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Regarding brain structure characteristics in intellectually superior schizophrenia

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To the Editors

The recent article by Vaskinn et al. "Brain structure characteristics in intellectually superior schizophrenia" [Psychiatry Research 2015; Feb 24] covers an important area of research. In addition, the article is well written. However, it is important that the authors provide more information and commentary about the analyses before conclusions can be drawn about structural differences and IQ in schizophrenia.

1. *Differences between SZ and HC participants.* There appear to be no significant differences between the SZ high IQ group and the HC normal IQ group. This would imply that SZ high IQ individuals do not differ in structural characteristics from normal controls. Unfortunately, nowhere in the paper are results comparing these two groups. The authors make the assertion that high IQ SZ participants have similar structural abnormalities to other SZ IQ groups, but abnormal compared to what?
2. *Theoretical basis for the investigation.* While the results would imply that cortical thickness is static as a function of IQ level in schizophrenia, it is also likely that cortical thickness has little phenotypic or genetic association with intelligence in healthy controls. For example, using a multivariate genetic analysis in 515 middle-aged twins, Vuoksima et al. recently demonstrated that both the phenotypic and genetic associations between neocortical volume and general cognitive ability are driven primarily by surface area rather than thickness (Vuoksima et al., 2014). This is consistent with an apparent lack of differences in cortical thickness across IQ group in both controls and patients in this study. Lack of evidence for association between IQ and cortical thickness in controls does not preclude a sound basis for studying cortical thickness in IQ-matched patients, but it should certainly be considered.

In sum, the above points should be addressed before conclusions are to be drawn about structural differences and IQ in schizophrenia.

References

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