regulation and borderline personality features: The mediating role of basic psychological need frustration

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## ABSTRACT

Based on Self-Determination Theory, the present study examined the link between emotion regulation (i.e., emotional integration, dysregulation and suppression) and borderline personality features. In addition, this study examined the role of basic psychological need frustration as a mediator in these relations. Participants were 226 higher education students ( $M_{age} = 21.00$ ;  $SD = 1.61$ ; 77.4% female) who filled out questionnaires concerning their (mal)adaptive emotion regulation, frustration of the needs for autonomy, competence, and relatedness, and borderline personality features. Results showed that especially emotional dysregulation and to a lesser extent emotional suppression related to higher levels of borderline personality features, with experiences of need frustration acting as a mediating process underlying these relations. Current findings add to the growing literature showing both emotion regulation and basic psychological needs to be important processes in psychopathology.

## 1. Introduction

Borderline personality disorder is characterized by hypersensitivity to rejection and fear of abandonment, intense emotions, poor self-image and impulsivity (American Psychiatric Association, 2013). A vast amount of research indicates the costs associated with (features of) borderline personality disorder, including impaired psychological health, a lack of psychosocial integration, poor academic and occupational functioning, and above all a high risk for suicidal behavior (e.g., Leichsenring et al., 2011; Zeigler-Hill and Abraham, 2006). Moreover, borderline personality disorder constitutes one of the most expensive mental disorders, as indexed by a loss of productivity, high sick leave and immense clinical and societal resources (Leichsenring et al., 2011; Linehan, 1993).

Given the high costs associated with borderline personality features, investigating the factors underlying and/or maintaining borderline personality features is imperative. Next to biological vulnerabilities (such as impulsivity and heightened emotional sensitivity), impairments in emotion regulation (ER) have been shown to be at the core of the development, maintenance and exacerbation of borderline personality disorder (Linehan, 1993). Next to the conceptual value, emotion regulation is especially valued from a therapeutic perspective due to its

dynamic character with opportunities for growth. Specifically, experiencing difficulties in the regulation of emotions is recognized to be a transdiagnostic factor (see Aldao et al., 2016) that is rather variable across time within the same individual (e.g., Catterson et al., 2017), making it a suitable focus for therapeutic change. A theoretical framework on the role of emotion regulation and how this factor may be linked to personal well-being is, however, often missing in extant research. In this study, we built on Self-Determination Theory (SDT, Ryan and Deci, 2017; Ryan et al., 2015) where the frustration of inherent psychological needs is seen as a crucial mechanism behind symptoms of psychopathology. Although an abundance of studies examined the role of need frustration with regard to a range of psychological difficulties such as depressive symptoms, eating pathology, and anxiety symptoms (e.g., Ryan and Deci, 2017) and as a mediator between ER and psychological difficulties (e.g., Brenning et al., 2020), no study thus far examined it in relation to borderline personality features. The current research, therefore, aimed to examine the mediating role of need frustration in the relation between ER and features of borderline personality disorder.

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### 1.1. The role of emotion regulation in borderline personality features

ER refers to the processes individuals use to influence which emotions they have, when they have them, and how these emotions are experienced and expressed (Gross, 2002). Within SDT, three ER processes are distinguished (Roth et al., 2019; Ryan and Deci, 2017). As an adaptive form, *integrative ER* involves an open and non-judgmental stance towards one's emotions, fostering the exploration of their meaning in terms of one's own needs and (mal)adaptive functioning. By adopting a receptive and curious standpoint towards own emotions, individuals can volitionally determine how to further regulate their emotions. *Suppressive ER*, a maladaptive ER strategy, is characterized by experiencing negative emotions as pressuring or threatening, giving rise to attempts to ignore, minimize, avoid, distance and/or conceal them. In the case of *emotion dysregulation*, individuals feel unable to regulate their emotions, experiencing them as overwhelming and impairing their psychosocial functioning.

ER deficits have been found to relate to a diversity of psychological disorders, including depression, anxiety, eating disorders, and conduct disorders (see Aldao et al., 2016, pointing towards the transdiagnostic role of ER). With respect to borderline features, individuals scoring high on these features tend to react more strongly to emotional experiences, thereby experiencing significant fluctuations in their emotional state, which can induce feelings of helplessness and loss of control towards the experience of emotions (being indicative of emotion dysregulation) (Rosenthal et al., 2008). Due to this strong emotional reactivity, these individuals are also more likely to develop an avoidant attitude towards emotions, as indicated by emotion suppression (Chapman et al., 2009) and experiential avoidance (Chapman et al., 2011). Borderline personality features have also been found to relate to less openness to and clarity in emotional experiencing (Leible and Snell, 2004), hinting towards less integrative ER. These emotional difficulties also constitute a central focus in Acceptance and Commitment Therapy, a promising treatment for borderline personality disorder (Morgan and Aljabari, 2019), where the awareness and acceptance of emotions form crucial components.

### 1.2. The explanatory role of need frustration

As explained above, an increasing number of studies have linked impaired ER to borderline personality features, but less is known about the mechanisms underlying this relation. Herein we propose frustration of the basic psychological needs, the innate and essential requirements for a fulfilling life, as a candidate explanatory process. Within SDT, three basic psychological needs are differentiated, namely the needs for autonomy, competence, and relatedness (Ryan and Deci, 2017). Satisfaction of the need for autonomy is characterized by experiencing a sense of psychological freedom and volition, while frustration of this need is typified by feelings of pressure. Competence need satisfaction refers to feeling effective in daily activities, while competence frustration is defined by feelings of failure. Finally, satisfaction of the need for relatedness encompasses the experience of connectedness with important others, whereas relatedness frustration refers to experiencing exclusion and social isolation. While adaptive ER is conducive to need satisfaction, impairments in ER can engender experiences of need frustration (Brenning et al., 2020). Specifically, integrative ER is characterized by an open and curious attitude towards own emotions, which likely results in individuals being better able to reflect on the informational value of emotions thereby using their emotions as a radar to keep their life oriented towards personally important goals (cf. the need for autonomy). Also, integrative ER enables individuals to more competently deal with emotion-eliciting situations, which contributes to their general level of feeling capable in dealing effectively with daily challenges (cf. the need for competence). Finally, such ER strategy incorporates the volitional expression of emotions towards others, thereby fostering authentic communication and more solid

relationships (cf. the need for relatedness). In contrast, maladaptive ER strategies, such as suppression and dysregulation, may be linked with more experiences of need frustration. That is, while dysregulation is characterized by feeling overpowered by emotions, suppression is typified by the experience of pressure (to decrease emotions), both resulting in the frustration of the need for autonomy. Also, as both dysregulation and suppression hinder individuals to deal effectively with emotional situations, this might increase individuals' competence frustration by making them more vulnerable for failure experiences. Finally, by not expressing emotions (in the case of suppression) or by impulsively and without limits expressing emotions (in the case of dysregulation), individuals run the risk of pushing other people away thereby engendering feelings of relatedness frustration.

Research has indeed shown ER to be associated with need-related experiences, with these experiences in turn relating to individuals' psychological functioning. For instance, Benita et al. (2020) showed that experiences of need satisfaction mediated the positive relation between integrative ER and well-being, while need frustration mediated the relation between emotion suppression and lower levels of well-being. Also, Brenning et al. (2020) showed that high levels of emotion suppression and dysregulation related to higher levels of internalizing and externalizing problems through experienced need frustration, both among non-clinical as well as clinically-referred adolescents. Thus, these studies indicate that the quality of individuals' ER strategies relates to experiencing frustration or satisfaction of the basic psychological needs.

Although the relation between need-related experiences and borderline personality features have not yet been examined directly, experiences of need frustration do seem to be salient in borderline personality disorder, as indicated by (1) a lack of insight into own goals and values, resulting in an unstable sense of self (cf. autonomy frustration) (2) a high level of impulsivity reflecting individuals' incapacity to regulate their behavior and emotions (cf. competence frustration) and (3) the constant fear of real or imagined abandonment, the experience of mood swings and impulsiveness which may all hinder individuals' capacity to form enduring relationships (cf. relatedness frustration). Research has indeed shown need-based experiences and especially need frustration to result in diverse instances of psychopathology reminiscent of borderline personality features, including a fragmented identity formation (Luyckx et al., 2009), internalizing and externalizing problems (Brenning et al., 2020), and low self-control and associated impulsive behaviours such as self-harm (Emery et al., 2016). The current research aimed to examine the intervening role of need frustration in relation to borderline personality features.

### 1.3. The present research

Based on a Self-Determination Theory perspective, we propose that ER difficulties can engender feelings of involuntariness, failure, and social isolation, which in turn increase the likelihood of features associated with borderline personality disorder. To examine these hypothesized relations, a cross-sectional study among young adults was conducted. We hypothesized that whereas emotion dysregulation and suppression would relate positively to borderline personality features, emotion integration would show an opposite pattern (Hypothesis 1). Additionally, we expected that need frustration would intervene in the relation between the three aspects of ER and borderline personality features (Hypothesis 2).

## 2. Method

### 2.1. Participants and procedure

Participants were 226 Dutch higher education students ( $M_{age} = 21.00$ ;  $SD = 1.61$ ; range: 18–26 years) of which 77.4% was female. With respect to participants' educational level, 173 (i.e., 76.5%)

**Table 1**  
Correlations between and descriptives of the study variables.

	Mean	SD	1.	2.	3.	4.	5.	6.	7.
Emotion regulation									
1. Integration	3.46	0.69	–						
2. Suppression	2.47	0.87	–0.39***	–					
3. Dysregulation	2.28	0.65	0.03	0.09	–				
Need-based experiences									
4. Need frustration	1.83	0.44	–0.15*	0.28***	0.49***	–			
Borderline personality features									
5. Identity problems	1.22	0.57	–0.03	0.20**	0.59***	0.60***	–		
6. Affective instability	1.02	0.55	–0.05	0.10	0.56***	0.41***	0.54***	–	
7. Negative relationships	1.07	0.54	–0.05	0.19**	0.43***	0.34***	0.50***	0.52***	–
8. Self-harm	0.69	0.53	–0.11	0.10	0.23***	0.20**	0.24***	0.34***	0.26***

Note.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

and 53 (i.e., 23.5%) students were currently enrolled in university or college, respectively. Of those enrolled in university, 94 individuals participated in this study in exchange for course credits. Through word of mouth, social media and the official (*blinded for review*) university website, two bachelor students invited participants to complete the online survey. Before filling out this survey, participants were informed that the data would be processed in a confidential way, that their participation was voluntary, and that they were entitled to terminate their participation at any moment. All participants completed an informed consent.

## 2.2. Measures

### 2.2.1. Emotion regulation

The regulation of negative emotions was assessed with the Emotion Regulation Inventory (ERI; Roth et al., 2009). The ERI consists of the following three subscales: Integration (six items, e.g., “Negative emotions can sometimes help me understand important things about myself”;  $\alpha = 0.72$ ), suppression (six items, e.g., “When I feel negative emotions, I almost always hide it so others won’t notice it”;  $\alpha = 0.85$ ), and dysregulation (six items, e.g., “It is hard for me to control my negative emotions”;  $\alpha = 0.71$ ). Items were rated on a 5-point Likert scale, ranging from 1 (*Completely disagree*) to 5 (*Completely agree*).

### 2.2.2. Need frustration

Frustration of the needs (4 items each) was assessed with the 12-item need frustration subscale of the Basic Psychological Need Satisfaction and Need Frustration scale (BPNSNF; Chen et al., 2015). Example items are “I feel forced to do many things I wouldn’t choose to do” (autonomy frustration), “I have serious doubts about whether I can do things well” (competence frustration), and “I feel excluded from the group I want to belong to” (relatedness frustration). Items were rated on a 5-point Likert scale, ranging from 1 (*Completely disagree*) to 5 (*Completely agree*). Cronbach’s alpha was 0.78.

### 2.2.3. Borderline personality features

Features of borderline personality disorder were assessed with the Personality Assessment Inventory – Borderline (PAI-BOR; Distel et al., 2009; Morey, 2003). The PAI-BOR consists of the following subscales: Identity problems (six items, e.g., “My attitude about myself changes a lot”;  $\alpha = 0.65$ ), affective instability (six items, e.g., “My mood can shift quite suddenly”;  $\alpha = 0.71$ ), negative relationships (six items, e.g., “My relationships have been stormy”;  $\alpha = 0.62$ ), and self-harm (six items, e.g., “I sometimes do things so impulsively that I get into trouble”;  $\alpha = 0.78$ ). Items were rated on a 4-point Likert scale, ranging from 0 (*Completely disagree*) to 3 (*Completely agree*).

## 2.3. Plan of analyses

The main hypotheses were examined by estimating two structural path models using MPlus 8.4 (Muthén and Muthén, 1998-2017) through a robust maximum-likelihood approach. First, we examined a model with the three ER strategies as predictors of the four borderline personality features (cf. Hypothesis 1). Second, building on this first model, we added need frustration as a mediator in the relation between ER strategies and borderline personality features (cf. Hypothesis 2). We employed several indices to evaluate the fit of the path model, namely the  $\chi^2$  test, the comparative fit index (CFI), the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). An acceptable fit was indicated by  $\chi^2/df$  ratio of 2 or below, CFI values of 0.95 or above, SRMR values of 0.08 or below, and RMSEA values of 0.06 or below (Hu and Bentler, 1999; Kline, 2005). There were no missing data. To test the significance of indirect effects, we used bootstrapping (using 1000 draws), a nonparametric resampling procedure.

## 3. Results

### 3.1. Descriptive statistics and preliminary analyses

Descriptive statistics and bivariate correlations among the measured variables can be found in Table 1. Positive correlations were found between emotion dysregulation and all borderline personality features, while emotion suppression correlated positively with identity problems and negative relations. Furthermore, need frustration correlated negatively with integrative emotion regulation and positively with dysregulation, suppression and all borderline personality features.

Additionally, the relation of the background variables gender and age with the different study variables was assessed. A multivariate analysis of variance (MANOVA) showed a significant effect of gender; Wilks’ Lambda,  $F(9,216) = 2.00$ ,  $p = .03$ , partial  $\eta_p^2 = 0.08$ . More specifically, one-way ANOVAs showed women to score significantly higher than men with respect to emotion dysregulation ( $M_{women} = 2.33$ ,  $SD = 0.61$ ;  $M_{men} = 2.11$ ,  $SD = 0.73$ ;  $F(1,224) = 4.66$ ,  $p = .03$ ; partial  $\eta_p^2 = 0.02$ ), identity problems ( $M_{women} = 1.27$ ,  $SD = 0.57$ ;  $M_{men} = 1.03$ ,  $SD = 0.57$ ;  $F(1,224) = 7.19$ ,  $p = .01$ ; partial  $\eta_p^2 = 0.03$ ), affective instability ( $M_{women} = 1.06$ ,  $SD = 0.53$ ;  $M_{men} = 0.86$ ,  $SD = 0.59$ ;  $F(1,224) = 5.52$ ,  $p = .02$ ; partial  $\eta_p^2 = 0.02$ ) and negative relations ( $M_{women} = 1.14$ ,  $SD = 0.54$ ;  $M_{men} = 0.84$ ,  $SD = 0.51$ ;  $F(1,224) = 12.75$ ,  $p = .00$ ; partial  $\eta_p^2 = 0.05$ ). Furthermore, age correlated significantly negative with both emotional suppression ( $r = -0.17$ ,  $n = 226$ ,  $p = .01$ ) and identity problems ( $r = -0.17$ ,  $n = 226$ ,  $p = .01$ ). Given these findings, we controlled for both age and

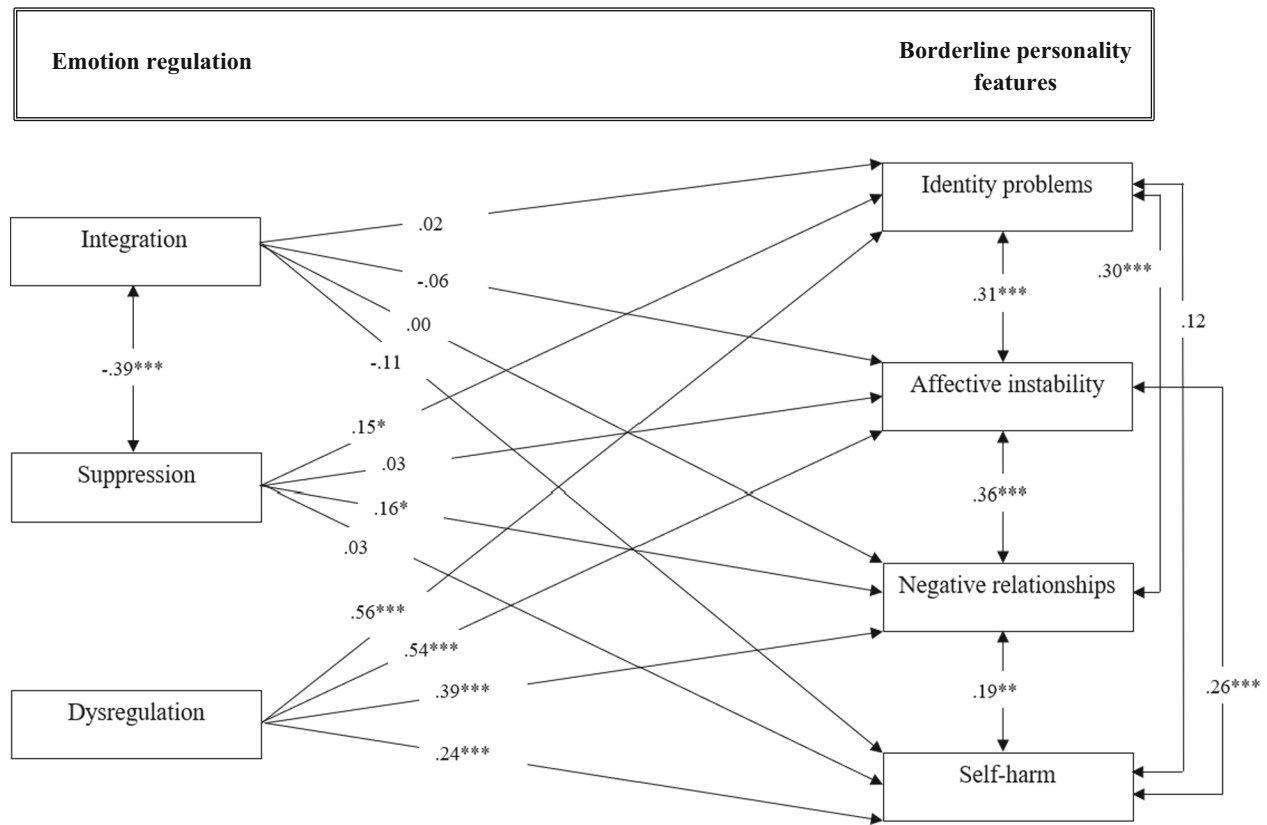


Fig. 1. Structural model depicting the relation between emotion regulation and borderline personality features.

gender in all further analyses.

### 3.2. Primary analyses

#### 3.2.1. The relation between emotion regulation and borderline personality features

In a first structural model, we entered three indicators of ER, that is integration, suppression, and dysregulation as predictors of the four studied borderline personality features. This model had a good fit;  $\chi^2/df = 1.57$ ; CFI = 0.99; SRMR = 0.03; RMSEA = 0.05. As displayed in Fig. 1, results showed that dysregulation related positively to all borderline features, whereas suppression showed a weaker relation with the outcomes and was associated only with identity problems and negative relationships. Integration was unrelated to the four outcomes.

#### 3.2.2. The intervening role of need frustration

In a second structural model, we built upon our first model by adding need frustration as an intervening variable in the relation between ER and borderline personality features. This model had a reasonably good fit;  $\chi^2/df = 2.48$ ; CFI = 0.94; SRMR = 0.06; RMSEA = 0.08. As displayed in Fig. 2, dysregulation and suppression (but not integration) related to need frustration, which in turn related to all borderline personality features. Note, however, that dysregulation still related also directly to identity problems and affective instability. Eight indirect effects were found to be significant. That is, suppression related via need frustration to identity problems (95% CI [0.033, 0.153]), affective instability (95% CI [0.006, 0.094]), negative relationships (95% CI [0.015, 0.116]), and self-harm (95% CI [0.001, 0.084]). Similarly, dysregulation related via need frustration to identity problems (95% CI [0.140, 0.272]), affective instability (95% CI [0.025, 0.199]), negative relationships (95% CI [0.079, 0.211]), and self-harm (95% CI [0.020, 0.169]).

### 4. Discussion

Past research has shown that features of borderline personality disorder come with a great individual and societal cost (e.g., Leichsenring et al., 2011), pointing to the importance of research on dynamic factors underlying or maintaining these disruptive features. Building on the increasing research on the importance of ER for borderline personality features and the need to know more about the underlying mechanisms in this relation, we examined need frustration as a mediator in the relation between ER and core features of borderline personality disorder. Results showed that especially emotional dysregulation was a significant predictor of higher levels of borderline features, which is in line with previous theorizing representing the dysregulation of emotions to be a fundamental factor predicting and maintaining borderline personality disorder (Linehan, 1993). Emotion suppression also related to two borderline personality features, namely identity problems and negative relationships. By suppressing emotions across a long time period individuals run the risk of losing themselves and not really knowing who they are. Also, when individuals do not express their authentic feelings towards others, the bonding process is hindered.

Secondly, in line with earlier findings showing need frustration to mediate the effect of ER on well-being (Benita et al., 2020) or internalizing and externalizing symptomatology (Brenning et al., 2020), our results showed need frustration to mediate the relations between emotion dysregulation and suppression on the one hand and borderline personality features on the other. Thus, experiencing dysregulation or suppression of emotions seems to be associated with feelings of pressure, forestalling authentic integration and a sense of psychological freedom. Also, maladaptive ER can disrupt one's ability to function effectively, making one prone to feel like a failure in daily undertakings. Furthermore, emotional hiding or flooding can hinder processes of social scaffolding, resulting in feelings of solitude and isolation. Through

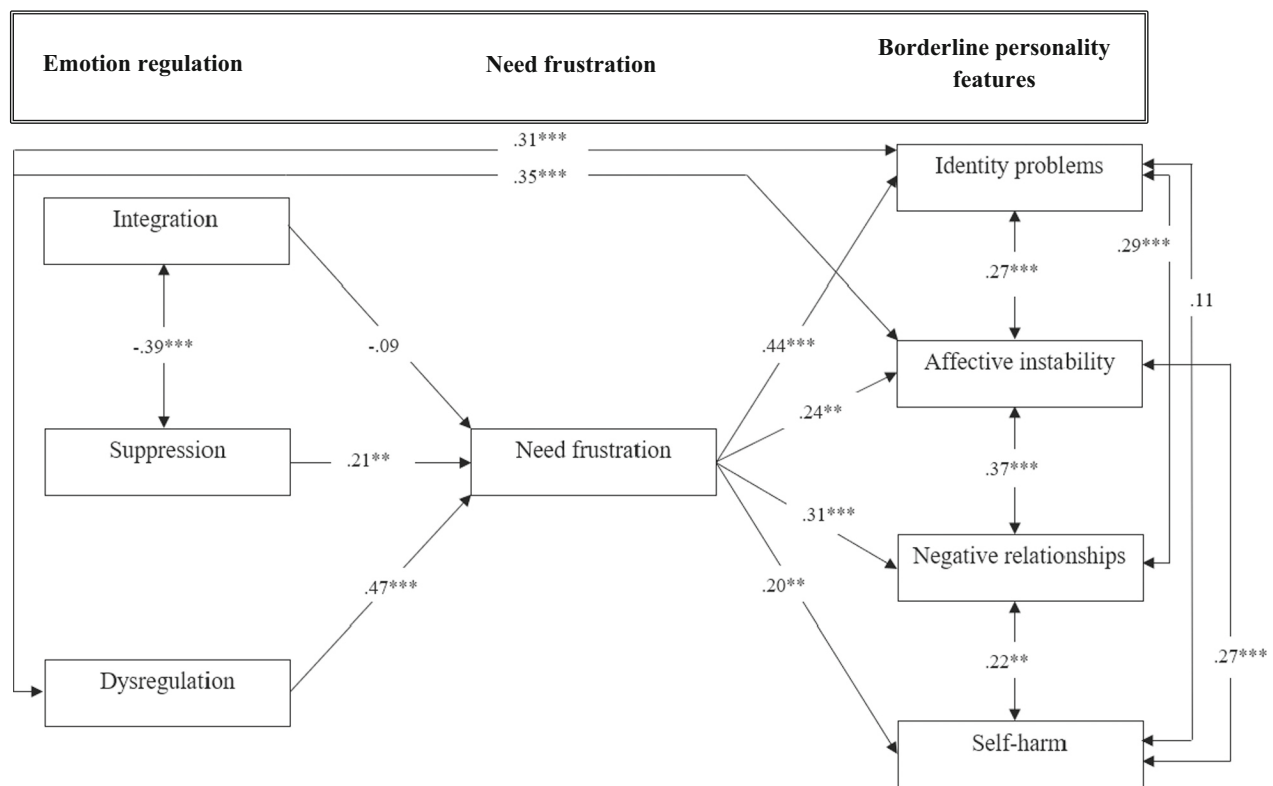


Fig. 2. Structural model depicting the mediating role of need frustration in the relation between emotion regulation and borderline personality features.

this need frustration, the inability to adaptively regulate negative emotions shows its pervasive effect on borderline personality features, impeding an authentic and stable sense of self, hindering harmonious intimate relations, increasing the experience of negative emotions and even instigating self-harm.

There were, however, two remaining direct effects from dysregulation to identity problems and affective instability, indicating that need frustration does not fully capture the mechanism behind these relations. Possibly, the enduring process of bottling negative emotions can have explosive effects, causing damage which surpasses the already growth deteriorating process of need frustration. Being out of balance caused by one's negative emotions has a direct effect making it difficult to grapple effectively with identity-relevant information, leaving one with an unclear or even empty sense of self. Also, dysregulation seems to have a direct perpetuating effect on the instability of one's emotional life. Clearly, explanations of these (momentary) processes need further studying.

#### 4.1. Future challenges and limitations

This study shows different avenues for future research. First, this study shows the effects of emotion dysregulation on borderline personality features to be only partially mediated by need frustration. Given the remaining significant direct effects of dysregulation and the cross-sectional nature of the current study, it would be important for future research to also consider alternative models with for instance dysregulation mediating the effect of need frustration on borderline personality features. Also, core aspects of borderline personality disorder such as negative relationships could engender increased emotion suppression, resulting in a higher level of need frustration. Clearly, future experimental and longitudinal research is needed to further explore the reciprocal and causal relations between ER, need frustration, and borderline symptomatology. Such studies would ideally be conducted among clinical samples diagnosed with Borderline Personality Disorder to determine whether the observed relations are also

applicable to individuals with dysfunctional scores of borderline personality features, while simultaneously examining the role of other comorbid disorders (e.g., substance abuse disorder).

Second, although Roth et al. (2019) clearly differentiate integrative ER into subcomponents such as non-judging observation next to intentional exploration of emotions, these are not empirically disentangled in empirical research. Future research in possible differential effects of these subprocesses might be interesting, especially given the non-significant effects of integration in this study.

Third, the lion's share of research in the effects of suppression of emotions is focused on suppressing emotions towards others (see Gross and John, 2003 for an overview). However, in our opinion, the suppression of the emotional experience itself might be more detrimental to psychological health, again calling for future research.

Furthermore, from a methodological point of view, our sample was recruited via undergraduate students. Although this recruitment method has been successfully used in multiple previous studies (e.g., Van der Kaap-Deeder et al., 2016), this approach might have caused a rather biased sampling which can limit the generalizability of the current findings. Similarly, the sample of the present study was rather homogeneous, consisting only of highly educated individuals and mostly women. More research is needed to test the current hypotheses in more diverse and clinical samples.

#### 4.2. Conclusion and clinical implications

These results are clearly in line with frameworks such as (radically open) dialectical behavior therapy (Linehan, 1993; Lynch, 2018). Interestingly, borderline personality disorder is typically seen as an issue of undercontrol, as evidenced in emotion dysregulation. However, these findings also suggest maladaptive overcontrol, as manifested in emotion suppression, to be predictive of borderline personality features. In addition, tapping into a deeper layer of emotional experience, current results indicate the therapeutic importance of basic psychological needs, next to ER, in the treatment of borderline personality symptoms.

First, in line with abundant effect studies in the Emotion-Focused tradition (e.g., Angus et al., 2015), empirical research in the SDT-tradition has shown that an emphasis on facilitating need satisfaction renders therapeutic effectiveness, both in adaptive change in the client's psychological health as well as in therapeutic engagement (e.g., Ryan, Deci, & Vansteenkiste, 2016). Next to the importance of basic psychological needs within the therapeutic relationship, recent empirical work based on SDT has also pointed to the importance of individuals' own active focus on basic psychological needs. The concept of "need crafting" was introduced promoting clients to proactively search for conditions of need satisfaction (Laporte et al., 2020).

In sum, this research was the first to show the effects of ER in conjunction with basic need frustration in the prediction of borderline personality features. Maladaptive ER strategies such as dysregulation and emotional suppression predict presence of borderline features such as identity problems, affective instability, negative relations and self-harm. Except for the effects of dysregulation on both identity problems and affective instability, these effects were fully mediated by basic need frustration.

### CRedit authorship contribution statement

**Jolene van der Kaap-Deeder:** Conceptualization, Methodology, Formal analysis, Writing - original draft. **Katrijn Brenning:** Writing - review & editing. **Bart Neyrinck:** Conceptualization, Methodology, Investigation, Writing - review & editing.

### Declaration of competing interest

None.

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