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# Investigating the police use of stop and search in England and Wales during the coronavirus pandemic

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## ABSTRACT

In this study we examine the use of the police stop and search tactic for preventing and investigating crime and as a method for maintaining order, during periods of national lockdown in England and Wales during the covid-19 global pandemic. By using time series modelling on data for all recorded stop and search over a 5-year period, we identify that of the 24 areas we examined, 16 saw the volume of stop and search increase significantly during lockdown periods. Significant findings included a rise in the overall volume of stop and search, and searches for controlled drugs. This is unusual given the reductions in crime and traditional police demand during the pandemic, creating somewhat of a paradox. We discuss this further and suggest that this can be reconciled by considering the possibility that the police have used the tactic of stop and search as a tool to maintain order during the pandemic, and specifically adherence to national lockdowns. This position is supported by the academic literature, an absence in associated recorded crime, correlations in the application of FPNs during the same period, and an increased volume of searches that resulted in no further action.

## 1. Introduction

In 2020 the spread of the coronavirus, COVID-19, was declared by the world health organization as a pandemic. As a result, governments around the world sought to tackle the virus through a combination of tactics. In the United Kingdom the immense health challenge presented by COVID-19 drove the biggest shift in the social, political, and policing landscape in over a generation. As previous such challenges have preceded legislative change, so too did the COVID-19 pandemic, which saw the introduction of the coronavirus act (Coronavirus Act 2020 (c.7) United Kingdom). With an emphasis on restricting the spread of COVID-19 the new legislation enacted stay at home orders and overnight the routine activities of the entire population of the U.K were significantly impeded. In doing so, the mobility of citizens drastically reduced (Halford et al., 2020) and traditional opportunities for contact between the police and the public declined.

New powers provided to the police to enforce coronavirus legislation to stop the spread of COVID-19 also caused the volume and nature of demand upon policing to change (Solymosi et al., 2021), and provided additional justification to interact with citizens. For decades, stop and search has been a tactic used by the police to warrant such interactions with citizens whom they had reasonable suspicion to be committing a criminal act. However, the coronavirus act now meant that simply being outdoors became reasonable justification for the police to stop and question any person seen in public. As a consequence, the new powers reshaped the role of the police from being one solely focused on crime prevention, reduction, and investigation, to one centered on the preservation of health.

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Although the act did not provide changes to stop and search, we hypothesise that such a dramatic change in policy regarding the contact between the police and public will affect the use of the tactic. However, to date, the impact of legislation related to the COVID-19 pandemic and its influence on police stop and search has not been explored. Examining this area is important as it will provide greater context to official data reported on stop and search during the pandemic. In addition, it will also enable us to understand how new and alternate powers to interact, control and enforce behavior upon the public affects the use of stop and search as a tool for crime prevention, investigation, and order maintenance. Furthermore, it will enable us to understand how increased discretionary powers affected the policing of everyday behaviours in the context of a public health emergency. Finally, it will also provide insights with ethical implications for the use of stop and search regarding the manner in which the power of such a tactic was wielded to maintain public health and safety, especially within the context of procedural justice theory.

## 2. Literature review

In the UK the police commonly use a tactic called stop and search. This tactic involves officers stopping citizens and then searching their person, and/or vehicle, if they have reasonable grounds to believe they may be in possession of an item that constitutes a crime, or can be used to conduct a criminal offence. Normally this relates to searches for illegal drugs, weapons, stolen property or something which could be used to help a person conduct a crime, such as a crowbar. The UK tactic is distinct to approaches seen in the United States, where police use what is known as stop and frisk, which is a less intrusive means of search and is often in the form of a 'pat down', commonly used as a detection tactic to locate weapons such as firearms, or as a preventative tactic in crime hotspots (Skogan, 2017).

### 2.1. How is stop and search used?

According to UK guidelines on stop and search, a police officer must have a "genuine and objectively reasonable suspicion that he or she will find a prohibited article or item for use in crime" (College of Policing, 2022) before conducting a search. When developing such suspicion "some specific behavior by the person concerned" is sufficient (Her Majesty's Inspectorate of Constabularies, 2013) for the officer to consider the threshold met.

As a tactic, it has been suggested that stop and search in the UK has 3 primary rationales. First, it is used as a preventative deterrent to the commission of crime (Apel and Nagin 2011; Bowling and Weber, 2011; Bradford et al., 2013; Nagin 2013; Pratt et al., 2009; Tiratelli et al., 2018; Quinton et al., 2017). It has been argued that the tactics preventative impact is achieved through its deterrent effect, which is founded upon the hypotheses that if a criminal believes they are more likely to be found in commission of an offence (Apel and Nagin 2011; Nagin 2013; Pratt et al., 2009), then the risk will deter them from committing a crime.

Second, it is used as an investigative tactic to detect crimes in action (Bowling and Weber, 2011). As an investigative aid, the tactics appeal is particularly pervasive in the context of detecting possession related crimes, such as carrying controlled drugs or offensive weapons, which stop and search is most likely to detect (Tiratelli et al., 2018). It also finds appeal in its application in the immediate aftermath of a crime, burglary for example, where alongside powers to search properties, stop and search is believed to be one of the most effective ways to locate stolen property. These beliefs are what Murray (2018) suggests provide its underlying appeal to police officers.

In addition to its use as a crime prevention and investigation tactic it has been argued that it is also used as a way for the police to maintain order (Bradford and Tiratelli, 2019; Braga et al., 2014; Choongh 1997; Quinton 2011; Smith and Gray 1985). In this context it is suggested that order is achieved by asserting power, often in focused geographic boundaries (Choongh 1997; Quinton 2011; Smith and Gray 1985). It has been suggested that the police do this to regulate the behavior of citizens within the specified zones (Bradford and Jackson, 2016) by displaying the use of their power (Gau and Brunson, 2010; Parmar, 2011; Tyler and Huo, 2002), the most visual of which is often stop and search.

### 2.2. Why is stop and search used by the police?

The effectiveness of stop and search as both a preventative deterrent and investigative tool has been examined robustly (McCandless et al., 2016; Rosenfeld and Fornango, 2014; Smith et al., 2012; Tiratelli et al., 2018; Weisburd et al., 2016; Weisburd et al., 2021). In doing so, it has been suggested that its impact on crime is limited and predominately restricted to drug related offences (Tiratelli et al., 2018). Even then, it has been argued this is more a result of identifying drug offences and not its ability to reduce or prevent their occurrence (Tiratelli et al., 2018). Despite such findings it has been argued that stop and search stubbornly retains its appeal amongst policing practitioners (Bowling and Weber, 2011), posing the question why.

The answer to this is best understood by examining how, and where the police apply the power that the tactic provides. At its core, stop and search is underpinned by theory from within criminology, specifically that related to routine activity theory (RAT) (Cohen and Felson, 1979), situational crime prevention (SCP) (Clarke, 1995) and rational choice theory (RCT) (Cornish and Clarke, 1985). Research in these areas has evidenced that issues affecting the police, such as crime and disorder, most frequently occur around pathways and nodes where members of the public, and those involved in such negative behavior, interact during their 'routine activities' (Brantingham and Brantingham, 1993; Cohen and Felson, 1979). The primary focus of SCP is to enable authorities, such as the police, to put interventions in place at these nodes and pathways, at the right time, so that they can prevent or reduce instances of behavior perceived as negative, such as crime and disorder (Clarke, 1995).

The main concept that underpins SCP is the argument that for incidents to occur, three components need to be considered. These

include, a motivated offender, a potentially suitable target or victim, and the absence of a capable guardian (Cohen and Felson, 1979). The capable guardian, which is frequently the police, is vital in this three-way interaction as their presence is often enough to deter a potential offender from committing the behavior perceived as negative, such as crime and disorder (Cohen and Felson, 1979). Research has repeatedly demonstrated the effectiveness of implementing capable guardianship interventions which has led to it being a widely used police tactic, supported by interventions including stop and search, and is one of the main drivers behind why the tactic is commonly supported by police.

The effectiveness of guardianship takes advantage of the final concept outlined, rational choice theory (RCT) (Cornish and Clarke, 1985). RCT argues that those who commit crime and disorder make a considered decision to do so. This is based on an heuristic calculation of risk that balances the reward of the act vs. the consequences of getting caught. Stop and search increases the risk in this calculation, especially for offenders who may be in possession of prohibited items such as drugs, weapons or stolen property. It is also argued to deter those not in possession of such items as many people simply do not want to be stopped and searched in public by the police due to the associated shame and/or perception of guilt this can create, therefore, the threat or risk of the tactic being used against them often acts as a strong coercive deterrence (Apel and Nagin 2011; Nagin 2013; Pratt et al., 2009).

### 2.3. How is stop and search conducted?

It is the inherent application of power that is involved in using stop and search that has led research to explore the conduct of the tactic. This has been achieved by examining the issue through the lens of procedural justice theory (PJT) (Bradford, 2017; Bradford and Jackson, 2016; Huq et al., 2011a, 2011b; Papachristos et al., 2012; Schulhofer et al., 2011; Sunshine and Tyler, 2003; and 2011; Tyler and Fagan, 2008; Tyler et al., 2010, 2015; Tyler and Jackson, 2014).

At its core, it has been suggested that PJT focuses on the universal consensus that “*T’ain’t what you do, it’s the way that you do it’ t*” (Hough et al., 2017, p274). In a policing context, Thacher (2019) suggests that PJT relates to the way in which the police behave during their interactions with the public, and is especially relevant during the application of power, as in the case of stop and search. PJT places an emphasis on how the police interact with citizens, who are more inclined to co-operate if they perceive themselves to be treated equitably, and fairly (Lind and Tyler, 1988; Schauer, 2015; Tyler 2016; Schulhofer et al., 2011). Therefore, for the police to achieve a procedurally just interaction 4 key conditions must be satisfied (Bradford, 2017; Bradford and Jackson, 2016).

- (1) The person subject to the interaction must be treated in line with the law.
- (2) They must also be respected, which is often demonstrated by using appropriate vocal tones and pitch by the police (McCluskey and Reisig, 2017).
- (3) The police must listen to the account provided by those subjected to the interaction (Bradford, 2017; Bradford and Jackson, 2016).
- (4) The police must make it clear why the interaction has occurred (Bradford, 2017; Bradford and Jackson, 2016).

### 2.4. The impact of stop and search

The aforementioned components are vital because if the subjects do not perceive the interaction to be procedurally just, it can have a negative impact. For example, if conducted incorrectly, studies indicate that young people are much more likely to behave in anti-social manner in the future, regardless of the outcome of the search (McAra and McVie, 2005). This increases if the same people are repeatedly subjected to the tactic (McVie, 2015), and has a lasting effect. Others (Bowling and Weber, 2011) suggest it reinforces negative stereotypes, creates division between communities and the police (Murray et al., 2021), and reduces the likelihood that the subject will fully cooperate with authorities in the future. It can also have a significant negative impact on the legitimacy of the police (Stevenson, 2016; Delsol and Shiner 2006; Thacher, 2019). These are important issues as if people do not view the police as a legitimate entity, it increases the risk that they will not respect the legal frameworks in place, the legislation they are built on, or their application (Bottoms and Tankebe 2012; Bradford, 2014; Hough et al. 2010, 2013; Jackson et al., 2012; Tyler and Huo 2002; Tyler and Blader, 2000; Tyler 2006, 2011; Tyler and Fagan 2008). PJT is important in the context of this study as if it is identified that the police may have misused stop and search during the pandemic, then it is likely to have some significant and potentially negative effects on the confidence and legitimacy of the police, and future behavior and attitudes towards them from those subjected to the searches.

### 2.5. How the pandemic is likely to impact the use of stop and search

Research on the impact of coronavirus lockdowns has shown that they significantly decreased levels of mobility of the population in England and Wales (Halford et al., 2020). New legislation in the form of the Coronavirus Act 2020 (Coronavirus Act 2020 (c.7) United Kingdom) was implemented to prevent contact between people to help stop the spread of the virus. As a result, several key rules were implemented. These included “*stay at home*” lockdown laws and the closing down of significant sections of society such as schools, businesses, and large events (Brown, 2021). In addition, restrictions were placed on social distancing, public gatherings, and the necessity for infected persons or their close contacts to self-isolate to stop the spread of the virus was also made mandatory (Brown, 2021).

Such a rapid reduction in mobility, and the new rules, significantly reduced overall crime (Halford et al., 2020) and we hypothesize will reduce opportunities for stop and search activity, with the exception of drug and cyber related offences, both of which increased during the pandemic (Langton et al., 2021). As a result, there were less property crimes such as theft and burglary, which was most

prominent during the first national lockdown (Halford et al., 2020). Because of this, less 'investigative' stop and search are likely to have occurred. For example, less burglary offences means less opportunity for the police to stop and search potential offenders in possession of stolen items in the immediate aftermath of such an offence.

Other studies have shown that the police also received fewer calls for service, and spent less time at crime scenes, both further reducing interactions with the public (Solymosi et al., 2021). The police also had fewer road related incidents to attend to (Solymosi et al., 2021). As a result, less 'general' contact with the public should also lead to less opportunity for the police to identify reasonable grounds of suspicion for a host of offences that underpin the authority of the police to conduct a stop and search.

With the new coronavirus legislation came new powers for the police to disperse citizens and impose fixed penalty notices (FPNs) to people who breached such laws (Brown, 2021). To support the implementation of the new legislation the police embraced a 4E's strategy, which stood for 'engage, explain, encourage, enforce' (Brown, 2021), as a result, in contrast to the aforementioned examples of decreasing demand, incidents related to breaches of coronavirus legislation presented an increase (Solymosi et al., 2021) along with small rises in anti-social behavior (Halford et al., 2022). The combination of these two factors (new powers and policies, and increasing disorder related activity) adds a new dimension to interactions between the police and the public and may have provided an alternate option to stopping and searching people during the pandemic and as a result, less reliance on the tactic as a method for maintaining order.

## 2.6. The official statistics on stop and search during the pandemic

As we have argued, it would be natural to conclude then that when combined (decreased levels of population mobility and changes in crime and demand), these changes should lead to less use of stop and search by the police to prevent and investigate crime. However, official statistics on the matter indicate that the use of stop and search actually rose by 24% during the period of April 1st 2020–March 31st 2021 when compared with the previous year (Home Office, 2022). Importantly, this period covered all 3 lockdowns. This trend has been present since 2018/19 and has been attributed to improvements in stop and search data supplied by police services (Home Office, 2022). As such, understanding if, and to what extent, levels experienced during 2020 are influenced by the pandemic enables us to both understand the existing trend in more detail, and also offers insight into how stop and search was used in the new operating environment.

Scholars have also suggested that in tackling COVID-19 related demand, the police enforcement of coronavirus legislation and use of the FPN system would create a negative backlash against them (Bradford et al., 2020). It was argued that widespread defiance may even threaten the fundamental legitimacy that they held (Bradford et al., 2020). In other countries, reporting has demonstrated that such backlash did result in large scale violent disorder.<sup>1</sup> In the U.K, even just potential for such violence enables the police to implement widespread stop and search powers under the public order act (Public Order Act, 1994 (c.33) section 60) in any area they think it may occur, without the need for reasonable grounds or suspicion. As such, although overall stop and search is likely to have decreased, we also want to explore this area to help understand if the police called upon 'section 60' powers more frequently during the pandemic to prevent potential covid-19 related disorder.

When we examined official statistics on this area we identify that the use of section 60 powers decreased by 49% during the period of April 1st 2020–March 31st 2021 when compared with the previous year (Home Office, 2022). This decrease was despite a significant relaxation of the laws surrounding its use as part of the governments 'Beating Crime Plan', which made it easier for the police to implement (Home Office, 2021). However, an overall decline does not negate an increase during lockdown periods and as the official data does not illustrate how these powers were used during the peaks of the pandemic, and specifically during periods of national lockdown, this study will seek to do so.

Overall, understanding how all of the aforementioned factors affected stop and search during the pandemic will help us understand if the changes seen in nationally publicized data are part of an existing or emerging trend, or are as a direct result of the pandemic lockdown conditions. In doing so, it will also add further insight into *how* the overall policing use of the tactic may have adapted during the pandemic by helping to understand if it was used to prevent or investigate crime, or as a tool for order maintenance.

## 2.7. Purpose and aims of the study

We hypothesize that key changes related to covid-19 that affected policing during the 2020 pandemic (decreased levels of population mobility, changes in police demand, including reductions in recorded crime, introduction of coronavirus legislation enforcement and the potential public order response to coronavirus legislation enforcement), will impact the conduct of police stop and search, especially during the periods of lockdown.

The primary aim of the study is to explore the impact of such influencing factors on stop and search so that we can interpret if any changes identified are part of an existing trend or pattern, or are distinct to the conditions of the coronavirus lockdowns.

Our secondary aim is to then consider how stop and search has been tactically used during the lockdowns, as this will add significant value to literature on the use of stop and search, which has never been examined in such conditions. We consider this by grouping the reasons for conducting searches into the categories for which stop and search is outlined as being used in the literature i.e. preventative, investigative, and order maintenance. These are outlined in Table 1.

<sup>1</sup> COVID-19: Riot police deploy water cannon and tear gas against anti-lockdown protesters in Brussels.

We achieved this by examining the 17 total reasons available that are recorded for the stop and search in the data sets we retrieved. We then grouped those that only relate to the 3 reasons we have outlined (preventative, investigative tactic, and order maintenance).

In [Table 1](#) we categorize preventative reasons as those which require a person to have possession of an item, *with the intent* of committing a future criminal offence. For example, a person who has in their possession, without a reasonable justification, a lock snapping kit used to break into homes. Preventative stop and search reasons exist so that officers are able to prevent such crimes before they occur, possibly even leading to convictions for offences such as 'going equipped',<sup>2</sup> which in English and Welsh law is when a person is carrying an item with the intention of using it to commit a future crime.

Similarly, we include under the investigative category, reasons that are to investigate *active commission of a crime*, and not to prevent a future act. These relate to offences for which possession alone is considered an offence, without requirement to prove intent. As such, they include stop and search for drugs and stolen property. Finally, we naturally included any searches conducted under the English and Welsh public order legislation we have outlined (section 60) within the category of stop and search used to conduct order maintenance.

Our approach to categorizing criteria of stop and search in this manner has never been done before and has therefore never been proven as a by-proxy, which we acknowledge as a limitation of this methodology. However, the objective of the indicators used allows us to make a strong connection to each of the criteria that is both valid and credible, and therefore reliable.

## 2.8. Data and method

To enable the study to test our hypothesis we use open-source data that provides all recorded police stop and search in England and Wales to complete our 2 primary aims (examine whether stop and search was affected and if so, how). This data is available at [www.policedata.co.uk](http://www.policedata.co.uk). Data was retrieved for all police services in England and Wales over a 5-year period between January 2016–December 2021. We use this data to concentrate on the periods during which national lockdowns were in place, which provides the best indicator of the pandemics impact. These periods included March 26th, 2020 until May 10th, 2020 (Lockdown 1), November 5th, 2020 until December 2nd, 2020 (Lockdown 2) and January 6th, 2021 until March 8th, 2021 (Lockdown 3) ([Institute for Government, 2021a, 2021b](#)).

Of note, in between the full national lockdowns imposed in England and Wales a complex system of local lockdowns was also introduced. Local lockdowns worked on a tiered system, ranging from the lowest level (Tier 1), all the way to the highest (Tier 4), which imposed full stay at home conditions that replicated the full national lockdowns ([Institute for Government, 2021a, 2021b](#)). As a result, at various stages between national lockdowns any number of localized areas that were experiencing higher levels of infection could be subjected to a range of conditions that would affect the factors we have outlined as influencing the potential use of stop and search. It is for this reason that our study refrains from examining these periods and focuses solely on the periods of national lockdowns. This limitation could be addressed through future, geo specific studies.

Descriptive statistics are first used to analyze patterns and trends. These are identified by calculating overall counts, means and percentile changes for each lockdown period for the stop and search reasons used to explore our 2 primary aims. To support the aforementioned, we also test for statistical significance by calculating the T-Test to check if the mean daily number of searches for each of the 3 different periods (Lockdown 1, 2 and 3) are statistically significantly different to the same periods in non-lockdown years. To achieve this, we used two-sample t-tests ([Snedecor and Cochran, 1989](#)) to determine if the two population means are either statistically higher, or lower between the groups examined.

To add context to the findings we also analyze the data using time series anomaly detection. Anomaly detection is highly effective methodology for identifying patterns that lay outside the boundaries of normality ([van Leeuwen and Koole, 2023](#)). There are multiple forms of anomaly detection, the most frequently used in social science studies is that of seasonal autoregressive integrated moving average (SARIMA), but it also includes several other approaches including time-series outlier detection using prediction of the confidence interval (PCI) ([Braei and Wagner, 2020](#)). To conduct the anomaly detection, we conduct the time series forecasting with Prophet in Python. This is a PCI procedure that can be successfully used to forecast complex data sets to produce time series predictions where non-linear trends are combined with calendar periods (yearly, weekly, and daily seasonality, plus holiday effects). The method works best with time series that have strong seasonal effects and several seasons of historical data (Snow, 2020), and has been argued to be robust to missing data and deviations in the trend, whilst also being able to effectively manage outliers ([Zunic et al., 2020](#)), making the methodology ideally suited for this study. A decomposable time series model ([Harvey and Peters, 1990](#)) is used to manage the effects of variances of the three main model components: trend, seasonality, and holidays.

The benefit to using this methodology is that in addition to providing a forecast pattern, it is extremely effective at identifying anomalies within the time series. An anomaly is a point in time when the identified volume of data examined (no. of stop and search), exceeded the PCI. In effect, it is a way of identifying highly extreme negative (those below) and positive (those above) data points that fall outside the upper or lower bound of the confidence interval, set at 95%. Identifying anomalies is useful as it enables us to provide detail of interest, such as hi-lighting the volume of daily anomalies, identifying the average number of weekly anomalies, and number of positive anomalies (those only exceeding the upper interval level). Due to the results identified, we only discuss the weekly averages for positive anomalies.

Visually, this also enables us to display each anomaly as a red dot on the forecast chart to help visualize clustering and other

<sup>2</sup> Under the [Theft Act of 1968](#), in UK law a person shall be guilty of an offence of going equipped if, when not at his place of abode, he has with him any article for use in the course of or in connection with any burglary, theft or cheat.

**Table 1**  
Reasons for conducting stop and searches grouped into categories.

Stop and Search Category (Preventative/Investigative/Order Maintenance)	Indicator/Reason for Conducting Stop and Search
Overall Stop and Search	<ul style="list-style-type: none"> <li>•Reduction in overall stop and searches conducted</li> </ul>
Preventative	<ul style="list-style-type: none"> <li>• Stop and search for articles for use in theft</li> <li>• Stop and search for anything to threaten or harm anyone</li> </ul>
Investigative	<ul style="list-style-type: none"> <li>• Stop and search for articles for use in criminal damage</li> <li>• Stop and searches for stolen property</li> <li>• Stop and search for controlled drugs</li> <li>• Stop and search for psycho-active substances</li> </ul>
Order Maintenance	<ul style="list-style-type: none"> <li>• Stop and search under the public order act 1994 (sec 60)</li> </ul>

patterns of interest. This is useful as identifying such patterns enables us to pinpoint instances when the data rises rapidly and unexpectedly. Doing so then helps us to draw inferences from the patterns or clusters identified about causal factors that may cause them to occur. When examining specific lockdown periods this is especially useful as we can overlay the time periods in question to identify correlations for which we can consider inferences.

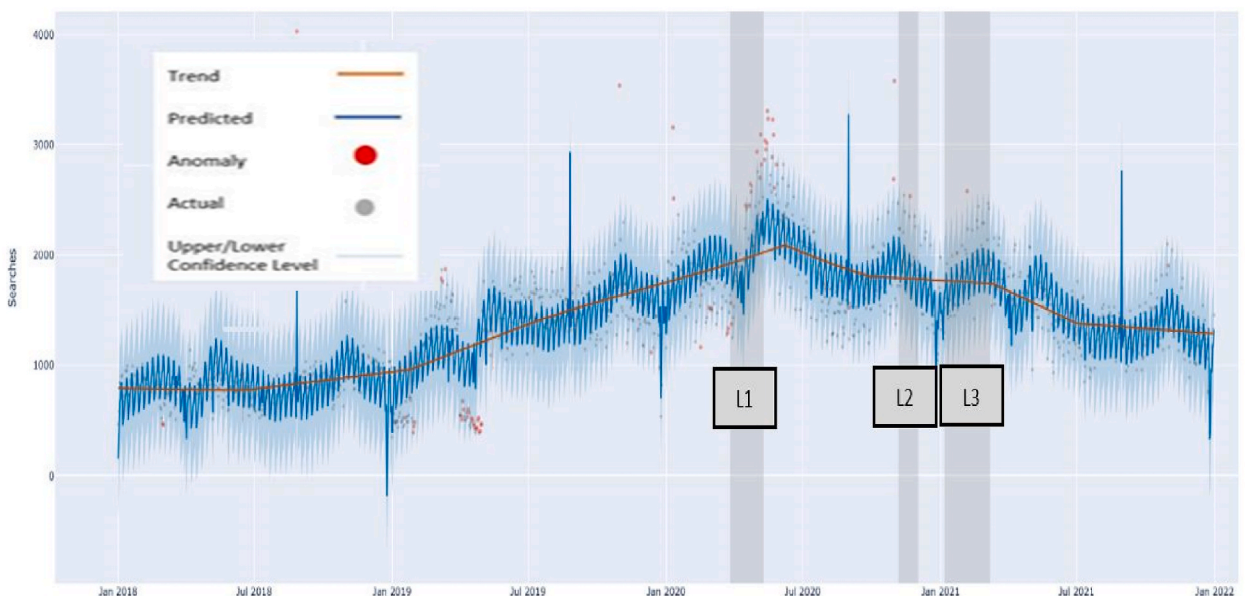
Triangulation of these three data points (descriptive analysis, *t*-test, and anomaly detection) provides us with an incredibly robust set of results that can then be used to underpin subsequent discussion. Tables and figures are used to describe and visualize the nature of the patterns and trends identified.

**3. Results**

Our primary hypothesis was that stop and search would be affected by the significant changes to the policing environment in 2020. Results of the modelling for overall volumes of stop and search can be seen in Fig. 1 and illustrate that stop and search has been experiencing a moderate upward trend over the past several years.

Regardless of this trend, the impact of the pandemic is evident, with a sharp rise in stop and search clearly visible around lockdown 1. Analysis of means supported this position and identified that each lockdown had a higher average number of daily searches than the same periods of non-lockdown years (which included periods both before and after the year of the pandemic). At their height in lockdown 1 the increases in daily means were as much as 94%, which was a significant difference ( $p < .001$ ) when compared to the same periods from non-lockdown years. Significant rises were also identified in lockdown 2 ( $p < .001$ ) and lockdown 3 ( $p < .001$ ), the full results of which can be seen in Table 2.

In addition, the anomaly detection, which can be seen in Fig. 2, indicates that anomalies cluster heavily within, and immediately after periods of lockdown. This is most prominent for lockdown 1. Furthermore, the mean number of positive weekly anomalies during lockdown periods was also much higher, increasing from 0 to 1.2 and 0.25 respectively in lockdown 1 and 2, with lockdown 3 remaining unchanged at 0.1. Of note, the average number of positive weekly anomalies across all 5 years of data was just 0.15. This indicates that during lockdowns 1 and 2 there was a large rise in instances of stop and search and the evidence strongly indicates that

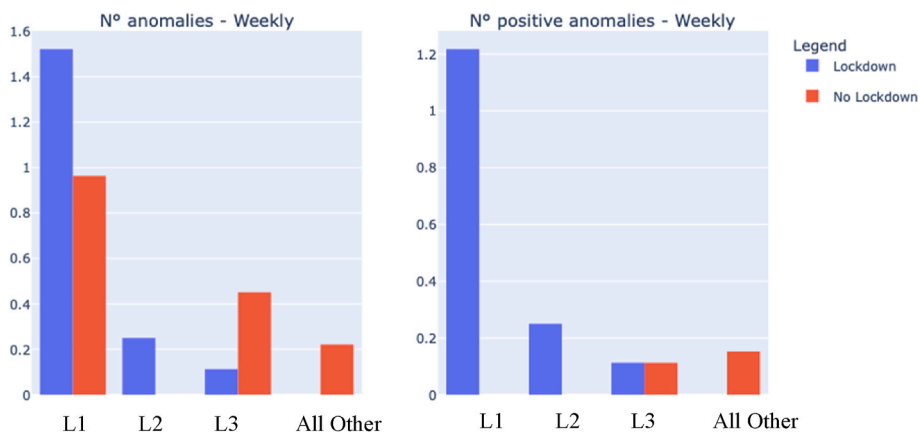


**Fig. 1.** Multivariate analysis of overall stop and search. Lockdowns in grey. 95% Confidence Interval.

**Table 2**

Results of Descriptive and Inferential Statistics for Overall Stop and Search Conducted Per Lockdown Period vs. Non Lockdown Year Periods vs. Percentile Changes.

Overall Stop and Search	Lockdown 1			Lockdown 2			Lockdown 3		
	Mean No.of Searches	% ±		Mean No.of Searches	% ±		Mean No.of Searches	% ±	
	Lockdown (Other Years)			Lockdown (Other Years)			Lockdown (Other Years)		
	2121 (1092)	+94%		2019 (1267)	+59%		1880 (1185)	+59%	
	SD	N (df)	T (p)	SD	N (df)	T (p)	SD	N (df)	T (p)
	30.33	39 (37)	13.29 (.000)	22.46	27 (25)	12.19 (.000)	25.30	59 (57)	13.01 (.000)



**Fig. 2.** Anomaly detections for overall stop and search. Displaying anomalies during the 3 lockdown periods vs. Same periods in previous years vs. All non-lockdown periods.

the coronavirus pandemic, specifically the lockdowns, and most notably, lockdown 1, is the likely cause of the rises in the use of stop and search.

Our secondary aim was to explore how the pandemic lockdowns affected the use of stop and search by exploring their use as a tactic for preventative, investigative, and order maintenance purposes. Our modelling results for the reasons within the category of preventative stop and search can be seen in Figs. 3, 4 and 5 of the appendix. The figures relating to articles used in theft and criminal damage, both show clustering around each of the lockdown periods, which was most prominent for lockdown 1.

The full results of the descriptive and inferential analysis can be seen in Tables 3 and 4. This analysis further confirms that two of the reasons for stop and search (articles for use in theft and for use in criminal damage) increased significantly ( $p < .001$ ) during each lockdown period. Stop and search used for anything to threaten or harm anyone did increase slightly during lockdown 2 and 3, but not significantly.

The rises in means are also reflected in the anomaly detections, with weekly anomalies increasing from 0, to 2.5, and 1.25 for lockdown 1 and 2 respectively, and from 0.1 to 0.4 for lockdown 3. This is against a backdrop of an average weekly anomaly over the whole data period of just 0.25. In respect of articles for use in criminal damage, weekly anomalies during lockdown periods rose slightly from 0.15 to 0.3 in lockdown 1, 0.08 to 0.75 in lockdown 2, and 0.12 to 0.45 in lockdown 3. These rises were also higher than the weekly anomaly detection level across the whole data period, which was 0.27. Articles used to threaten or harm anyone saw no positive anomalies during the periods of lockdown.

Next, we explored reasons for stop and search within the investigation category. The modelling in respect of stolen property, which can be seen in Fig. 6 of the appendix, indicates that although there was some limited clustering in and around lockdowns 1 and 2, this was modest. In contrast, stop and search conducted for controlled drugs, which can be seen in Figs. 7 and 8 of the appendix, show a much stronger correlation with periods of lockdown, especially the first national lockdown in March and April 2020.

When we examined the mean daily searches, our results, which are outlined in Tables 5 and 6, support our assertion on the impact of lockdown 1 and show that all search reasons significantly increased during that period, though we caution against interpreting too much from the rises in searches for psycho-active substances due to their low volume.

Anomaly detection corresponds with this pattern and positive anomalies in relation to stop and search for stolen property does not exceed the levels seen in the same periods of non-pandemic years, further explaining the modest rise in daily means. In contrast, in lockdown 1 the number of weekly anomalies for controlled drugs and psycho-active substances rose from 0.1 to 2.5, and 0.2 to 0.6 respectively.

Finally, we explored how the police had used stop and search as an order maintenance tool. We tested for this by exploring the volume of stop and search under the public order act 1994 (sec 60). We identified that the frequency of searches under section 60 of the public order act 1994 were very low throughout the pandemic and lockdown periods, and this is reflected in the modelling seen in Fig. 9 of the appendix. The descriptive and inferential statistics results can be seen in Tables 7 and 8 and indicate that only lockdown 3

**Table 3**

Descriptive results of mean volumes stop and search or preventative purposes.

	Mean Numbers of Stop and Search Conducted Per Lockdown Period vs. Non-Lockdown Years vs. Percentile Changes								
	Lockdown 1			Lockdown 2			Lockdown 3		
	Lockdown	Other Years	% ±	Lockdown	Other Years	% ±	Lockdown	Other Years	% ±
For use in theft	112	57	+96%	93	65	+43%	82	63	+30%
<b>To threaten or harm anyone</b>	23	24	+4%	27	22	+23%	37	29	+28%
<b>Articles for use in criminal damage</b>	31	17	+82%	35	20	+75%	36	16	+125%

**Table 4**

Inferential Statistics Results of Mean Numbers of Preventative Stop and Search Conducted Per Lockdown Period vs. Non-Lockdown Years.

	Lockdown 1			Lockdown 2			Lockdown 3		
	SD	N (df)	T (p)	SD	N (df)	T (p)	SD	N (df)	T (p)
For use in theft	6.55	39 (37)	15.76 (.000)	5.43	27 (25)	7.85 (.000)	5.78	59 (57)	6.89 (.000)
<b>To threaten or harm anyone</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>
	8.42	39 (37)	<b>0.40 (.692)</b>	7.03	27 (25)	<b>1.09 (.279)</b>	9.08	59 (57)	<b>1.70 (.092)</b>
<b>For use in criminal damage</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>
	4.58	39 (37)	7.53 (.000)	4.89	27 (25)	4.97 (.000)	4.94	59 (57)	11.24 (.000)

**Table 5**

Descriptive results of mean volumes stop and search for investigative purposes.

Officer Defined Ethnicity	Mean Numbers of Stop and Search Conducted Per Lockdown Period vs. Non-Lockdown Years vs. Percentile Changes								
	Lockdown 1			Lockdown 2			Lockdown 3		
	Lockdown	Other Years	% ±	Lockdown	Other Years	% ±	Lockdown	Other Years	% ±
Stolen property	160	97	+65%	151	126	+20%	129	125	+3%
<b>Controlled drugs</b>	1409	604	+133%	1194	727	+64%	1104	694	+59%
<b>Psycho Active Substances</b>	22	2	+1100%	1	1	0%	1	15	-1500%

**Table 6**

Inferential Statistics Results of Mean Numbers of Investigative Stop and Search Conducted Per Lockdown Period vs. Non-Lockdown Years.

	Lockdown 1			Lockdown 2			Lockdown 3		
	SD	N (df)	T (p)	SD	N (df)	T (p)	SD	N (df)	T (p)
Stolen Property	6.81	39 (37)	14.11 (.000)	7.48	27 (25)	4.64 (.000)	6.78	59 (57)	0.92 (.359)
<b>Controlled Drugs</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>
	24.75	39 (37)	15.35 (.000)	18.41	27 (25)	12.51 (.000)	20.59	59 (57)	12.28 (.000)
<b>Psycho Active Substances</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>	<b>SD</b>	<b>N (df)</b>	<b>T (p)</b>
	5.09	39 (37)	11.89 (.000)	1.73	27 (25)	0.14 (.892)	3.46	59 (57)	2.60 (.010)

saw a significant change in daily means ( $p < .001$ ), actually experiencing a reduction, though the volumes were very low.

There were no positive anomalies detected in any lockdown period, indicating that such searches remained within expected boundaries.

#### 4. Discussion

Our hypothesis was that the coronavirus pandemic and the subsequent changes in the policing environment affected the police use of the stop and search tactic. If proven, we wanted to understand how it had impacted its use. To provide context within the literature we focused on how stop and search was used to prevent and investigate crime, and help maintain order, which are all widely accepted purposes for which the police utilize the tactic. We also outlined how, and why, stop and search can be effective by providing an overview of criminological literature including theories of routine activity and rational choice. To finalize our literature review we outlined the importance of PJT and the context of this for the pandemic, and our study. To examine stop and search in the context of these areas we looked at overall volumes of stop and search and grouped reasons for conducting them into categories (preventative, investigative and order maintenance) which we examined by analyzing stop and search data related to them, and in this section we discuss the findings in greater detail.

**Table 7**  
Descriptive results of mean volumes stop and search for maintaining order.

Officer Defined Ethnicity	Mean Numbers of Stop and Search Conducted Per Lockdown Period vs. Non-Lockdown Years vs. Percentile Changes								
	Lockdown 1			Lockdown 2			Lockdown 3		
	Lockdown	Other Years	% ±	Lockdown	Other Years	% ±	Lockdown	Other Years	% ±
Public order Act 1994 (Section 60)	17	18	-6%	14	20	-30%	20	34	-41%

**Table 8**  
Inferential Statistics Results of Mean Numbers of Order Maintenance Stop and Search Conducted Per Lockdown Period vs. Non-Lockdown Years.

	Lockdown 1			Lockdown 2			Lockdown 3		
	SD	N (df)	T (p)	SD	N (df)	T (p)	SD	N (df)	T (p)
Public order Act 1994 (Section 60)	8.18	39 (37)	0.16 (.872)	7.1	27 (25)	1.11 (.269)	7.93	59 (57)	2.75 (.006)

#### 4.1. Overall impact on stop and search

To begin with we hypothesized that the coronavirus pandemic lockdowns, reduced social mobility, and recorded crime, would combine to affect the police use of the stop and search tactic. Our analysis showed that it did, but not in the manner one would expect. Instead, we identified significantly higher volumes of stop and search during lockdown periods. The modelling and anomaly detection presented strong evidence to support the position that this was caused by the lockdowns, which is most evident during lockdown 1 where we illustrate a large rise in use of the tactic. As our review of literature indicated, stop and search is heavily underpinned by routine activity theory, and as such, the dramatic reductions in social mobility should have significantly reduced opportunities for use of the capable guardianship approach through stop and search at pathways and nodes where traditional policing issues like crime and disorder occur (Clarke, 1995; Cohen and Felson, 1979). Therefore, this finding is highly unusual.

Also of note, is the fact that the rise was most prominent around the period of L1, which was the period subjected to the most stringent legislative conditions. As we outlined earlier in this article, after L1 there was a significant change in the nature of the legislative framework, with whole lockdowns removed and rules in England and Wales being replaced with regional and local tiers. As a result, different conditions were experienced, to varying degrees, dependent on the severity of infection in the community. Therefore, it stands to reason that as lockdown conditions were gradually released, patterns of stop and search should begin to return to the levels seen prior to the pandemic, which does begin. However, one would expect this to return from a position of reduced activity, and not increased volumes as we see here.

If viewed from a positive perspective then this indicates that neither a global pandemic, or the associated restrictions on social distancing and use of personal protective equipment (PPE), which undoubtedly created practical problems for the police when conducting stop and search, negatively affected their decision to use the tactic. It does however, present the first indicator that stop and search may not have been used in its traditional manner. Therefore, answering questions about how and why the use of the tactic increased during a period of significant restrictions on social mobility becomes vitally important.

#### 4.2. How stop and search was used during the pandemic

When we explored these questions further by examining *how* the police had used the tactic as both a preventative and investigative tool, our results identified that of the 21 variables (7 stop and search reasons across 3 lockdown periods), 13 experienced significant increases in daily means. Despite the widespread rises in stop and search across a variety of reasons examined, it is articles for use in theft, possession of stolen property, and controlled drugs, that contributed the greatest rises.

In terms of search category, although preventative forms of search have risen, it is investigative searches, and specifically those conducted for controlled drugs which has provided by far the largest contribution. However, based on our review of the literature regarding how the policing landscape changed during the pandemic, that an increase in the use of stop and search as a preventative and investigative means is highly unusual, and unlikely to be the primary function the tactic was used for during lockdown periods. In the remainder of this discussion, we explore why in further detail.

In line with criminological concepts including RAT (Cohen and Felson, 1979) SCP (Clarke, 1995) and RCT (Cornish and Clarke, 1985), for increases in stop and search as a preventative and investigative means during the pandemic to be justified, one would expect to see correlations in rises of associated issues for which the police were responding to, which can be identified by examining rises recorded crime levels. This is especially true within lockdown 1 when the rises are at their highest. However, early research on the issue demonstrated that most crime did not increase during the pandemic (Halford et al., 2020).

As stop and search for controlled drugs has had the most dramatic impact, we examine this first by looking at official government data on drug related recorded crimes. This indicates that they increased by 19% between the financial year of April 2019 to March 31st 2020, and April 2020 to March 31st 2021, which is broadly in line with the dates of the coronavirus pandemic (Allen and Tunnicliffe, 2021). As such, we should expect to see a rise in stop and search for controlled drugs, which we do. However, previous research on drug related crime during the pandemic has argued this is simply as a result of increased police enforcement, and not a rise in drug crime (Langton et al., 2021). This is a finding that has been identified in pre pandemic literature which argued that the perceived

effectiveness of stop and search as a method for detecting drug crime is misplaced, and that the police simply identify more drug offences because they conduct more searches (Tiratelli et al., 2018).

Our own examination supported these conclusions. It has been outlined that roughly 25% of searches lead to some form of recordable offence related to drugs (Allen and Tunnicliffe, 2021). Although we found this remained the same during lockdown 1, when 26% of stop and search for controlled drugs led to a positive outcome.<sup>3</sup> Of note is the fact that this was actually a drop from the same period in 2019 when 32% led to a positive outcome,<sup>4</sup> representing a reduction in the tactics effectiveness. Further support for this was identified when we analyzed data of all stop and search records to explore the proportion that resulted in no further action (NFA).<sup>5</sup> When this was completed we identified that NFA results also increased dramatically by 45% between 2019 (355,010 NFAs) and 2020 (515,455 NFAs) when the global pandemic occurs, then subsequently reduced in 2021 by 23% (396,115 NFAs), once the pandemic had receded.

When we consider these factors this provides strong support for the position that although drug related stop and search increased during the pandemic, this is not in response to a change in the offending behavior of the public, despite what rises in recorded crime for drug offences may suggest. It is again, simply evidence of the police using the tactic more frequently, and as a result, finding more people in possession of drugs. This presents further indication that the tactic may not have been used for its stated purpose.

When we consider the significant rises in stop and search for articles used in theft, we see an even starker picture as overall recorded crime *declined* by as much as 41%. Importantly, this was largely driven by reductions in theft related offences such as shoplifting, which reduced by 62%, standard theft by 52%, theft from vehicles by 43%, and burglary dwelling and burglary non-dwelling both dropped by 25% (Halford et al., 2020). These are all crime forms that the police commonly call upon interventions relying on RAT (Cohen and Felson, 1979) SCP (Clarke, 1995) and RCT (Cornish and Clarke, 1985) which they use to underpin the tried and tested method of hotspot policing (Braga et al., 2019), supporting by tactics such as stop and search.

In addition, when we consider other areas of searching which also increased, but not to statistically significant levels, such as those for articles to threaten or harm anyone, and for items used to commit criminal damage, correlated crimes also reduced. For example, assaults reduced by as much as 36% and criminal damage also decreased (Langton et al., 2021). Although all of these reductions returned to normal levels as restrictions eased, the bounce back was gradual (Langton et al., 2021), further indicating that whatever reason the police were using the tactic for was dissipating.

When we consider this information as a whole, there are a number of factors here that undermine the position that the increases in stop and search are caused by the police using the tactic to investigate, and to a lesser degree, prevent crime. The first and most obvious is the contradiction between theories that underpin the tactics used by the police to prevent and reduce crime. All of the criminological theories outlined (RAT, SCP and RCT) work together to provide enhanced capable guardianship, and help reduce and prevent crime through targeted interventions, such as stop and search. However, the crimes for which such approaches are most frequently used, did not increase. Furthermore, when stop and search was used, the tactic experienced reduced effectiveness, as evidenced by the reduction in positive outcomes, and increases in NFA. As such, together, these provide strong evidence to support the argument that although stop and search increased as a result of the pandemic, most notably driven by rises during lockdown 1, this does not appear to be in response to any significant increase in associated criminal behavior, and as such, the police are likely to have been using stop and search for alternate purposes. This suggestion creates an interesting paradox and we propose an alternate hypothesis which we draw from our review of the literature.

#### 4.3. Using stop and search to maintain order

As we indicated previously, stop and search is primarily used for just three functions, and if it has not been used to prevent or investigate crime during the periods of lockdown, then this naturally leads to the likelihood that it has been used for the third function, to maintain order. As the data we examined did not identify any significant rise in its use to combat disorder under section 60 of the public order act, then the tactic must have been used for an alternate, order maintenance function. We propose this is most likely to ensure adherence to the COVID-19 coronavirus legislation.

The use of stop and search in such a manner is not unheard of and previous literature (Bradford and Jackson, 2016; Choongh 1997; Quinton 2011; Smith and Gray 1985) has indicated it is often used to support police activity as they conduct an order maintenance function. Stop and search is used in such circumstances in the absence of other legal powers, often resulting in searches for a variety of reasons, but predominately those we have identified in the preventative and investigative categories. As such, although the reason for stop and search may list one reason i.e. searching for controlled drugs, the true purpose is often something different, such as order maintenance. The literature strongly supports such cases, and has outlined how stop and search as a coercive method of control to regulate the behavior of citizens is in line with the theoretical applications we have outlined (RAT, SCP and RCT). As such, it is often conducted in specific micro-areas or zones, such as hotspots (Bradford and Jackson, 2016) where the police use the tactic as an overt display of power (Gau and Brunson, 2010; Parmar, 2011; Tyler and Huo, 2002).

<sup>3</sup> Our data showed that during lockdown 1 there were 97,568 searches nationally, of which 64,798 (66%) were for controlled drugs, and, 47,891 (74%) led to NFA, meaning 26% led to a positive outcome and a recorded crime (approximately 16,907 crimes).

<sup>4</sup> Similarly, our data showed that in 2019, during the same period as lockdown 1, there were 36,747 searches nationally, of which 20,074 (55%) were for controlled drugs, and, 13,815 (68%) led to NFA, meaning 32% led to a positive outcome and a recorded crime (approximately 6259 crimes).

<sup>5</sup> No further action (NFA) simply means the police found no evidence of any criminal activity during the search.

For example, police tackling anti-social behavior (ASB) will identify ‘hotspots’ of disorder and crime linked to the routine activities of those involved. A simple example of this would be a local park identified as a hotspot for ASB. As a result, the police will increase their patrols in the park, thereby enhancing the capable guardianship effect, underpinned by tactics such as stop and search. Such tactics are used as a coercive method of influencing the rational choice of those causing the problems, with the primary purpose being to maintain order by dispersing the groups involved and returning the area to a more socially acceptable status. In essence, those causing the disorder either disperse, or risk being searched by the police and potentially caught in possession of illegal items, such as cannabis, or experiencing associated personal shame or association of guilt.

Considering this example, it is not too hard to appreciate how the tactic may have been used as a method to maintain order to prevent breaches in coronavirus legislation. For example, if the police have identified hotspots during the pandemic where there are significant levels of people breaching lockdown or social distancing restrictions, then traditional increases in capable guardianship and associated tactics, such as stop and search, would naturally be expected.

#### 4.4. *The linked between stop and search, and coronavirus fixed penalty notices*

Further support for this argument can be found in the link between stop and search and coronavirus FPNs. Research on FPNs demonstrates that the trends related to their issuance in England and Wales (Brown, 2021), and Scotland (McVie and Matthews, 2021, p16 and McVie et al., 2023) strongly correlate with the patterns we see for stop and search in this study, which indicates the two may be linked. However, it is a limitation of this study that we cannot at this stage support this position categorically, as it cannot be tested for using the data we examined. A more detailed plan to achieve this is outlined in the limitations section, however, we suggest how this may have occurred.

It is clear that during the pandemic, and especially the lockdown periods, that the police were under a great deal of pressure to conduct a public health function, as such, the desire of the police to maintain order and compliance with the COVID-19 legislation were significant. We also know that as a result, the way the ‘4 E’ process was pursued was sometimes overzealous. For example, recorded instances of the police searching peoples shopping bags and vehicles were frequent (Evans, 2020; Jarvis, 2020), with some police chiefs even suggesting the tactic would potentially be used systematically, in conjunction with other order maintenance tactics such as road blocks (Christodolou, 2020). Both suggestions were subsequently retracted, but regardless, such searches must be recorded somewhere. Therefore, it is conceivable this behavior accounts for some of the rises in stop and search identified, especially in lockdown 1 when the police were still trying to adjust to their new role in the pandemic. This is important as coronavirus legislation did not carry any power to stop and search.

A further explanation for the rises that reconciles the paradox is that such pressure may also have created a loosening of the threshold used to form reasonable grounds to conduct stop and search. For instance, during the national lockdown periods there were, in reality, only 3 reasons for a person to be out of their home. First, lawful justification, which included a single period of daily exercise, shopping for necessities, travel to essential roles of employment, medical appointments and emergencies. The second reason would be the illegal breaching of coronavirus legislation for non-nefarious purposes, such as taking more than the permitted sessions of daily exercise. The final reason is the illegal breaching of coronavirus legislation for nefarious purposes, namely the planning or commission of crime. Even though the ‘4 E’ approach provided a method for police to interact with the public to discern between the aforementioned legal and illegal reasons, any person engaged with who was breaching coronavirus legislation is likely to have been equally as elusive as a person committing, or planning to commit crime or disorder, and as previous literature has suggested, the police often need little justification to execute a stop and search (Bowling and Weber, 2011).

To consider why this may cause searches to rise we have to revisit the guidance on stop and search. Such guidelines outline that the officer must have a “*genuine and objectively reasonable suspicion that he or she will find a prohibited article or item for use in crime*” (College of Policing, 2022) before conducting a search. However, it has also been outlined that when developing such suspicion “*some specific behavior by the person concerned*” is sufficient (Her Majesty’s Inspectorate of Constabularies, 2013). Therefore, elusive behavior by people potentially breaching coronavirus conditions may have been all an officer needed to raise the suspicion to a level required to conduct a search, which would be recorded under the reasons we have examined.

#### 4.5. *Implications for theory and practice*

The implications of this study are potentially significant. In respect of their relation to the criminological literature regarding RAT, SCP and RCT, we have presented a credible argument that the use of stop and search can be used for interventions other than those related to preventing and reducing crime. In this context, to help maintain public health and safety. However, in doing so, the study raises important potential ethical considerations that relate to PJT. As we outlined earlier in our literature review, PJT emphasis proper conduct of the application of power (Lind and Tyler, 1988; Schauer, 2015; Tyler 2016; Schulhofer et al., 2011). Specifically, two components of this is the necessity for the application of power to be legally just, and for the person searched to be fully aware of the justification (Bradford, 2017; Bradford and Jackson, 2016). In this scenario, we present the argument that the use of stop and search may not have been for the stated purpose i.e. prevention and investigation of crime, and instead, as a coercive tactic to maintain order, specifically adherence to national lockdowns. As such, this raises the question of whether or not those subjected to the searches were aware of the true motives of the police when subjected to the search.

Furthermore, the increased use of stop and search was not authorized in coronavirus legislation, as such, if the true motives were to coerce subjects to maintain compliance with national lockdowns, as we suggest, then they may not have been legally, and therefore procedurally just (Bradford, 2017; Bradford and Jackson, 2016). Both of these potential breaches in theoretical application are

important as the literature on PJT also indicates that if the application of power is not just, then it may negatively affect the public's trust and confidence in the police, and therefore, their legitimacy. This is an important implication and finding, and may go some way to further understanding why recent literature (Charman et al., 2023) has indicated that the manner in which the pandemic was policed, has affect their relationship with communities, resulting in public confidence being at an all-time low in regards to the police service (Mynenko and Ditcham, 2022).

## 5. Summary conclusions

To summarize, the results of this study show that during the covid-19 pandemic, and particularly the periods of national lockdown, the wider changes to the landscape within which the police were operating, did affect their use of stop and search. However, it did not impact it in a manner which is easy to reconcile with the criminological literature and the wider policing environment (reduced social mobility, absence of rising crime, statistically significant rises in searches during lockdowns, and increases in NFAs), creating somewhat of a paradox. As such, guided by literature on how the police often use stop and search to maintain order, we suggest this paradox can be reconciled by the police more likely having used it in line with criminological methods for reducing and preventing crime. Instead, we suggest it has been used as a tactic to maintain order, specifically adherence to lockdowns (Bradford and Jackson, 2016), which they achieved by using stop and search as a display of power (Gau and Brunson, 2010; Parmar, 2011; Tyler and Huo, 2002), potentially to support, or in conjunction with the use of the FPN scheme.

These findings create potential ethical implications that relate to procedural justice theory as if our suggestion can be further corroborated then fundamental components of PJT may have been overlooked. We suggest this my account in part, for recent reductions in confidence of the police. Furthermore, although the findings are likely to have geo-specific impact, especially for areas where tiered lockdowns persisted beyond national conditions, they are likely to be generisable across all police services who use stop and search.

## 6. Limitations and further research

This study has a number of limitations. First, we argue that the police have used stop and search to primarily maintain order during the pandemic, and in particular adherence to lockdowns. We form this position by using only a quantitative methodology. To truly explore this argument a more qualitative method is required. For example, surveys or interviews of officers on frontline duties during the pandemic may identify their views and perspectives on the identified rises in stop and search. These would also help understand if the coronavirus legislation and pandemic environment influenced the forming of reasonable grounds, which we suggest may have heavily diluted the threshold for forming suspicion to conduct a stop and search. This approach would also help understand if, as we suggest, the tactic of stop and search may have been used in conjunction with legislation regarding coronavirus FPNs.

In respect of geographical context, our studies limitation is that we refrain from examining localized, tiered lockdowns. Instead, we examine only periods of national lockdowns. This limitation could be addressed through future, geo specific studies that examine if our findings are replicated at a local level, but also in other area of the UK, such as Scotland.

Additionally, future studies could utilize additional resources to improve the scope of the data collection to include a detailed exam of free text from original stop and search records. This may provide insights regarding the grounds of the searches and enable analysis to determine answers to some of the questions we pose.

From a method and quantitative data perspective, we acknowledge that our approach to categorizing criteria of stop and search in this manner has never been done before and has therefore never been proven as a by-proxy. Furthermore, other modelling methods such as ARIMA, may provide additional nuances to our approach. In addition, we did not examine all 17 available reasons for a search to be conducted. We did this as we considered many of them to have such a minimal impact, that their inclusion would not add value i. e. possession of crossbows or poaching related stop and search. However, we accept the modest volumes of such searches may account for some of the overall rises, but suggest they are unlikely to alter the outcomes. Other limitations to be acknowledged include other variables such as geo locations of the stop and search records may also provide insights into the geographical impact of the pandemic on stop and search.

Appendix. of Figures

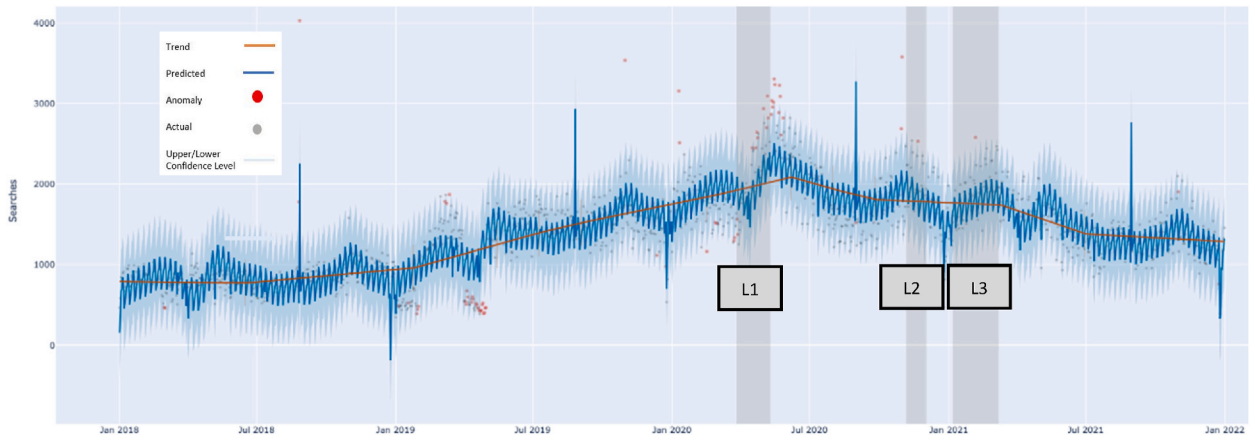


Fig. 1. Multivariate analysis of overall stop and search. Lockdowns in grey. 95% Confidence Interval.

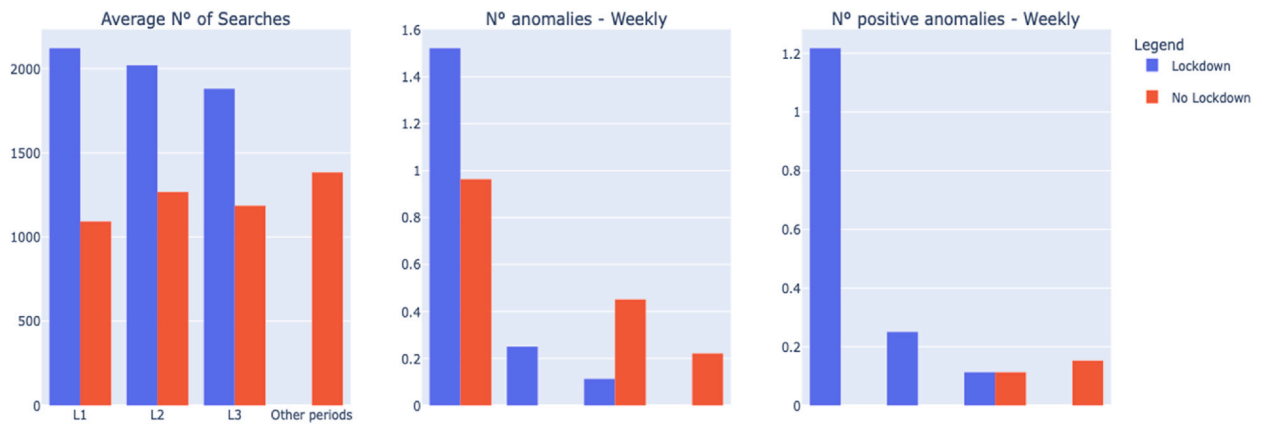


Fig. 2. Anomaly detection analysis of overall stop and search showing comparison averages during the 3 lockdown periods vs. same periods in the previous year and all other periods.

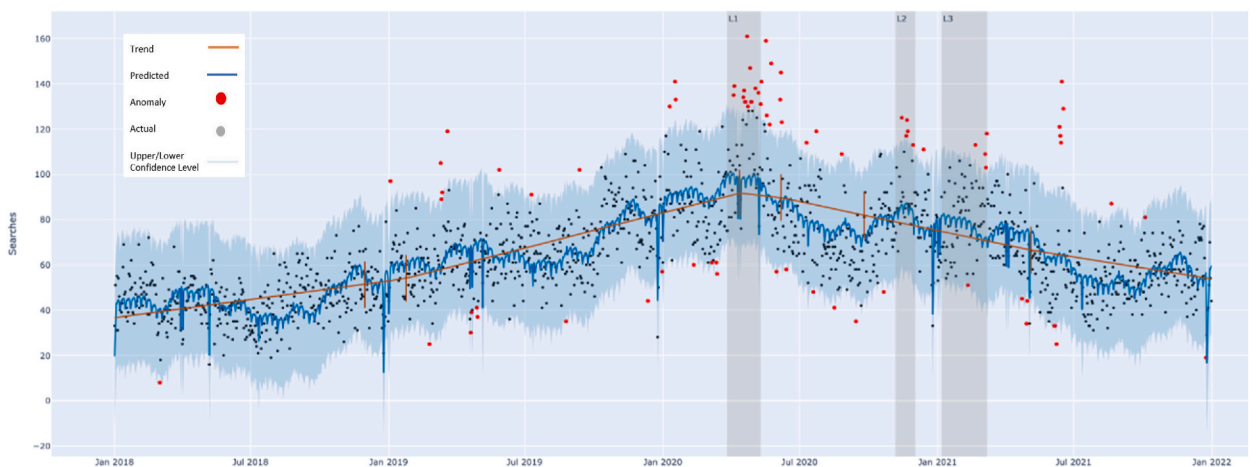


Fig. 3. Multivariate analysis of articles for use in theft. Lockdowns in grey. 95% Confidence Interval.

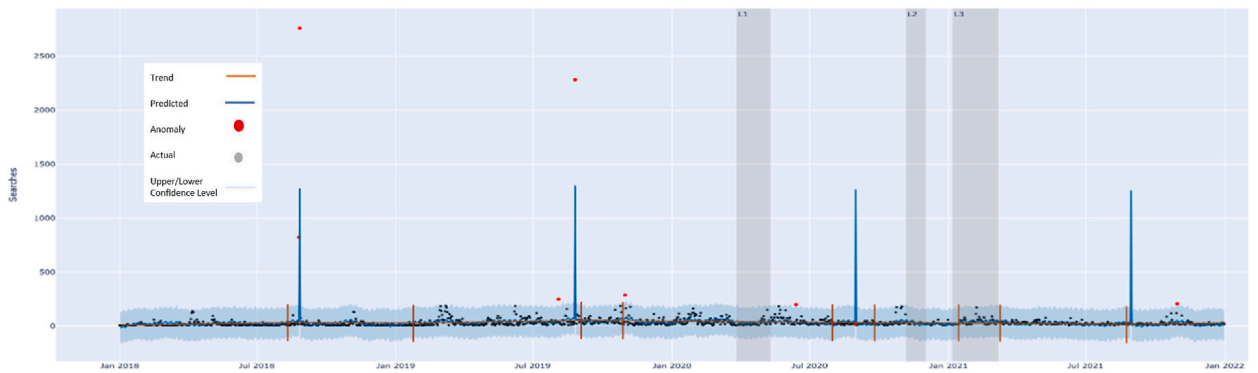


Fig. 4. Multivariate analysis of articles to threaten or harm anyone. Lockdowns in grey. 95% Confidence Interval.

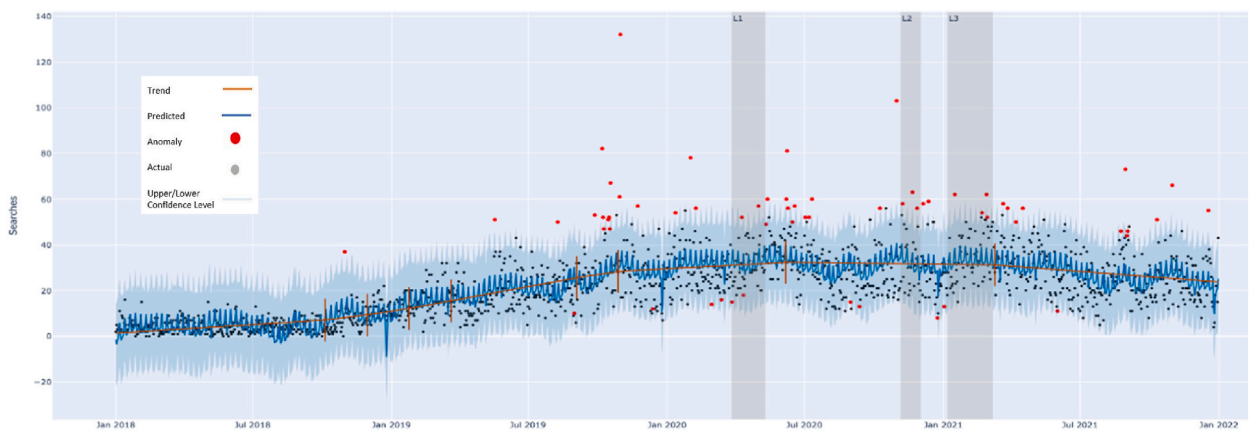


Fig. 5. Multivariate analysis of articles for use in criminal damage. Lockdowns in grey. 95% Confidence Interval.

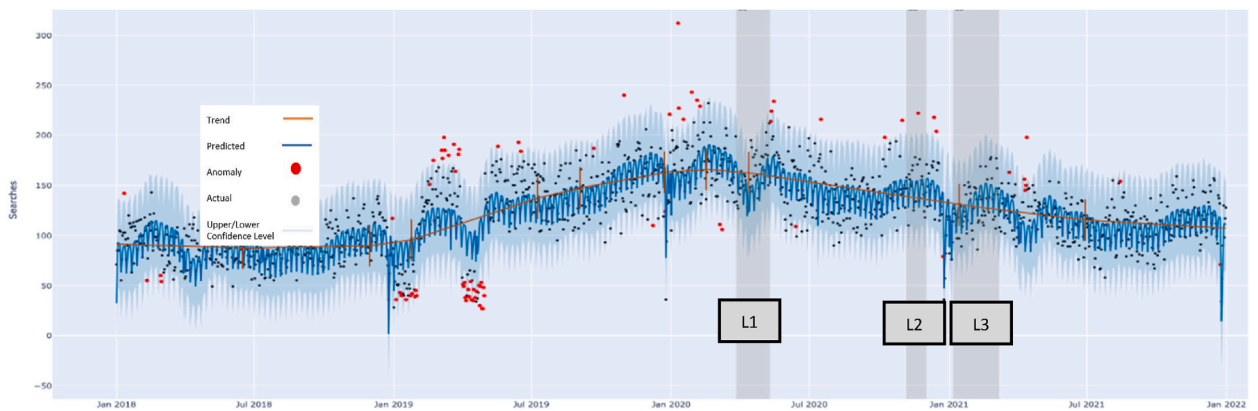


Fig. 6. Multivariate analysis of articles for stolen property. Lockdowns in grey. 95% Confidence Interval.

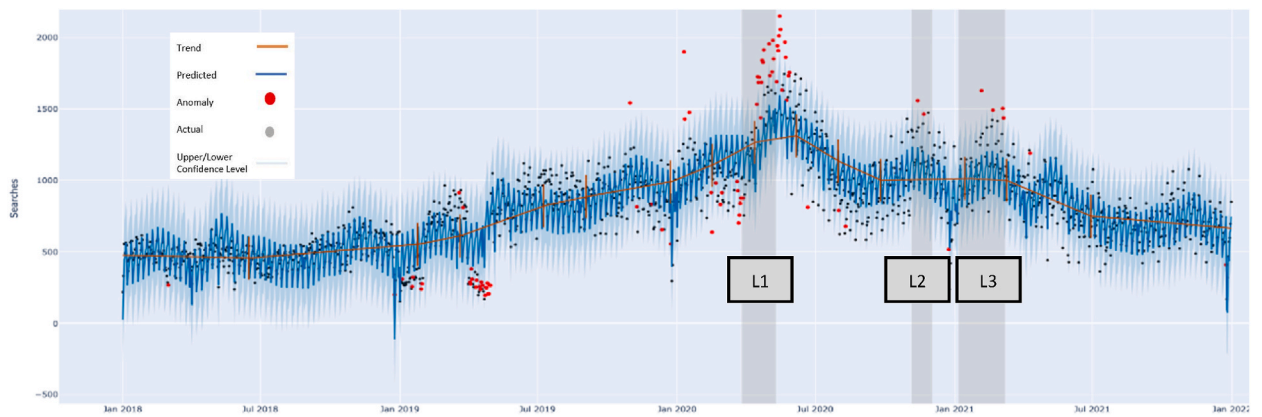


Fig. 7. Multivariate analysis of articles for controlled drugs. Lockdowns in grey. 95% Confidence Interval.

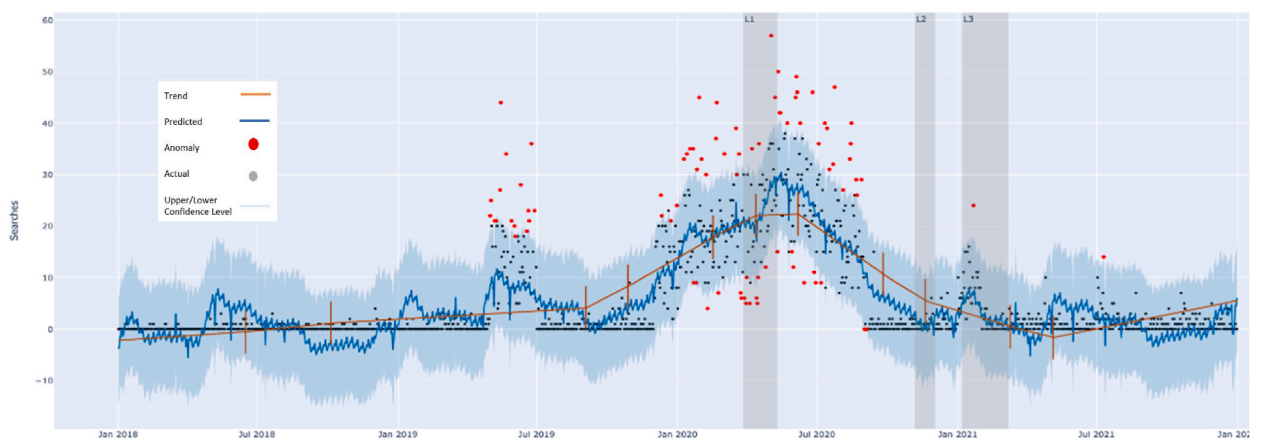


Fig. 8. Multivariate analysis of articles for psycho-active substances. Lockdowns in grey. 95% Confidence Interval.

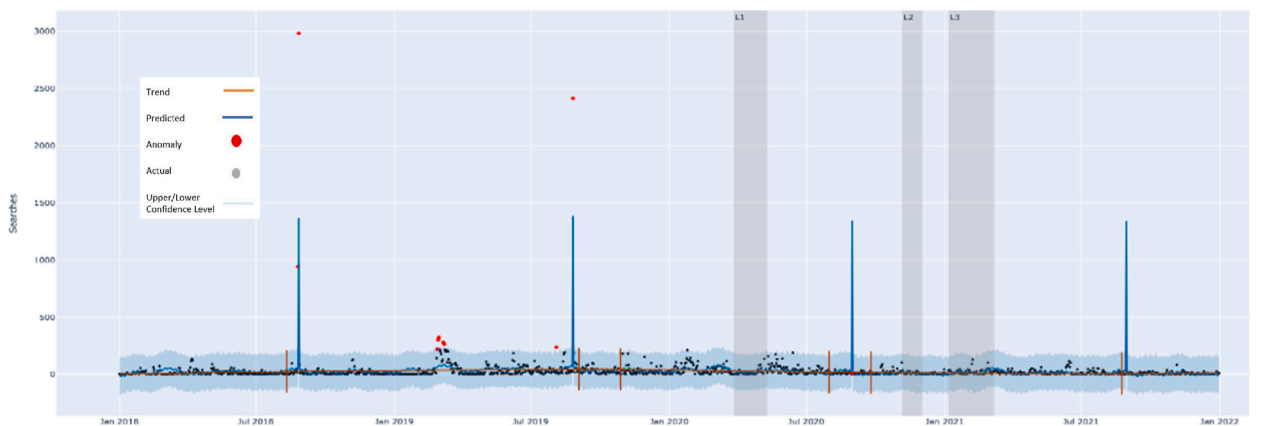


Fig. 9. Multivariate analysis of stop and search under the public order act, section 60. Lockdowns in grey. 95% Confidence Interval.

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