


LETTER TO THE EDITOR

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Mixed mood states and emotion-related urgency in bipolar spectrum disorders: a call for greater investigation

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Bipolar disorder (BD) is a complex and serious psychiatric disorder characterized by mood dysregulation difficulties (American Psychiatric Association 2013; Gruber 2011; Phillips et al. 2008; Johnson et al. 2007; Swann et al. 2013). BD is also associated with a high rate of suicide (Merikangas et al. 2011) and functioning difficulties (Murray and Lopez 1996; Sanchez-Moreno et al. 2009). Moreover, BD patients are at elevated risk for suicide (Koukopoulos et al. 2007) and exhibit poorer responses to treatment interventions (González-Pinto et al. 2010) during mixed mood states (Swann et al. 2013). This underscores the need to better understand psychologically-relevant processes that may contribute to the etiology and course of BD, particularly during mixed mood states.

This brief letter suggests the importance of considering impulsivity during mixed states. *Emotion-related urgency* (hereto referred as ERU) is defined as a tendency to act rashly in the context of extreme emotions, including trouble inhibiting impulses and risk-taking behaviors (e.g., Cyders and Smith 2008). ERU has been studied in the context of extreme negative and positive emotions (e.g., Carver et al. 2013; Johnson et al. 2018). For example, *negative urgency* (defined as the tendency to behave rashly during extreme negative emotions; e.g., Whiteside and Lynam 2001) is associated with increased impulsivity during extreme negative mood states, and has been linked to hostile verbal and physical behaviors (Johnson and Carver 2016), compulsive spending (Lejoyeux

et al. 2000) and tobacco cravings (Anestis et al. 2007). By contrast, *positive urgency* (defined as the tendency to behave rashly during extreme positive emotions; Cyders 2014) is associated with increased risk-taking and sensation seeking, including excessive drinking (Cooper et al. 1995; Cyders et al. 2009), sexual promiscuity (Johnson and Carver 2016), and aggression (e.g., Cyders and Smith 2008).

Both negative and positive ERU have been implicated in BD (Giovannelli et al. 2013; Johnson et al. 2018), suggesting it may be an important factor underlying risk and functioning difficulties. However, one important gap in these findings is the lack of data on ERU during mixed-states in BD that include, in part, co-occurring negative and positive affective states. Given elevated risk of suicidality and harmful behaviors that co-occur during mixed mood states (e.g., Nordentoft et al. 2011) and the high percentage of mixed mood episodes occurring among BD individuals (González-Pinto et al. 2010; Swann et al. 2013), greater research prioritization is warranted. Yet, we know of no research to date specifically examining ERU in the context of mixed mood states in BD or across mood disorders.

We suggest increased investigation into transdiagnostic presentations and clinical implications of ERU. Indeed, recent recognition of mixed features also occurring in the context of major depressive disorders underscores the important transdiagnostic utility of ERU across mood disorders. We suggest three key areas for future research. First, it will be important to develop well-validated assessment tools to measure mixed-mood ERU across self-report and clinician-rated instrument domains. Second, it will be important to carefully assess the

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maladaptive behaviors that may predict, and result from, ERU during mixed states and differentiate those from more general risk-taking behavior. Third, future research should carefully consider lifespan approaches that consider ERU in the context of BD onset, risk and recurrence at critical developmental junctures. We believe the time is ripe to call greater attention to examining risky and potentially fatal consequences of impulsivity during strong and co-occurring negative and positive emotion states.

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References

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 5th ed. Arlington, VA: American Psychiatric Association; 2013.
- Anestis MD, Selby EA, Joiner TE. The role of urgency in maladaptive behaviors. *Behav Res Ther*. 2007;45(12):3018–29. <https://doi.org/10.1016/j.brat.2007.08.012>.
- Carver CS, Johnson SL, Joormann J. Major depressive disorder and impulsive reactivity to emotion: toward a dual-process view of depression. *Br J Clin Psychol*. 2013;52(3):285–99. <https://doi.org/10.1111/bjc.12014>.
- Cooper ML, Frone MR, Russell M, Mudar P. Drinking to regulate positive and negative emotions: a motivational model of alcohol use. *J Pers Soc Psychol*. 1995;69(5):990–1005. <https://doi.org/10.1037//0022-3514.69.5.990>.
- Cyders MA. Positive urgency and negative outcomes: the dispositional tendency to rash action during positive emotional states. In: Gruber J, Moskowitz J, editors. *Light and dark side of positive emotion*. Oxford: Oxford University Press; 2014. p. 382–405.
- Cyders MA, Flory K, Rainer S, Smith GT. The role of personality dispositions to risky behavior in predicting first-year college drinking. *Addiction*. 2009;104(2):193–202. <https://doi.org/10.1111/j.1360-0443.2008.02434.x>.
- Cyders MA, Smith GT. Emotion-based dispositions to rash action: positive and negative urgency. *Psychol Bull*. 2008;134(6):807–28. <https://doi.org/10.1037/a0013341>.
- Giovanelli A, Hoerger M, Johnson SL, Gruber J. Impulsive responses to positive mood and reward are related to mania risk. *Cogn Emot*. 2013;27(6):1091–104. <https://doi.org/10.1080/02699931.2013.772048>.
- González-Pinto A, Barbeito S, Alonso M, Alberich S, Haidar MK, Vieta E, López P. Poor long-term prognosis in mixed bipolar patients. *J Clin Psychiatry*. 2010;72(5):671–6. <https://doi.org/10.4088/jcp.09m05483yel>.
- Gruber J. When feeling good can be bad: positive emotion persistence (PEP) in bipolar disorder. *Curr Dir psychol Sci*. 2011;20(4):217–21. <https://doi.org/10.1177/0963721411414632>.
- Johnson SL, Carver CS. Emotion-relevant impulsivity predicts sustained anger and aggression after remission in bipolar I disorder. *J Affect Disord*. 2016;189:169–75. <https://doi.org/10.1016/j.jad.2015.07.050>.
- Johnson SL, McKenzie G, McMurrich S. Ruminative responses to negative and positive affect among students diagnosed with bipolar disorder and major depressive disorder. *Cogn Ther Res*. 2007;32(5):702–13. <https://doi.org/10.1007/s10608-007-9158-6>.
- Johnson SL, Pearson J, Swerdlow B, Carver C. Emotion-related impulsivity and the mood disorders. *Neurobiol Abnorm Emot Motiv Behav*. 2018. <https://doi.org/10.1016/B978-0-12-813693-5.00002-2>.
- Koukopoulos A, Sani G, Koukopoulos AE, Manfredi G, Pacchiarotti I, Girardi P. Melancholia agitata and mixed depression. *Acta Psychiatr Scand*. 2007;115(S433):50–7. <https://doi.org/10.1111/j.1600-0447.2007.00963.x>.
- Lejoyeux M, Loughlin MM, Adès J. Epidemiology of behavioral dependence: literature review and results of original studies. *Eur Psychiatry*. 2000;15(2):129–34. [https://doi.org/10.1016/S0924-9338\(00\)00201-7](https://doi.org/10.1016/S0924-9338(00)00201-7).
- Merikangas KR, Jin R, He J, Kessler RC, Lee S, Sampson NA, Zarkov Z. Prevalence and correlates of bipolar spectrum disorder in the World Mental Health7 Survey Initiative. *Arch Gen Psychiatry*. 2011;68(3):241–51. <https://doi.org/10.1001/archgenpsychiatry.2011.12>.
- Murray CJ, Lopez AD. Evidence-based health policy: lessons from the Global Burden of Disease Study. *Science*. 1996;274(5288):740–3. <https://doi.org/10.1126/science.274.5288.740>.
- Nordentoft M, Mortensen P, Pedersen C. Absolute risk of suicide after first hospital contact in mental disorder. *Arch Gen Psychiatry*. 2011;68(10):1058–64. <https://doi.org/10.1001/archgenpsychiatry.2011.113>.
- Phillips ML, Ladouceur CD, Drevets WC. A neural model of voluntary and automatic emotion regulation: implications for understanding the pathophysiology and neurodevelopment of bipolar disorder. *Mol Psychiatry*. 2008;13(9):833–57. <https://doi.org/10.1038/mp.2008.65>.
- Sanchez-Moreno J, Martinez-Aran A, Tabarés-Seisdedos R, Torrent C, Vieta E, Ayuso-Mateos JL. Functioning and disability in bipolar disorder: an extensive review. *Psychother Psychosom*. 2009;78(5):285–97.
- Swann AC, Lafer B, Perugi G, Frye MA, Bauer M, Bahk W, Suppes T. Bipolar mixed states: an International Society for bipolar disorders task force report of symptom structure, course of illness, and diagnosis. *Am J Psychiatry*. 2013;170(1):31–42. <https://doi.org/10.1176/appi.ajp.2012.12030301>.
- Whiteside SP, Lynam DR. The five factor model and impulsivity: using a structural model of personality to understand impulsivity. *Personal Individ Differ*. 2001;30(4):669–89. [https://doi.org/10.1016/S0191-8869\(00\)00064-7](https://doi.org/10.1016/S0191-8869(00)00064-7).

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