Don't throw the baby out with the bathwater

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Published in:
Neuroimage

DOI:
10.1016/j.neuroimage.2015.11.012

Publication date:
2016

NeuroImage 125 (2016) 1103

Contents lists available at ScienceDirect

NeuroImage

journal homepage: www.elsevier.com/locate/ynimg

Comments and Controversies

Don't throw the baby out with the bathwater: Depressive traits are part and parcel of neuroticism

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In their comment (Bianchi and Laurent, 2015) on a recent publication in NeuroImage (Everaerd et al., 2015), Bianchi and Laurent argue that "depressive symptomatology should be systematically controlled for in neuroticism research" in order to be able to interpret the "true effect" of neuroticism. Unfortunately, their uncommon (see for example Table 2 in the meta-analysis of Servaas et al. (2013), where depression was specifically not mentioned as a covariate) advice lacks a theoretical or strong empirical basis. On the contrary, the high correlation of $\rho = 0.73$ between depressive symptoms (as measured with the Beck Depression Inventory) and neuroticism reveals that these cannot be easily disentangled, but rather suggests a significant degree of convergence, which may be based on shared (genetic) etiology (Genetics of Personality Consortium et al., 2015). We therefore argue that neuroticism, a personality trait known to be a robust predictor of vulnerability for physical and common mental health disorders, including depression (Hakulinen et al., 2015; Lahey, 2009), deserves a more nuanced approach than being reduced to variance left after systematic adjustment for depressive symptoms.

We are concerned that Bianchi and Laurent's advice could be potentially misguiding to researchers, since controlling for third factors should be grounded in a specific research question. At least a distinction should be made between trait depressive symptoms (i.e. the depressive symptoms one usually experiences) and state depressive symptoms, because a temporary episode of (subthreshold) depression can inflate neuroticism reports (Ormel et al., 2013b). Depending on the research question, it can be defended to adjust the neuroticism personality trait for temporary increases in depressive symptoms (state depression), although more elegant alternatives would be to either postpone personality assessment until the episode has remitted or use other-reports (e.g. parent, partner) to assess an individual's trait scores.

Moreover, there is substantial consensus about the multifaceted nature of neuroticism. Depression is one of these facets, next to anxiety, hostility, and self-consciousness, among others (John et al., 2008; Ormel et al., 2013b). A systematic control for symptoms of depression seems therefore quite arbitrary, as one could also control for symptoms of e.g. anxiety ($r = .65$ with neuroticism, and $r = .77$ with depression; Jeronimus et al., 2013), or both. In our opinion, future research could benefit from systematically acknowledging the heterogeneity of neuroticism. Revealing facet-specific neurobiological underpinnings of neuroticism may help to better understand the association between neuroticism, stress-reactivity, and mental disorders (Haas et al., 2007; Ormel et al., 2013a). In sum, we feel that a systematic control for a person's usual depressive symptoms results in a mutilated neuroticism construct and may yield uninterpretable results.

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http://dx.doi.org/10.1016/j.neuroimage.2015.11.012