de Siqueira Rotenberg Luisa (Orcid ID: 0000-0001-9175-7567)
Lewandowski Kathryn Eve (Orcid ID: 0000-0003-1477-6187)
Miklowitz David (Orcid ID: 0000-0002-9647-6147)
Wright Kim (Orcid ID: 0000-0003-3865-9743)

Targeting Emotion Regulation in Psychological Therapy for Bipolar Disorder: A Viable Approach?

Authors: Luisa de Siqueira Rotenberg[1]; Harriet Birabwa-Oketcho[2]; Kathryn E. Lewandowski[3,4]; David J. Miklowitz[5]; Sarah H. Sperry[6]; Kim Wright[7]

Affiliations:

1. Bipolar Disorder Program (PROMAN), Department of Psychiatry, University of São Paulo Medical School, São Paulo, Brazil

2. Butabika National Referral Mental Hospital, Kampala, Uganda

3. Schizophrenia and Bipolar Disorder Program, McLean Hospital, Belmont, Massachusetts, USA

4. Department of Psychiatry, Harvard Medical School, Boston, Massachusetts, USA

5. Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles School of Medicine, Los Angeles, CA, USA

6. Department of Psychiatry, University of Michigan, Michigan, USA

7. Department of Psychology, University of Exeter, Exeter, UK

Number of words (excl. abstract and references): 1518

Number of tables / figures: 0

Corresponding author: Luisa de Siqueira Rotenberg

Bipolar Disorder Program (PROMAN), Department of Psychiatry,
University of São Paulo Medical School, São Paulo, Brazil.

Rua Dr. Ovídio Pires de Campos, 785

CEP 01060-970, São Paulo, SP, Brazil.

E-mail: rotenbergluisa@gmail.com

Acknowledgements:

LSR was supported by CAPES Scholarship 88887.475730/2020-00 during the preparation of this manuscript.

SHS was supported by NIMH K23MH131601 and NIMH L30MH127613 during the preparation of this manuscript.

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/bdi.70052

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We would like to acknowledge Emma Morton and Halla Ósk Ólafsdóttir for their assistance in reviewing the manuscript.

Conflicts of Interest:
The remaining authors declare no conflicts of interest.

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By definition, bipolar disorder (BD) involves periods of extreme affective disturbance. This makes it intuitively appealing to turn towards emotion regulation (ER) as a target for adjunctive psychological therapies aimed at managing the condition. In this editorial, we explore whether ER plays a causal role in the course of the disorder or its associated conditions, and whether it is a tractable treatment target. ER refers to the processes by which individuals monitor, evaluate, and modify their emotional responses to their environment, which can be adaptive or maladaptive [1,2]. In the general population, strategies considered adaptive - such as reappraisal and problem-solving - are associated with better affective, cognitive and social functioning than are maladaptive strategies such as rumination or suppression of emotional expression. Our examination of this topic is based on research measuring ER directly through self-report, rather than inferring this process from studies of brain structure or activity.

Do ER difficulties play a causal role in the maintenance of mood stability?

Reviews of studies examining the reported use of adaptive and maladaptive ER strategies in people with BD indicate similarities with patients with unipolar disorder or schizophrenia, in terms of increased use of rumination and catastrophizing, and reduced use of positive reappraisal and perspective-taking, compared to healthy controls (HC). However, BD is distinguished by a greater inclination towards seeking novelty and challenges, as well as elevated levels of positive rumination. ER in BD often involves a mix of adaptive and maladaptive strategies, with patients reporting lower success in managing emotions compared to HC individuals [1].

The transdiagnostic nature of ER difficulties does not preclude the possibility that they play a casual role in the maintenance of bipolar symptoms or associated difficulties. Since higher use of typically maladaptive ER strategies are observed even during remission, indicating that it is not tied to acute affective symptoms, they may serve as a risk factor for future affective episodes. Furthermore, research on affective response patterns within BD has consistently shown that tendencies toward risky and impulsive behaviors, as well as dampening

responses to both positive and negative affect and engaging in rumination, are associated with poorer symptomatic outcomes [3].

Prospective studies on ER face challenges, as they cannot rule out confounding factors like childhood trauma that may increase both ER difficulties and vulnerability to relapse. Furthermore, the time frame for detecting causal effects in real-world settings, as opposed to laboratory-based manipulations over limited intervals, makes it scientifically difficult to draw firm conclusions. This highlights the need for more rigorous experimental and longitudinal designs to strengthen the evidence base regarding the causal role of ER in BD.

Are ER difficulties tractable?

Are ER difficulties stable, or can they be modified with treatment? With regard to stability, BD is characterized by its dynamic psychopathology, marked by complex switch-like dynamics, causing individuals to fluctuate between normal mood, depressive episodes, subthreshold depression, and manic or hypomanic states Furthermore, even during periods of "normal mood," many individuals with BD experience significant affective instability. This refers to the difficulty in sustaining stable emotional states, leading to frequent and brief shifts in mood that do not necessarily constitute a full mood episode. While difficulties with ER may contribute to affective instability, the two are distinct: ER refers to a skillset or process, while affective instability is a characteristic pattern of mood fluctuations. Hence, due to the dynamic nature of BD, identifying a static ER profile for people with BD poses a challenge to both research on ER strategies, and therapy addressing them. There is preliminary evidence that compared to individuals without BD, those with BD tend to use both adaptive and maladaptive strategies more frequently, exert more effort in deploying them, and report less success in their efforts. Consequently, therapy targeting ER may need to focus on the meta-skill of selecting the best ER strategy for specific situations, rather than teaching reduction or increase in use of one particular ER strategy.

There have been relatively few attempts to directly address ER in BD in randomized controlled trials. Two studies have delivered group-based programmes to adults with BD, based on dialectical behaviour therapy (DBT), which explicitly seeks to build ER skills; post-treatment, one study reported greater decrease in ER difficulties in the intervention arm, whilst the other reported increases in mindfulness skills [4,5]. We can draw insights from the broader literature on ER modification in other populations, such as individuals with depression, trauma-related disorders like PTSD, and even the general population, where strategies like reappraisal

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and suppression have been shown to be modifiable. This provides a promising foundation for targeting these strategies in BD, though it is unclear whether changes in ER are necessary or sufficient for clinical improvement. In sum, while there are positive signs that ER difficulties are tractable, particularly in other populations, the complexity of BD demands more nuanced and targeted investigations to fully understand how this is best achieved.

Clinical and research implications

While difficulties with ER are present in individuals with BD and may serve as risk factors for future mood episodes and ongoing affective instability, establishing a direct causal relationship between ER and the course of BD remains challenging due to confounding variables and the dynamic nature of BD. Additionally, although ER strategies may be flexible and potentially modifiable through therapy, further research is needed to determine the most effective approaches for achieving these modifications.

Rather than simply increasing or decreasing the use of specific strategies, it may be better to prioritize teaching patients how to select and adaptively apply ER strategies based on situational demands; for instance, helping a patient with BD to use cognitive reappraisal for lower-intensity emotion shifts, versus distraction for more intense feelings at times when their capacity for flexible thinking feels depleted. It is also essential to account for the role of mood fluctuations, which may impact the application and success of ER strategies in therapy, necessitating flexible and responsive treatment approaches. Given the dynamic nature of BD, it may not always be possible to address "live" ER issues during therapy sessions. Thus, it is critical to first discuss the rationale behind ER techniques and prepare the ground for their application. This can be achieved by using moments of intense emotion during sessions as an opportunity to practice ER together, identifying opportunities for patients to practice these strategies in real-life situations, and incorporating imaginal exposure to relevant scenarios or mood states to help patients rehearse and strengthen their ER skills. Real-time assessments, including ecological momentary assessments, should be utilized to capture fluctuations in ER strategies and mood, providing a more nuanced understanding of their interaction. The effectiveness for BD of existing ER interventions from other populations, such as those with emotion instability or trauma-related disorders, could be assessed in randomized controlled trials —for example, integrating grounding techniques from trauma-focused therapies to help manage emotional dysregulation during mood shifts in BD. Lastly, as randomised controlled

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trials of interventions with an ER component accrue, within-trial process analysis and between-trial network analysis can be used to explore its impact.

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References

1. Dodd A, Lockwood E, Mansell W, Palmier-Claus J. Emotion regulation strategies in bipolar disorder: A systematic and critical review. *Journal of Affective Disorders*. 2019;246:262-284.
2. Gross JJ. The emerging field of emotion regulation: An integrative review. *Review of general psychology*. 1998;2(3):271-299.
3. Miola A, Cattarinussi G, Antiga G, Caiolo S, Solmi M, Sambataro F. Difficulties in emotion regulation in bipolar disorder: a systematic review and meta-analysis. *Journal of Affective Disorders*. 2022;302:352-360.
4. Azevedo J, Swales M, Carreiras D, Guiomar R, Macedo A, Castilho P. BI-REAL: A 12-session DBT skills group intervention adapted for bipolar disorder–A feasibility randomised pilot trial. *Journal of Affective Disorders*. 2024;356:394-404.
5. Van Dijk S, Jeffrey J, Katz MR. A randomized, controlled, pilot study of dialectical behavior therapy skills in a psychoeducational group for individuals with bipolar disorder. *Journal of affective disorders*. 2013;145(3):386-393.