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**DOI link to article:**

http://dx.doi.org/10.1192/bjp.209.6.528a

**Date deposited:**

31/10/2017

**Embargo release date:**

01 December 2017
Ethnic density - meaning and implications – letter of response

We thank Rodger (2016) for his interest in our study and for the opportunity to clarify our measure of ethnic density. The measure used was the percentage of the total adult primary care trust (PCT) population from BME groups. However, the original work which preceded this ecological analysis (Weich et al., 2015) was a multilevel model to estimate the risk of compulsory admission, which involved simultaneous consideration of both individual ethnicity and ethnic density calculated as the proportion of adults reporting White British ethnicity for lower layer super output areas (LSOAs - average population ~ 1500) which we loosely regarded as ‘neighbourhoods’. In that study, neighbourhood ethnic density was associated with an increased overall risk of compulsory admission, even when controlling for individual ethnicity. Furthermore we found a dose response relationship: the greater the percentage of the neighbourhood population from BME groups, the greater the overall risk of compulsory admission. It is important to note that we measured the risk of compulsory admission for all adults attending secondary mental health care services in England during 2010/11, rather than the risk of compulsory admission for the entire BME population, or individual ethnic groups.

Rodger also makes reference to the work of Das-Munshi et al (2012), exploring the buffering effect of ‘own-group density’ across middle super output area (population average ~7200). Own-group density and overall ethnic density are two different ways of operationalising area level ethnicity. Indeed in our multilevel analysis we also tested the association between risk of compulsory admission and neighbourhood ethnic diversity (mixing) using the Theil index (Massey and Denton 1988). A very weak negative association was evident, suggesting that more homogenous neighbourhoods were associated with an increased risk of compulsory admission, although the association was not statistically significant. Furthermore, the Theil Index was strongly negatively correlated with our neighbourhood level index of White British ethnicity (r=-0.839, p<0.001). For these reasons we did not include the ethnic diversity findings in our original work (Weich et al. 2015). We agree with Rodger that there are a number of limitations in terms of identifying individual level factors from a paper looking at associations at a population level. Further studies are needed to discern the different effects of ethnic density, ethnic diversity and the buffering effects of own group density, all of which are slightly different ways of capturing neighbourhood ethnicity. The findings of our multilevel analysis at LSOA-level suggest that any buffering effect of ethnic diversity were outweighed by overall ethnic density.

We agree that the lack of association between ethnicity and compulsory admission at the PCT level in rural areas is intriguing. Defining areas such as communities or neighbourhoods is difficult and it can be problematic to pick up the effects of buffering. The finding may also be due to the negative correlation between ethnic density and deprivation seen in rural settings.
References


