

DATA VISUALIZATION ON RACISM USING TABLEAU (A CASE STUDY OF UNITED KINGDOM)

BY

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A Capstone Project on Data Visualization using Tableau

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Table of Contents

Introduction	3
Historical Facts about Racism	3
Forms of Racism	4
Racism in the United Kingdom	5
Data Source	5
Dashboard Presenting Different Visualizations	6
Population of the United Kingdom by Race	6
Total Reported Cases of Racism per Financial Year in UK	7
Case Type Reported	8
Reported Assaults with injury Per Financial Year	9
Reported Assaults without injury Per Financial Year	9
Reported Criminal Damage per Financial Year	10
Reported Harassment per Financial Year	10
Reported Cases per Police Force Area	10
Reported Cases per Financial Year per Region per Police Force Areas	11
Further Exploration of Northamptonshire	14
Reported Cases of Racism in Northamptonshire	15
Comparing Metropolitan Police and Northamptonshire	15
Observations	16
Inferences	17
Recommendation	17
References	18
Data Sources	18

Introduction

“Bitch”, “overbaked dough”, “ape”, “undone rice”, these and many more are the words that racists usually used in assaulting its victims.

Racism is *prejudice, discrimination, or antagonism* directed against a person or people on the basis of their membership of a particular racial or ethnic group, typically one that is a minority or marginalized. In most cases, it is an oppression of people of colour based on a socially constructed racial hierarchy that privileges white people.

Simply put,

Racism = Racial Prejudice + Power

By racial prejudice, it means a set of discriminatory or derogatory attitudes based on assumptions deriving from perceptions about race/skin colour.

By Power, it simply means the authority granted through social structures and conventions—possibly supported by force or the threat of force—and access to means of communications and resources, to reinforce racial prejudice, regardless of the falsity of the underlying prejudiced assumption.

Historical Facts about Racism

Historically, those who openly professed or practiced racism held that members of low-status races should be limited to low-status jobs and that members of the dominant race should have exclusive access to political power, economic resources, high-status jobs, and unrestricted civil rights. The lived experience of racism for members of low-status races includes acts of physical violence, daily insults, and frequent acts and verbal expressions of contempt and disrespect, all of which have profound effects on self-esteem and social relationships.

In the United States, racism came under increasing attack during the civil rights movement of the 1950s and '60s, and laws and social policies that enforced racial segregation and permitted racial discrimination against African Americans were gradually eliminated. Laws aimed at limiting the voting power of racial minorities were invalidated by the Twenty-fourth Amendment (1964) to the U.S. Constitution, which prohibited poll taxes, and by the federal Voting Rights Act (1965), which required jurisdictions with a history of voter suppression to obtain federal approval (“preclearance”) of any proposed changes to their voting laws (the preclearance requirement was effectively removed by the U.S. Supreme Court in 2013 [*see Shelby County v. Holder*]). By 2020 nearly three-quarters of the states had adopted varying forms of voter ID law, by which would-be voters were required or requested to present certain forms of identification before casting a ballot.

Critics of the laws, some of which were successfully challenged in the courts, contended that they effectively suppressed voting among African Americans and other demographic groups. Other measures that tended to limit voting by African Americans were unconstitutional racial gerrymanders, partisan gerrymanders aimed at limiting the number of Democratic representatives in state legislatures and Congress, the closing of polling stations in African American or Democratic-leaning neighbourhoods, restrictions on the use of mail-in and absentee ballots, limits on early voting, and purges of voter rolls.

Forms of Racism

Racism could come in different forms, ranging from *Individual* to *Systemic*

Racism occurs between individuals, on an interpersonal level, and is embedded in organizations and institutions through their policies, procedures and practices. In general, it may seem easier to recognize individual or interpersonal acts of racism: a slur made, a person ignored in a social or work setting, an act of violence. However, "individual" racism is not created in a vacuum but instead emerges from a society's foundational beliefs and "ways" of seeing/doing things, and is manifested in organizations, institutions, and systems (including education). Below are some useful definitions:

Individual Racism refers to an individual's racist assumptions, beliefs or behaviours and is "a form of racial discrimination that stems from conscious and unconscious, personal prejudice".

Systemic Racism includes the policies and practices entrenched in established institutions, which result in the exclusion or promotion of designated groups. It differs from overt discrimination in that no individual intent is necessary. (Toronto Mayor's Committee on Community and Race Relations. Race Relations: Myths and Facts)

It manifests itself in two ways:

1. **Institutional Racism:** racial discrimination that derives from individuals carrying out the dictates of others who are prejudiced or of a prejudiced society
2. **Structural Racism:** inequalities rooted in the system-wide operation of a society that excludes substantial numbers of members of particular groups from significant participation in major social institutions.

Some forms of systemic racism may be more explicit or easier (for some) to identify than others: the Indian Residential School System in Canada; Jim Crow Laws in the US; the exclusion of African-American golfers from elite, private golf courses in the US; the way that "universal suffrage" did not include Indigenous North American women (nor did Indigenous men receive the vote until 1960, unless they gave up their status/identity as Indigenous).

Some Canadian examples of systemic racism include: the 1885 Head Tax, the 1923 Exclusion Act, the 1897 Female Refugee Act, passed in Ontario, which criminalized 'immoral' and 'incorrigible' acts conducted by women if they were found to be pregnant out of wedlock or drunk in public.

Other forms or manifestations of systemic racism may not be as readily obvious to some, usually those privileged by the system.

Fortunately, individuals can be anti-racist within, and despite, systems and institutions that are systemically racist. Despite that several laws have been passed and as well amended; racism still pose a big threat to the world even in this 21st Century.

In this study, we shall consider some visualisations that depict that racism is not yet dead in the world, Most especially in the giant countries of the western world. Specifically, we shall be considering the United Kingdom.

Racism in the United Kingdom

United Kingdom (UK) is made up of four divisions (countries) to include England, Wales, Scotland and Northern Ireland, and 45 different Police Force Area in which one of each belong to one of the following subdivisions (regions):

- Southwest Borders and Wales
- Southeast of England
- East Midland and East of England
- West Midland and Northwest of England
- North of England

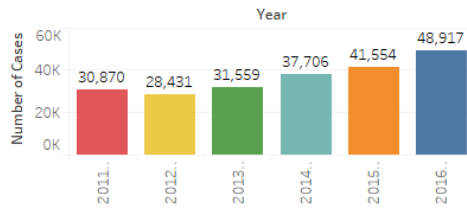
Data Source

The dataset used for this visualization was obtained from **data.gov.uk** and it was presented in financial year (e.g. 2007/08, 2008/09, etc.). A period of six financial years was considered for this work.

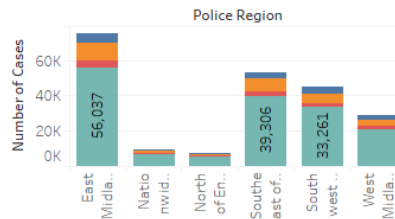
With the type of dataset obtained, more of exploratory data analysis via visualization could only be carried out.

Dashboard Presenting Different Visualizations

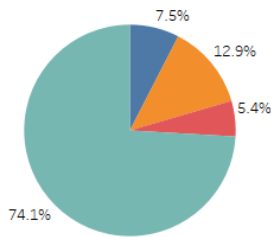
Frequency of Reported Cases of Racism per Financial Year in UK



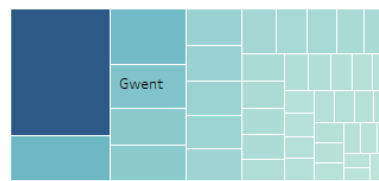
Number of Reported Cases Per Region



Percentage Case Type Reported



Number of Reported Cases in each Police Force Area



Case Type

- Assault with injury
- Assault without injury
- Criminal damage
- Harassment

Number of Cases

952 42,347

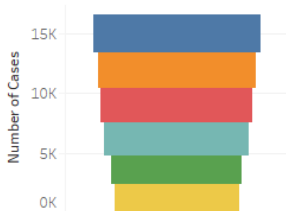
Year

- 2016/17
- 2015/16
- 2011/12
- 2014/15
- 2013/14
- 2012/13

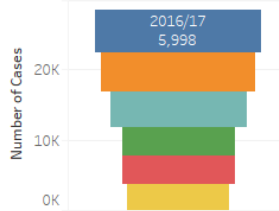
Number of Cases

- 2,352
- 2,600
- 2,800
- 3,000
- 3,157

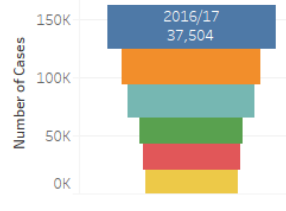
Funnel Chart Showing Assault with Injury for each year



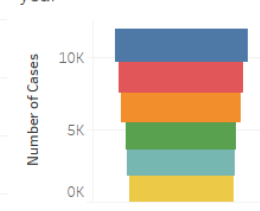
Funnel Chart Showing Assault without Injury for each year



Funnel Chart Showing Harassment for each year



Funnel Chart Showing Criminal Damage for each year



The above Dashboard shows different graphical representations of the dataset. In the above the following types of chart is seen:

- Bar Chart (Vertical)
- Stacked Bar Chart
- Pie Chart
- Tree maps; &
- Funnel Graph

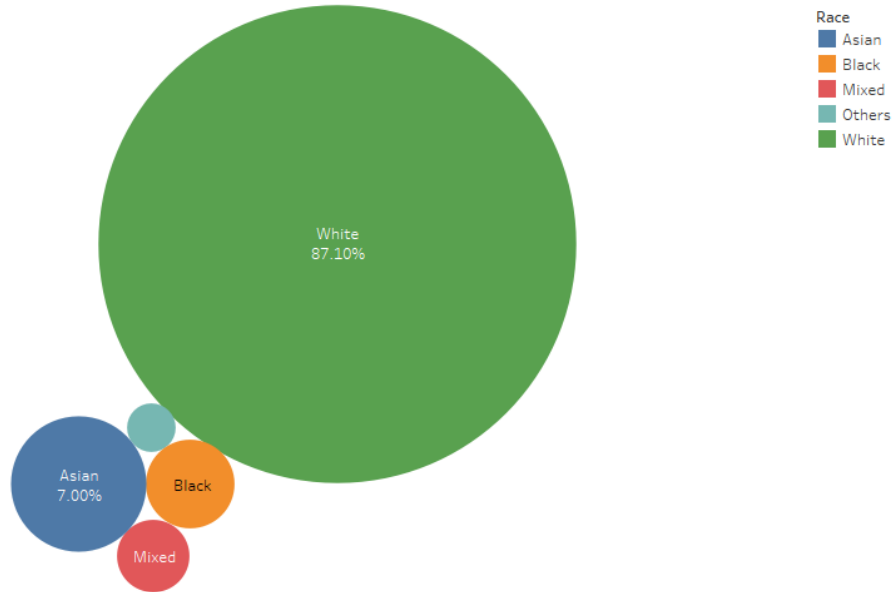
alongside the key(legend) that say more about each of the representation.

Population of the United Kingdom by Race

By virtue of the 2011 census of the United Kingdom, a total of 63,182,178 citizens reside in the united kingdom (Wikipedia).

The Bubble Chart below shows a percentage composition of the entire population by race. The bigger the bubble, the bigger the percentage.

Population of United Kingdom by Race

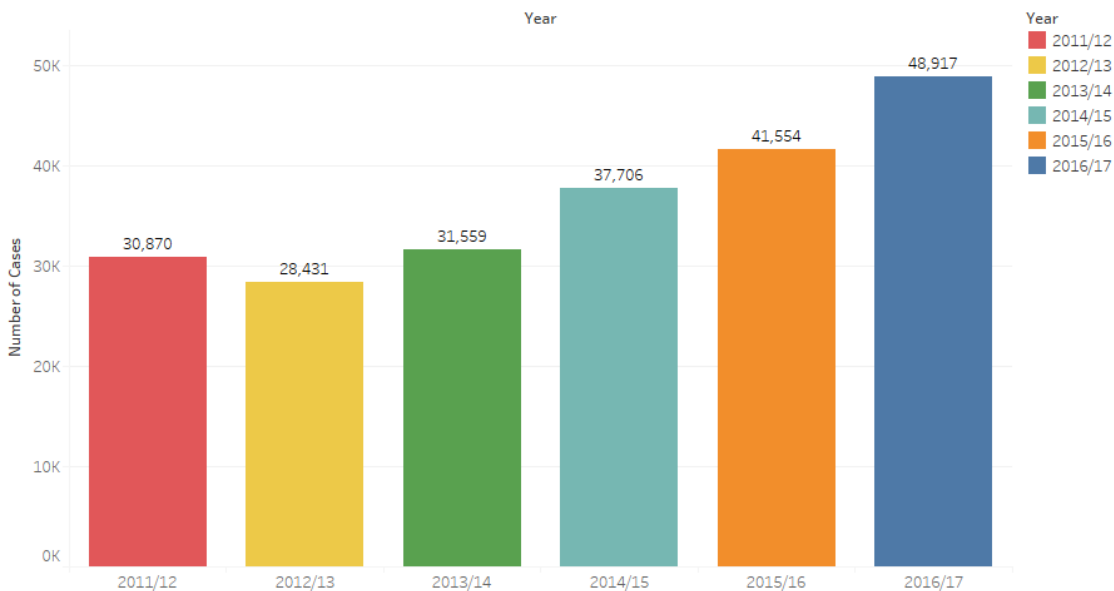


Race and % of Total Population. Colour shows details about Race. Size shows % of Total Population. The marks are labelled by Race and % of Total Population. Percents are based on the whole table.

Total Reported Cases of Racism per Financial Year in UK

The Bar Chart below shows the frequency of the Reported Cases from 2011/12 – 2016/2017 financial years, with 2014/15 – 2016/17 being the top three. Except for a little decrease from 2011/12 to 2012/13, the chart reveals that the total number of reported cases on racism in the United Kingdom increases at a significant rate each financial year.

Frequency of Reported Cases of Racism per Financial Year in UK



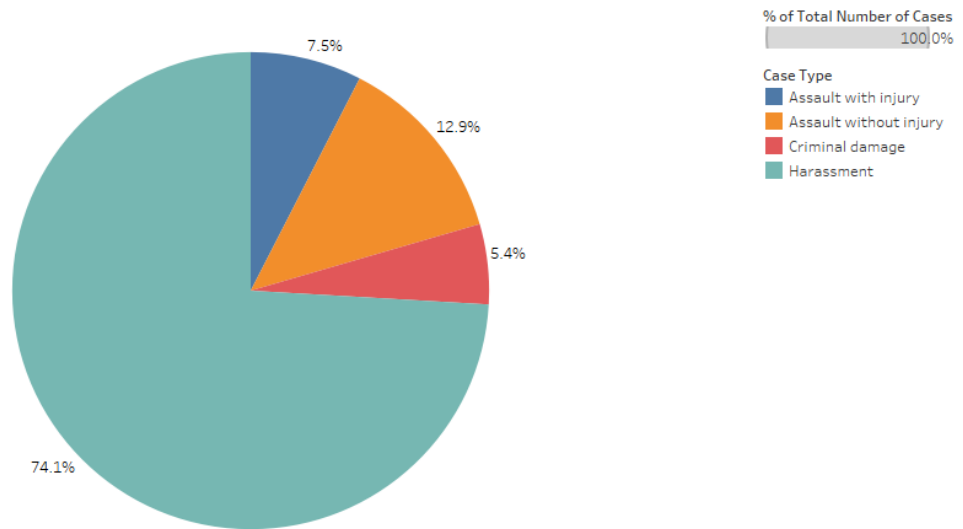
Sum of Number of Cases for each Year. Colour shows details about Year. The marks are labelled by sum of Number of Cases.

Case Type Reported

Below is a Pie Chart showing different categories of crimes associated with racism being reported to the Police force Areas of the United Kingdom in the period covered to include: **Assault with Injury, Assault without Injury, Criminal Damage and Harassment.**

The chart reveals most victims of racism in the United Kingdom suffer harassment while more suffer assaults (without injury) and a little percentage have their properties damaged.

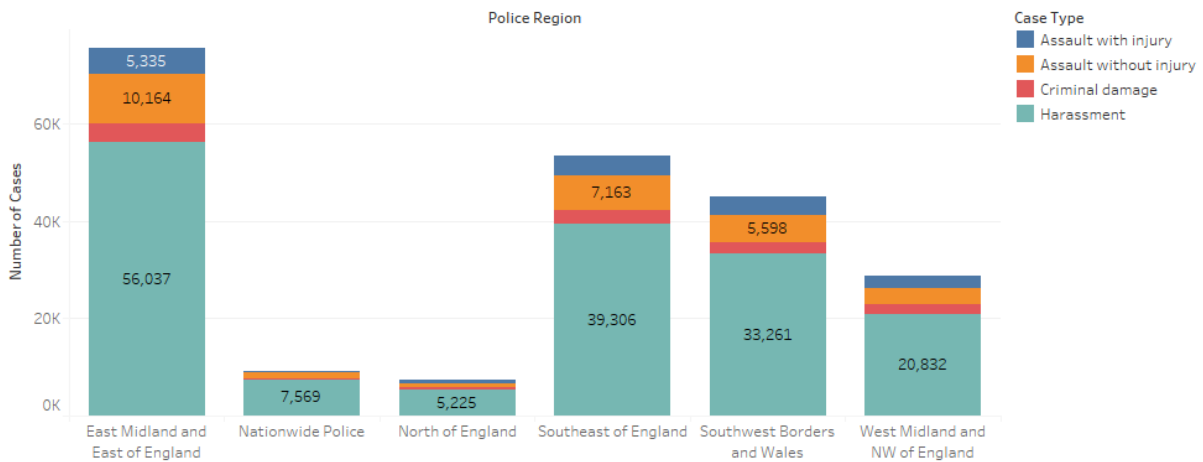
Percentage Case Type Reported



Case Type (colour) and % of Total Number of Cases (size). Percents are based on the whole table.

Number of Reported Cases Per Region

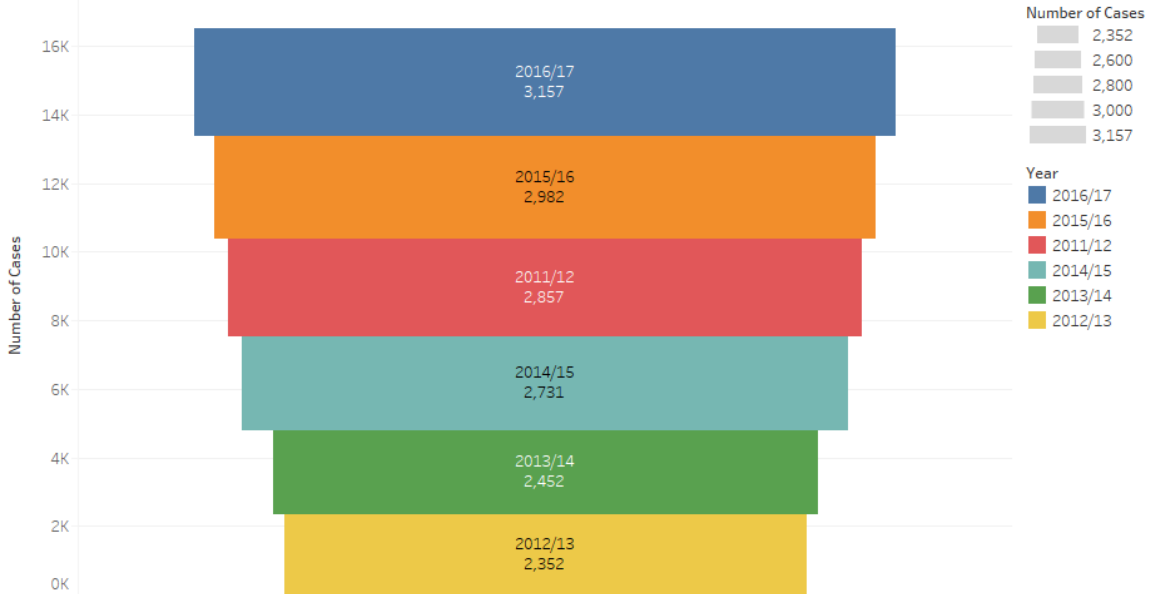
Number of Reported Cases Per Region



The Stacked Bars shows each section in the UK with each bar divided by the total number of case type reported to each section.

Reported Assaults with injury Per Financial Year

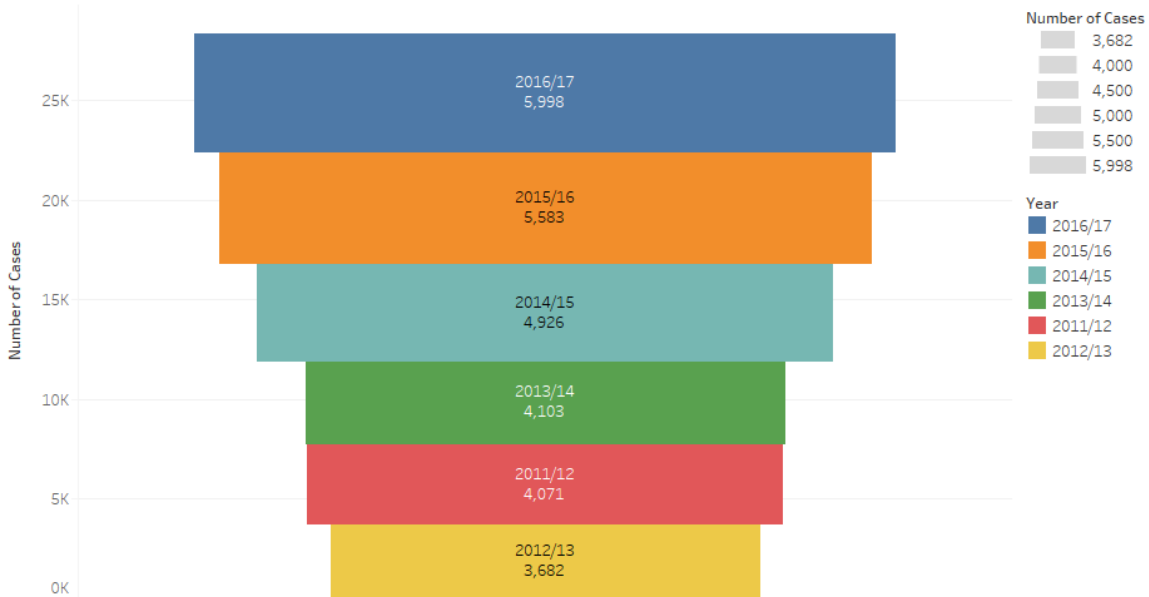
Funnel Chart Showing Assault with Injury for each year



Sum of Number of Cases. Colour shows details about Year. Size shows sum of Number of Cases. The marks are labelled by Year and sum of Number of Cases. The data is filtered on Case Type, which keeps Assault with injury.

Reported Assaults without injury Per Financial Year

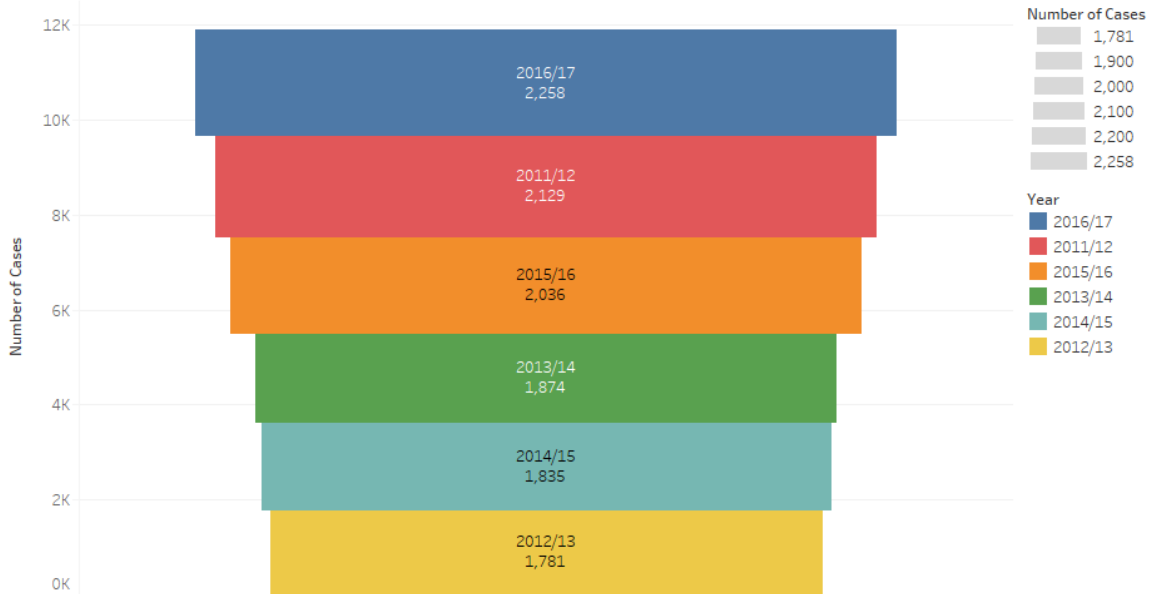
Funnel Chart Showing Assault without Injury for each year



Sum of Number of Cases. Colour shows details about Year. Size shows sum of Number of Cases. The marks are labelled by Year and sum of Number of Cases. The data is filtered on Case Type, which keeps Assault without injury.

Reported Criminal Damage per Financial Year

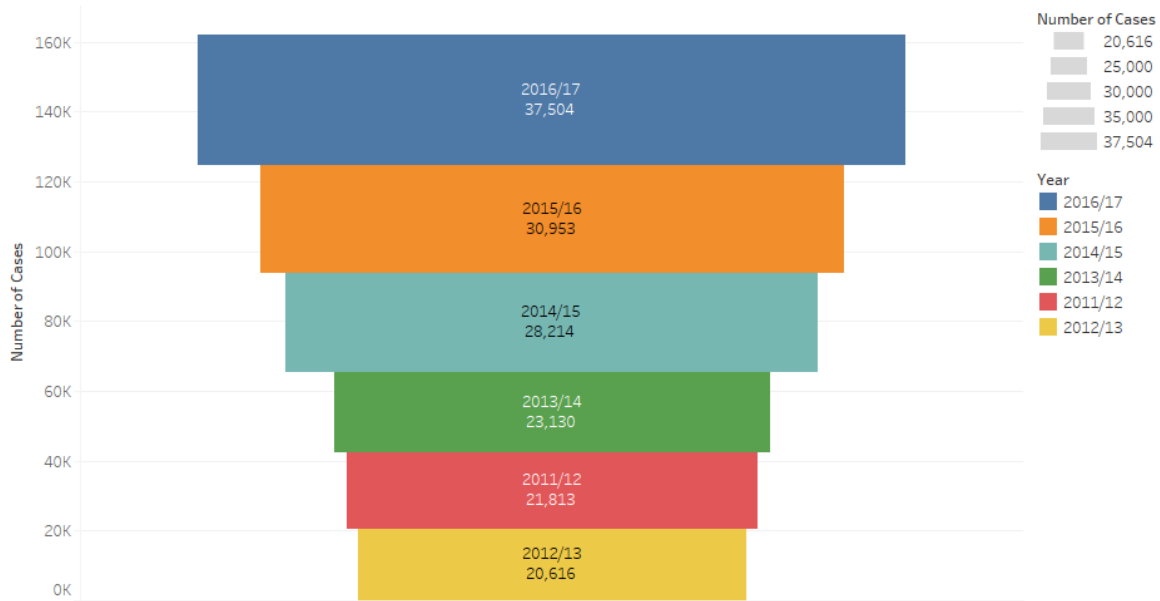
Funnel Chart Showing Criminal Damage for each year



Sum of Number of Cases. Colour shows details about Year. Size shows sum of Number of Cases. The marks are labelled by Year and sum of Number of Cases. The data is filtered on Case Type, which keeps Criminal damage.

Reported Harassment per Financial Year

Funnel Chart Showing Harassment for each year



Sum of Number of Cases. Colour shows details about Year. Size shows sum of Number of Cases. The marks are labelled by Year and sum of Number of Cases. The data is filtered on Case Type, which keeps Harassment.

Reported Cases per Police Force Area

The treemap below shows the sum of the number of reported cases tendered at each Police Force Area of the United Kingdom for the period covered, with Northamptonshire having the highest total number of reported cases.

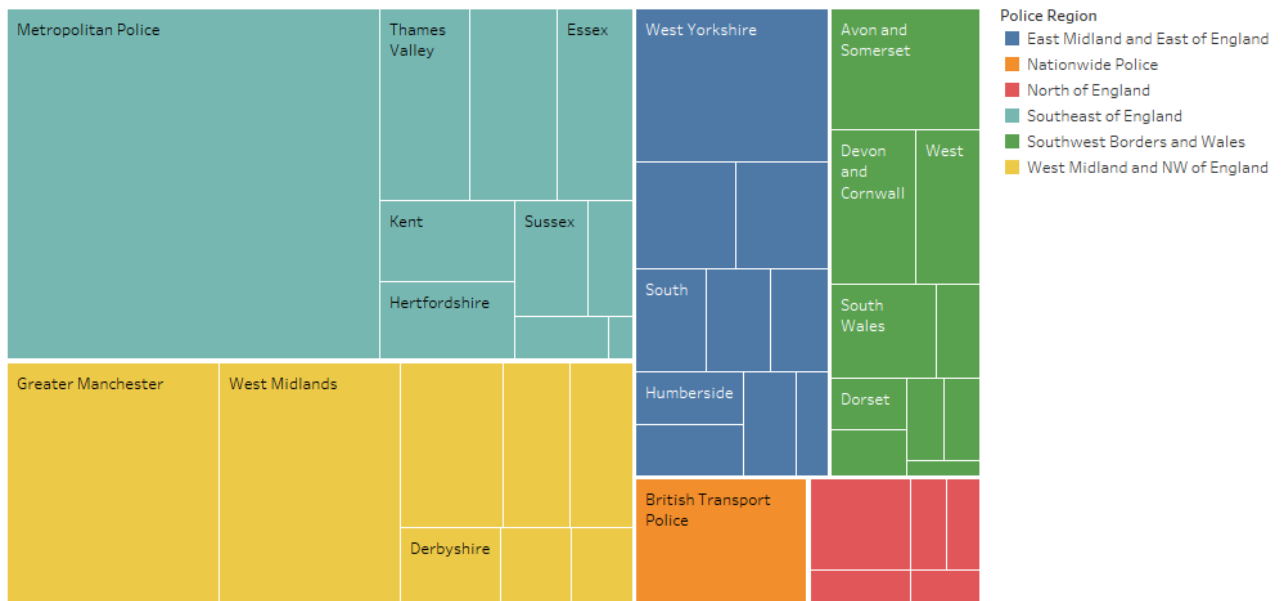
Number of Reported Cases in each Police Force Area



Police Force Area. Colour shows sum of Number of Cases. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 6 of 6 members.

Reported Cases per Financial Year per Region per Police Force Areas

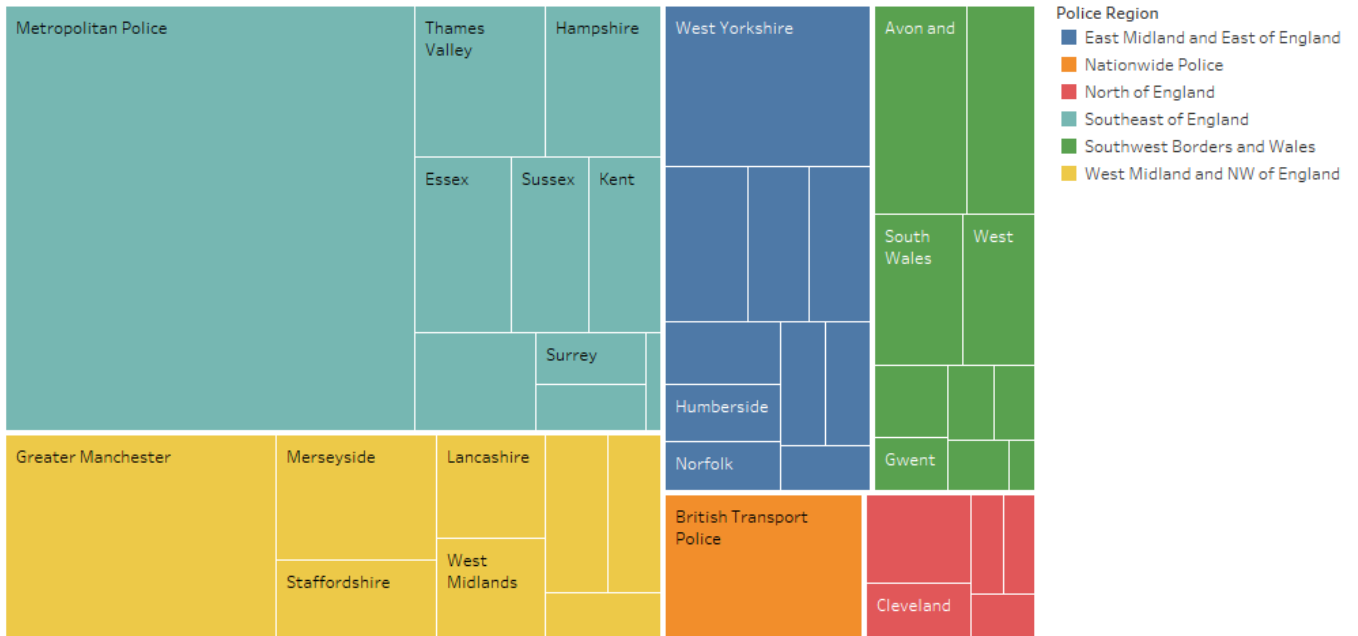
Reported Cases for 2011/12 in each Police Force Area per Police Region



Police Force Area. Colour shows details about Police Region. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 2011/12.

For the year 2011/12, Southeast of England has the highest reported cases of racism (with the most report recorded by the Metropolitan Police) followed by the West Midland and Northwest of England (highest report from Greater Manchester) with the least record in the North of England.

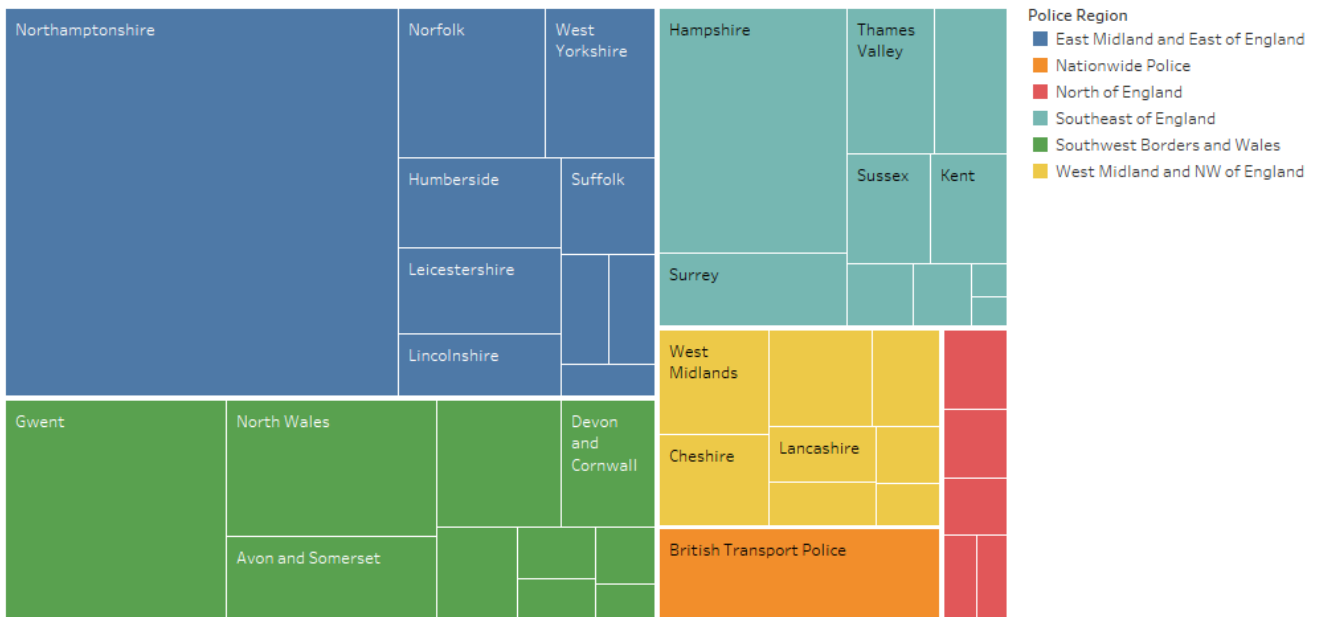
Reported Cases for 2012/13 in each Police Force Area per Police Region



Police Force Area. Colour shows details about Police Region. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 2012/13.

Reported cases in 2012/13 almost follow suit as the previous year but with a significant rise in Hampshire (Southeast of England) and also a conspicuous decrease in Avon and Somerset (Southwest Borders and Wales) compared to the previous year.

Reported Cases for 2013/14 in each Police Force Area per Police Region

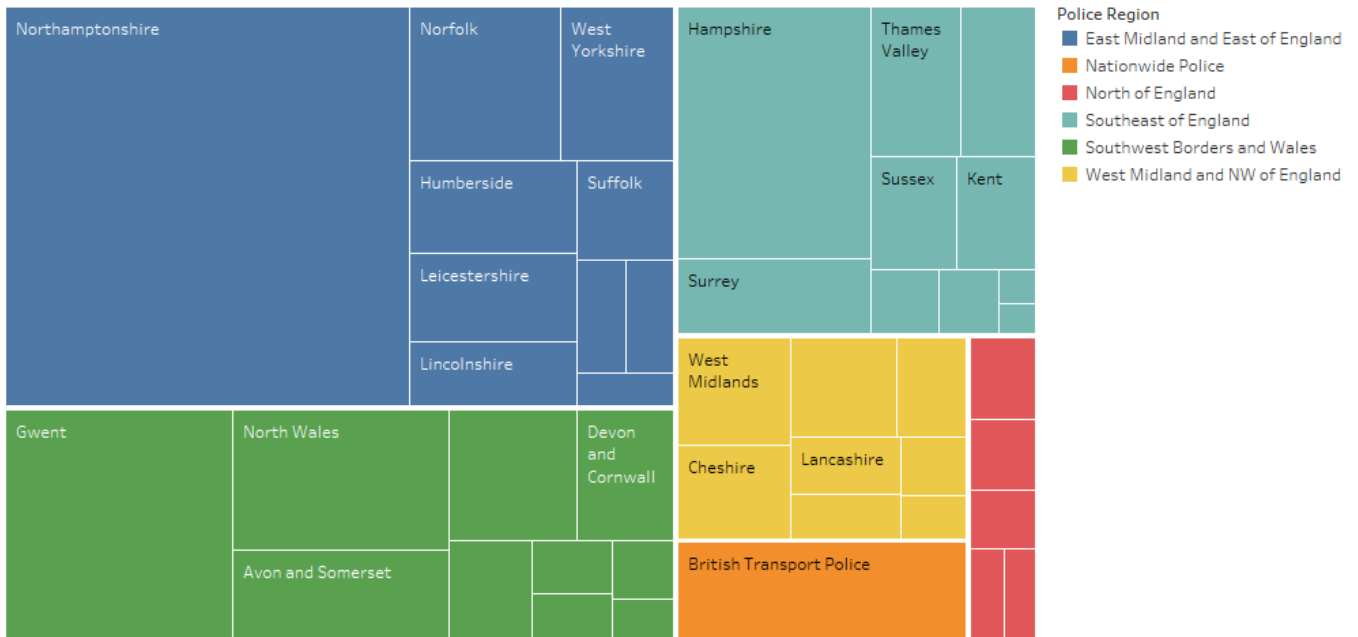


Police Force Area. Colour shows details about Police Region. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 2013/14.

Compared to the previous financial years, there's a drastic change in 2013/14 in which reported cases in the East Midlands and East of England are on the rise with the most reported cases coming from Northamptonshire which was initially no where to be found in the previous years considered.

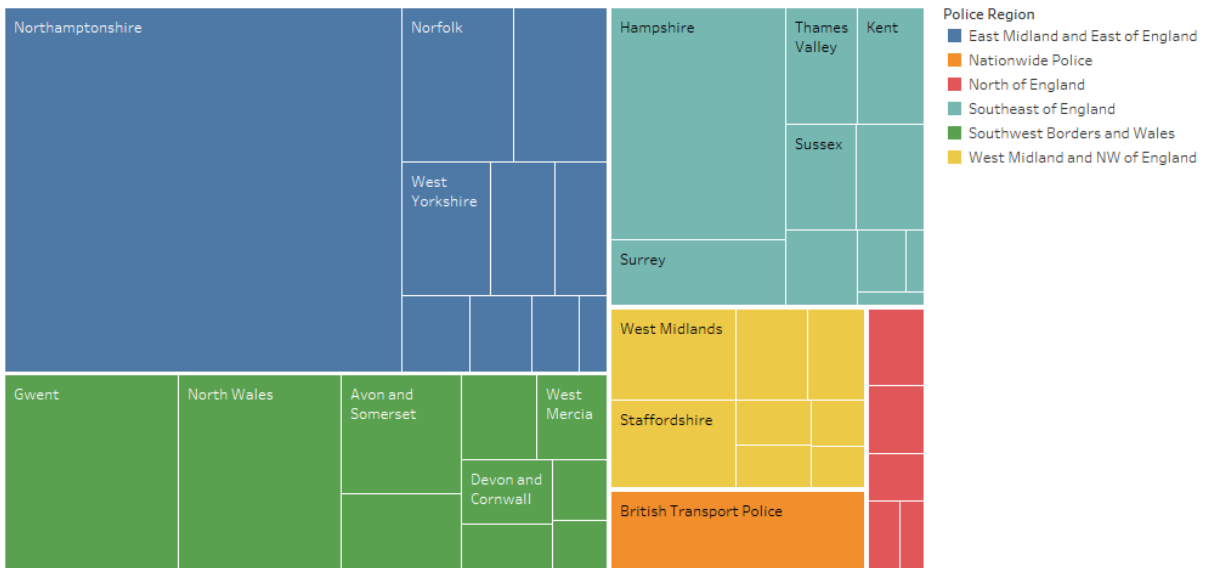
Metropolitan Area and Greater Manchester are currently nowhere to be found on the treemap, hence a sharp decrease in reported cases in the Southeast of England and West Midland and Northwest of England respectively. Though the North of England usually has the least reported cases, yet there's reduced reported cases in the region compared to the previous years (same as British Transport Police).

Reported Cases for 2014/15 in each Police Force Area per Police Region



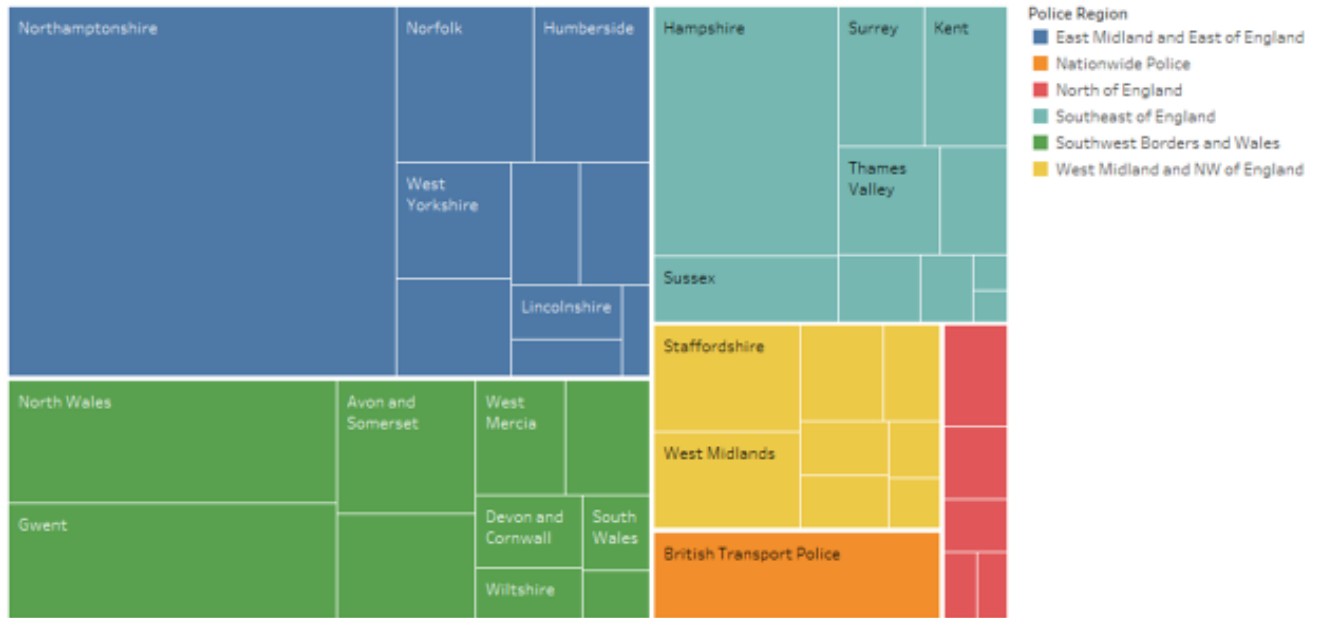
Police Force Area. Colour shows details about Police Region. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 2013/14.

Reported Cases for 2015/16 in each Police Force Area per Police Region



Police Force Area. Colour shows details about Police Region. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 2015/16.

Reported Cases for 2016/17 in each Police Force Area per Police Region



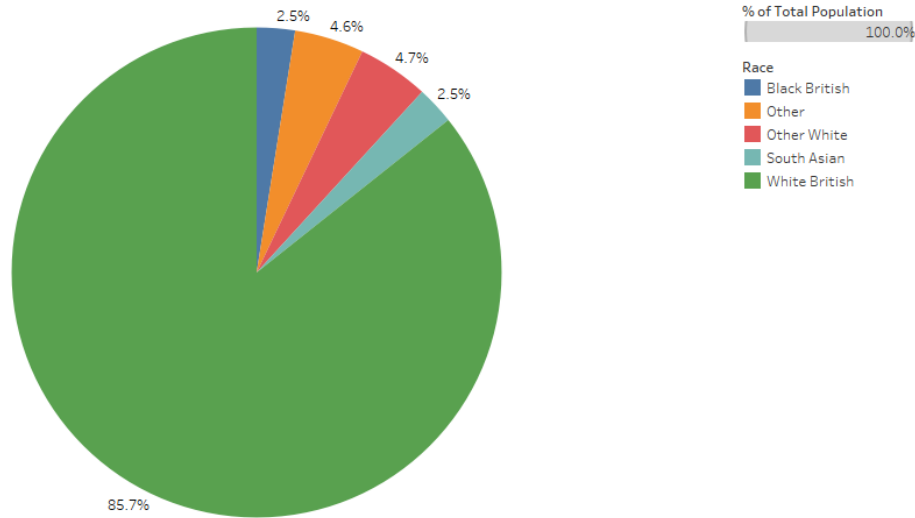
Police Force Area. Colour shows details about Police Region. Size shows sum of Number of Cases. The marks are labelled by Police Force Area. The data is filtered on Year, which keeps 2016/17.

The last three financial years still have Northamptonshire to be the leading Police Force Area for reported racism cases both for the East Midland and East of England and also for the entire United Kingdom. Also, Hampshire tops the Southeast of England for these three years.

Further Exploration of Northamptonshire

The population of the Northamptonshire area of United Kingdom as of 2015 is 723,000 (source: Wikipedia). The pie chart below shows the percentage distribution of the total population by race. With the whites dominating the area, Asians and Blacks both comprised of 2.5% each of the entire population.

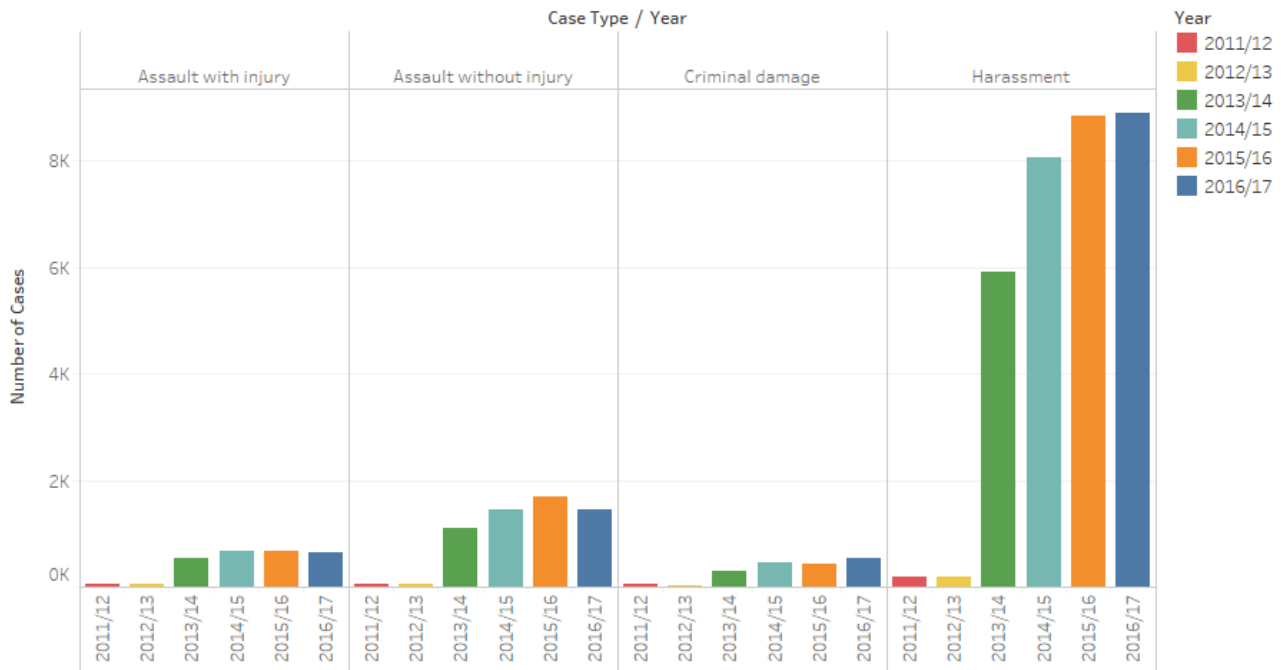
Northamptonshire Population by Race



% of Total Population. Colour shows details about Race. Size shows % of Total Population. The marks are labelled by % of Total Population. Percents are based on the whole table.

Reported Cases of Racism in Northamptonshire.

Breakdown of Northamptonshire

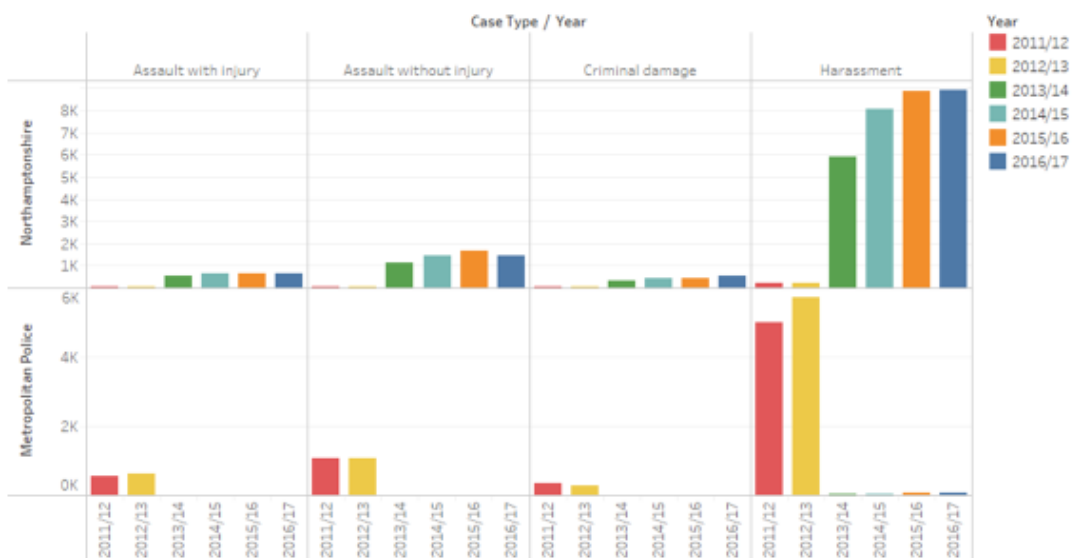


Sum of Number of Cases for each Year broken down by Case Type. Colour shows details about Year. The data is filtered on Police Force Area, which keeps Northamptonshire.

The above bar chart shows a crosstabulation of Case type by year of reported racism cases in Northamptonshire. It is worthy of note that from 2013/14 up to the last year considered, there is a significant increase in the number of reported cases most especially a skyrocketing level of Harassment. This led to the area having a sudden top ranking on the leader of the police force area, displacing the initial Metropolitan Police.

Comparing Metropolitan Police and Northamptonshire

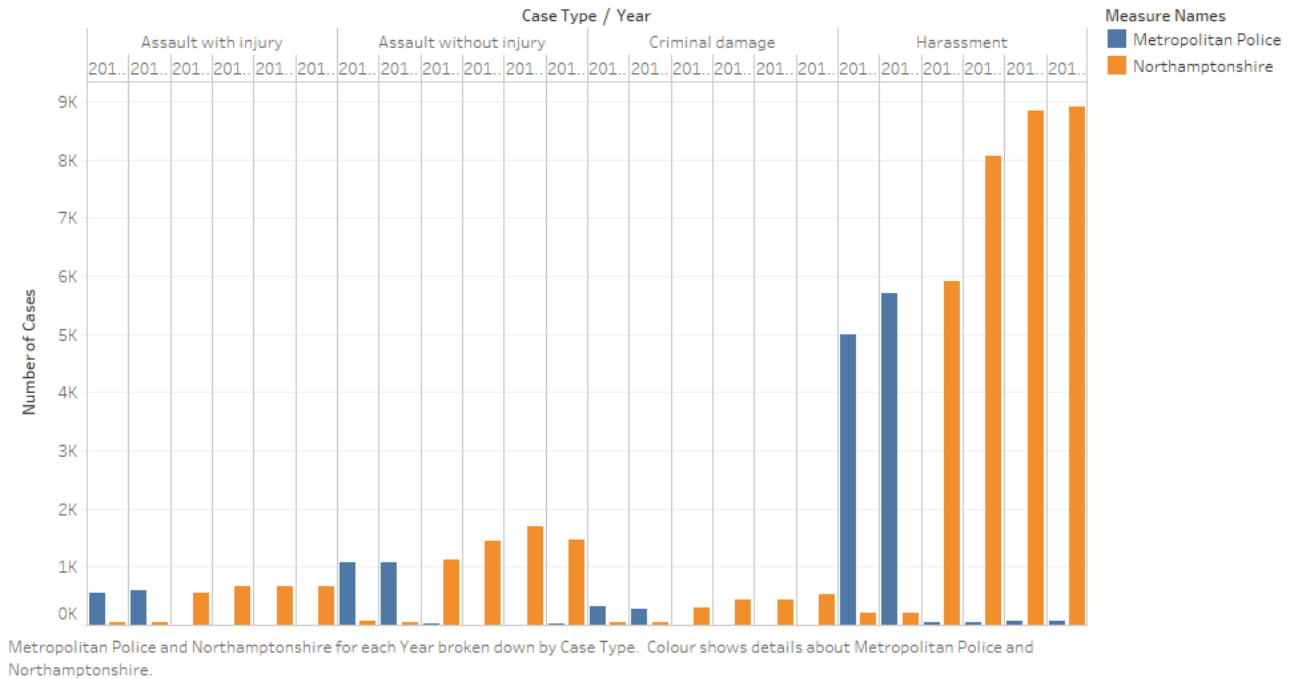
Northamptonshire and Metropolitan Police 1



Sum of Northamptonshire and sum of Metropolitan Police for each Year broken down by Case Type. Colour shows details about Year.

The above is a dual axis Bar Chart showing a comparison between the racism reported cases for both Northamptonshire and the Metropolitan Police areas. Obviously, in the first two years, the Metropolitan Police Area had a significant level of the bars in the reported cases (with Harassment being the most reported case) compared to that of Northamptonshire area, but the reverse is the case in the subsequent years. While the bars of reported cases in the Metropolitan Area is barely visible, that of Northamptonshire are shooting out as much as possible.

Northamptonshire and Metropolitan Police 2



The above side-by-side bar chart reveals clearly why the Northamptonshire Police Force Area took the lead in racism reported cases throughout the UK.

Observations

From our exploratory visualisations, much emphasis is laid on the Northamptonshire and Metropolitan Police Area of the UK because of the drastic changes that occur between the two areas.

It is worthy of note that the dataset obtained (and a visualisation of it) reveals that in the United Kingdom, there is more of Individual Racism than the Systemic simply because the reported cases above are only that which involves individuals and not by any policy or bill.

In other to probe into this a mail was sent to the East Northamptonshire Council (DP@east-northamptonshire.gov.uk) in order to get a dataset in this regard that of subsequent years (2017/18 till 2019/20) to know if the increment in the crime is progressive or perhaps there is a decline but as at the date of the compilation of this report, no response has been given yet.

Inferences

With the sharp increase in the recorded cases of Northamptonshire from 2013/14 and also a drastic decrease in that of the Metropolitan Area and Greater Manchester in the same year, it must have been that the Law Enforcement Agents in the latter areas must have implemented measures that curb the racists' acts which might not have been the same case with the Northamptonshire area. Moreover, it might probably be that the offenders relocated from those areas to Northamptonshire or any other possible cause.

Recommendation

We hereby recommend that if the measures put in place for the Metropolitan Police area and Greater Manchester to drastically reduced the racism crime could be implemented in other areas like Northamptonshire, Gwent, Hampshire and the host of others, if not totally curbed, a significant decrease in this crime rate will be recorded as well.

References

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Alberta Civil Liberties Research Centre: “What is Racism?” <http://www.aclrc.com/racism-and-power>, retrieved 5th August, 2020

Audrey Smedley: “Racism”, <https://www.britannica.com/topic/racism>, retrieved 5th August, 2020
Wikipedia

Data Sources

United Kingdom – data.gov.uk

United States of America – US Bureau of Statistics, FRED Economic Research Data