

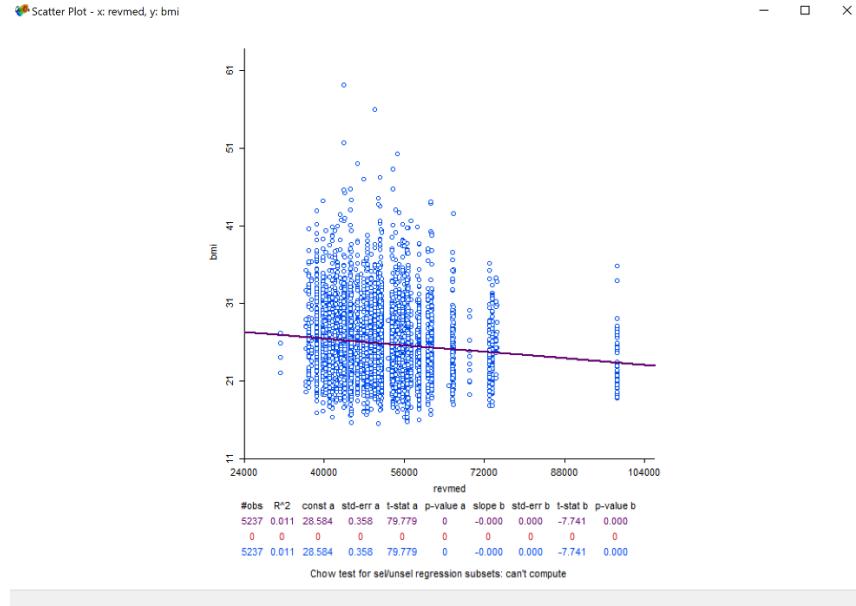
Exploratory data analysis in environmental health

Dr Stéphane Joost, Dr Mayssam Nehme, Noé Fellay

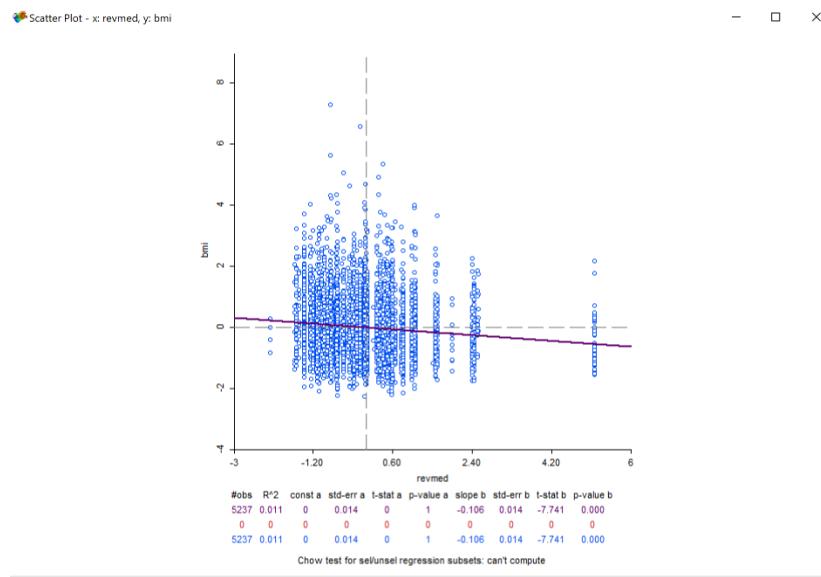
Exercise 5

Confounding factors & variable adjustment **Solution**

1. Produce a scatterplot of the relationship between BMI (y) and the median income (x); copy the scatterplot and paste it in a ms-word document



Scatter plot on raw values

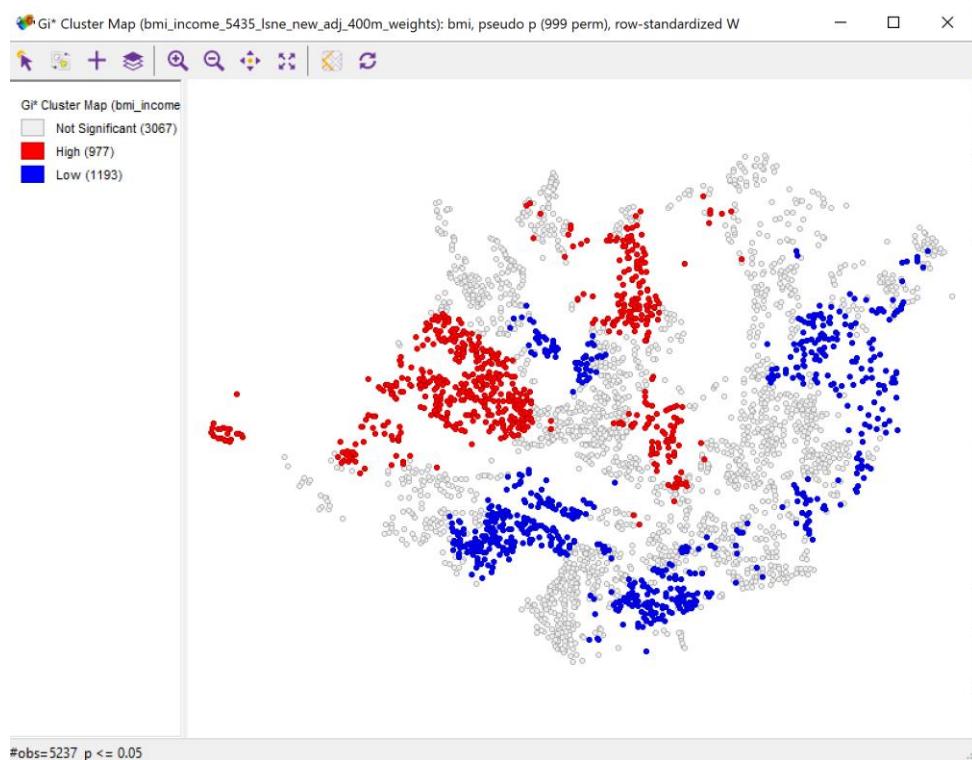


Scatter plot, on standardized values

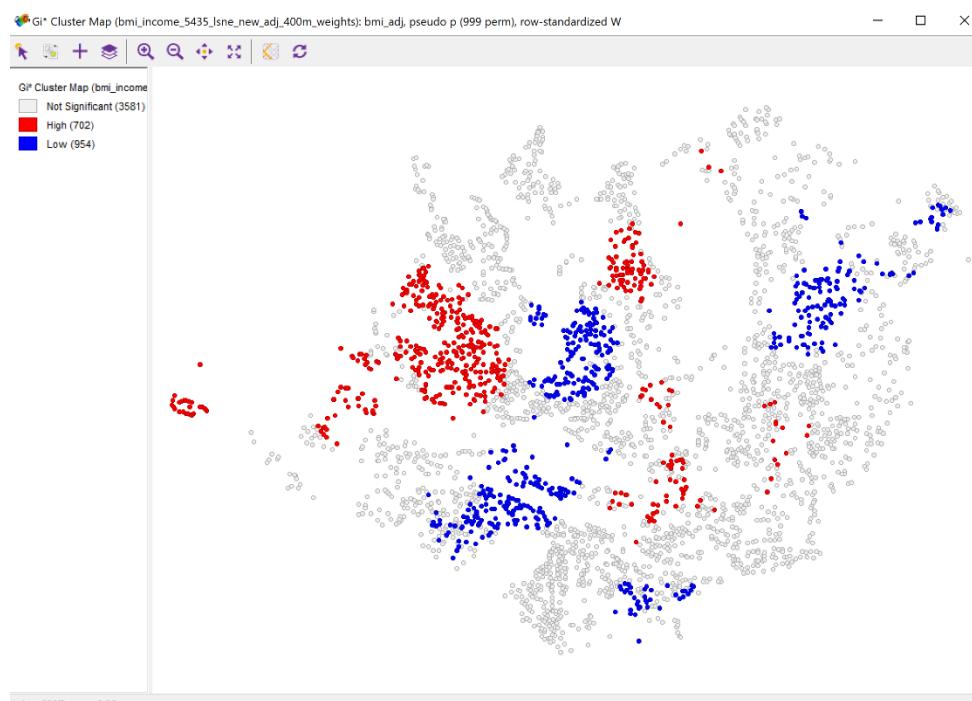
Exploratory data analysis in environmental health

Dr Stéphane Joost, Dr Mayssam Nehme, Noé Fellay

5. Process the Getis-Ord Gi* statistics (weight row-standardized) for the raw BMI variable



Getis-ord Gi BMI non-adjusted*



Getis-ord Gi BMI adjusted for median income*

Exploratory data analysis in environmental health

Dr Stéphane Joost, Dr Mayssam Nehme, Noé Fellay

9. We can observe smaller clusters (see the number of individuals within spatial autocorrelation classes), while the neutral class increases. Eastern and South-Eastern cold spots mainly disappear when adjusting for median income. A larger cold spot appears downtown.