

Mapping Ethnic Health Inequalities in England and Wales

The COVID-19 pandemic highlighted the racial disparity in health across the UK (Otu et al, 2020). BAME communities in particular suffered disproportionate deaths and long term illness from COVID-19 (Bambra et al, 2021; Keys et al, 2021). However, health inequality in these communities are not a recent phenomenon, with disparities shown in mental health (Hackett et al, 2020), dermatology (Lester et al, 2019) and cancer treatment (Zavala et al, 2021). The visualisation attempts to map racial health inequalities across the UK by mapping the percentage of citizens in Middle Layer Super Output Areas (MSOAs) who rated their health as Bad or Very Bad and comparing this to ethnicity data. The data was taken from the UK Census 2011 data set. This map will allow policy makers to identify areas of the UK where the self-reported health of the population is low. These areas will have the percentage of self-identified ethnic groups displayed as a table and graph.

The website was built using Mapbox GL Javascript and Chat JS and displays an interactive map for users to investigate MSOAs, with the percentage of bad and very bad healthcare shown as a choropleth map. The ratings are graded along a blue to red scale, with blue representing 0% of the population reporting bad health, white representing 10% and red representing 20%. The user can then click on the particular MSOA to receive a table of the ethnicity data along with a graph to explore the ethnicity of the MSOA. The user also has the option to choose to explore MSOAs based on the % of white ethnicity. This was chosen to allow the user to explore areas of white dominated population areas and areas of ethnically dominated areas to focus on the health inequality. In this case, the map will only show the MSOAs of the chosen radio button. Finally, several main UK population bases have a shortcut link for the user to quickly navigate to those areas to explore several urban areas of the UK.

The data was manually processed from the dataset into a CSV. A python program was created to join the MSOA GeoJSON files and CSV together using the Geopanda library. This map could be further improved with additional healthcare data to explore whether areas of low rated bad health are rated highly in good health and different issues relating to healthcare inequality, such as COVID-19 deaths could be included.

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