The key claim in the article is that Mohamad Salah joining the Liverpool football club

reduced hate crimes in that English city. Frame this question as a linear regression

problem, stating clearly what are the data points, the pre-treatment predictors, the

treatment variable, and the outcome variable. The actual analysis they do to lead to their

Figure 2 is complicated, so just try to set up the basic regression analysis. You can also

take a look at Figure A-2 and Section A-4 of the appendix, but it is important here to set

up the model from scratch rather than trying to copy what they did. Once you have

written the model, discuss challenges of estimating the model from the available data.

Consider problems of validity and reliability of measurement as well as the statistical

assumptions of the model. Your answer to this assignment should be no more than 1

page long.

This experiment seeks to determine if football player Mohammed Salah’s signing at English Club Liverpool F.C. had an effect on reducing Islamophobia in the UK. The outcome variable of this experiment is the monthly hate crime rate in the British city of Liverpool as measured by the hate crime data set from the Merseyside police department (which covers the city). We note that hate crimes comprise attacks committed on non-Muslims. The paper addresses this fact by pointing out that Muslims comprise only 5% of the UK population and account for 39% of all hate crimes, meaning that the hate crime rate is a good indirect predictor of Islamophobia.

When designing an experiment using a basic regression, I would make the predictor (and treatment) variable a binary indicator of whether or not a given month’s data was before or after Salah’s signing. The coefficient in the regression table would then correspond to the difference in average hate crime rate between the pre and post treatment groups. This would provide a quick and simple answer to the question of if Salah’s singing reduced hate crime rate.

One problem that I have with this study design is that I do not think that hate crime rate is a strong enough predictor of Islamophobia. While many hate crimes do affect Muslims, a general reduction in hate crimes or a specific reduction in other types of hate crimes could confound results. The authors attempt to mitigate the effects of a general reduction in hate crime with their imputation methods, but this does not account for the possibility of a specific reduction in other hate crimes. Additionally, Salah is not the first Muslim to become famous in the UK or even in Liverpool Football club. Controlling for the “Mané” effect was done in other parts of the study, but this does not address the fact that Parasocial Contact Hypothesis would have also suggested that interaction with Muslims prior to the signing of Salah should have decreased Islamophobia accordingly.

In terms of meeting the assumptions of regression, I only used one predictor in my model so we do not have to worry about multicollinearity. Also, since the predictor was binary, there is no need to verify that the data are normally distributed and we can assume that this data meets the conditions for linear regression. In terms of pre-treatment predictors, some interesting ones to pay attention to would be the presence of other Muslims’ exposure in British media or if Salah’s signing similar caused a decrease in other big clubs that he signed with before Liverpool (Chelsea, AS Roma).

The authors do mention in the paper that the results obtained are purely observational, and thus that a causal relationship cannot be established between Salah’s singing and a decrease in Islamophobia. We can be sure that immediately following his signing, hate crimes decreased in the city of Liverpool. There are many confounding variables that could have been responsible for the observed decrease in hate crime rates, and even then we cannot be sure that this directly means that Islamophobic attitudes decreased in Liverpool.