



The impact of COVID-19 lockdown restrictions on missing person reports

Freya O'Brien, Craig Collie, Karen Shalev Greene & Susan Giles

To cite this article: Freya O'Brien, Craig Collie, Karen Shalev Greene & Susan Giles (2022) The impact of COVID-19 lockdown restrictions on missing person reports, Policing and Society, 32:8, 997-1011, DOI: [10.1080/10439463.2021.1999448](https://doi.org/10.1080/10439463.2021.1999448)

To link to this article: <https://doi.org/10.1080/10439463.2021.1999448>



© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 19 Nov 2021.



Submit your article to this journal [↗](#)



Article views: 1493



View related articles [↗](#)



View Crossmark data [↗](#)



OPEN ACCESS



The impact of COVID-19 lockdown restrictions on missing person reports

Freya O'Brien ^a, Craig Collie ^b, Karen Shalev Greene ^b and Susan Giles ^a

^aDepartment of Psychological Sciences, University of Liverpool, Liverpool, UK; ^bInstitute of Criminal Justice Studies, University of Portsmouth, Portsmouth, UK

ABSTRACT

The COVID-19 pandemic and the resultant restrictions imposed by governments pose short- and long-term challenges for the police, especially within resource-intensive areas of policing such as missing persons. However, the novelty of the pandemic means little research focus has been directed at understanding these challenges and how they may be overcome. Using archival reports from six UK police forces, the current study examined the extent to which missing persons cases changed during the first UK COVID-19 lockdown. Using a non-experimental fixed design, differences in the characteristics of reports of both children and adults who went missing between March and May 2020 and the same time period in 2019 were examined. Findings suggest a substantial reduction in missing reports overall, but a shift in the proportions of types of cases reported. For example, there was a greater proportion of adults classified as high risk of harm during this period and a greater proportion of children who were deemed low risk, who were living in residential care, and who were not from a White British background. Although forces must consider the findings within their local context, the study has implications in terms of demand and allocation of police resources, as well as multi-agency working. Future research is discussed.

ARTICLE HISTORY

Received 1 March 2021

Accepted 25 October 2021

KEYWORDS

Missing persons; COVID-19; policing; vulnerability; multi-agency working

Introduction

Missing persons are among the most challenging issues for modern police forces, with the number of reported cases in the England and Wales increasing yearly for more than a decade, and reaching 382,960 in 2018/2019 (NCA 2020). For UK policing, a conservative annual cost of missing persons investigations is estimated at £916 million (Shalev Greene and Pakes 2013). The pandemic caused by the coronavirus disease 2019 outbreak (COVID-19) and resultant government restrictions (i.e. lockdowns) have placed unique demands on the emergency services (WHO 2020) including the police (Laufs and Waseem 2020) who, in the UK, bear responsibility for assessing the risk of harm of reported missing persons, locating them, and managing safeguarding (Fyfe *et al.* 2015, College of Policing 2020). This is a challenging task in 'normal' times given the sheer volume, complexity of cases, and decisions around how best to allocate stretched resources (Fyfe *et al.* 2015).

In addition to intra-organisational challenges, there are also inter-organisational challenges to consider. A police-led, multi-agency approach is now largely favoured in the handling of missing persons, especially due to the vulnerabilities of some repeatedly missing person groups (Jago

CONTACT Freya O'Brien  f.obrien@liverpool.ac.uk

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

et al. 2011, Sidebottom *et al.*, 2019). However, although partners such as social services, social care, health, and education have a duty of care for missing, responsibility tends to fall to police (Hayden and Shalev Greene 2016, Allsop *et al.* 2020). Identifying where the duty of care lies in each case creates ambiguity, and in some instances, this lack of clarity can lead to tension between agencies, with some police officers expressing that dealing with routine missing persons cases goes beyond police remit (Hayden and Shalev Greene 2016, Allsop *et al.* 2020). This is compounded by the issue that, ultimately, being missing is not criminal (Shalev Greene *et al.* 2019).

The COVID-19 pandemic provides a unique opportunity to examine not only how a public health emergency impacts on the profile of missing, but also what may influence missing in 'normal' times. To this end, the current study examines the extent to which the period of lockdown in early 2020 impacted the profile of UK missing person reports across six police forces by comparing the profile of missing person reports during this period with the same time period in 2019. This is beneficial for supporting police and partner agencies with preparing for further restrictions, extended lockdowns, and future public health emergencies (see Gentithes and Krent 2020).

Potential impacts of COVID-19 on the profile of missing persons

Lockdowns are likely to drive down overall reported missing persons through sheer oversight and enforcement (see Collie 2019). Direct police involvement in the control of movement of the general population via temporarily enhanced powers may place additional demands on police forces (Farrow 2020). At face value, directives to restrict movement are likely to reduce both opportunities to go missing (i.e. for fear of punishment) and opportunities to be reported missing mistakenly (i.e. lower risk of miscommunication). Certain risk factors usually associated with going missing may also not be present (e.g. problems in school; NCA 2020). Further, social care establishments from where people are frequently reported missing (such as residential care homes for the elderly or for young people) may monitor their residents in a stricter manner than before (e.g. Gordon 2020); equally, staff in other care establishments (such as hospitals) may be burdened by other duties, leading to missing incidents being overlooked and not being reported (Murphy *et al.* 2020).

Although lockdowns may lead to a decrease in the *number* of missing person reports, the *proportion* of types of reports may change. At the time of writing, the research body relating to the current COVID-19 pandemic was still emerging (see Ali *et al.* 2020), although there were indications that lockdowns in the early stages of the pandemic had negative consequences for many. Instructions to stay and work from home, social distance, and the financial hardship many felt as a result of lockdowns had a widespread adverse impact on well-being. People reported feeling lonelier (Groarke *et al.* 2020), more fearful, anxious, and uncertain (Gunnell *et al.* 2020), with many facing mental health difficulties (de Maio Nascimento 2020, Ramirez-Ortiz *et al.* 2020, White and van Der Boor 2020). Concerns were raised that suicide rates, and alcohol and substance abuse may increase (Gunnell *et al.* 2020, Ho *et al.* 2020, Rehm *et al.* 2020). These factors, as well as reduced opportunities for support and greater exposure to abusive relationships, led to other adverse experiences such as family conflict and domestic violence (Bradbury-Jones and Isham 2020, Peterman *et al.*, 2020) and calls to the police to attend domestic abuse incidences increased (Hartmann 2020, Kagi 2020, Leslie and Wilson 2020, Mahase 2020, Piquero *et al.* 2020, Tolan 2020).

As many of the above factors are often associated with or are antecedents to going missing in children (Biehal *et al.* 2003) and adults (Taylor *et al.* 2019), we would expect to see an increase in the proportion of missing reports which are characterised by these factors in a lockdown. This is because these factors are known to cause both children and adults to flee dangerous situations, go missing as a way to cope, or to pull them away from their home (Finkelstein 2004, Stevenson 2013, Huey and Ferguson 2020), especially if usual sources of support are restricted. Preliminary analysis of cases referred to the NCA during the first UK lockdown support this assumption, with a higher proportion of high risk cases (e.g. people at risk of suicide) being reported than usual in England and Wales (Humphrey and Parr 2020).

It is also predicted that there will be a higher proportion of people from Black and other ethnic minority backgrounds within missing reports during a pandemic. Existing inequalities across mental health care (Halvorsrud *et al.* 2018) and justice systems (Drakulich and Rodriguez-Whitney 2018), particularly for those who are from a lower socio-economic background (Ettman *et al.* 2020) have been compounded by the pandemic; work shutdowns, working from home, school closures, and health risks associated with COVID-19 (Office for National Statistics 2020) have impacted upon those in ethnic minority groups in particular (Blundell *et al.* 2020, Labgold *et al.* 2020). It is thought that existing disparities have led to an over-representation of Black people in missing person reports in non-pandemic times (NCA 2020); authors have suggested that this disproportionate picture will be exacerbated by the impact of lockdowns, with the proportion of missing people who are not from a White British background rising (Humphrey and Parr 2020).

Notably, we may expect to see disparity regarding children from minority backgrounds. Black children are over-represented in figures for children who are looked after in residential care settings (UK Department for Education 2021), a group who constitute a large proportion of missing children reports (NCA 2020). Additionally, children from Black, Asian, and other ethnic minority backgrounds may be more at risk of bereavement from COVID-19 due to the higher death rate within this group (Office for National Statistics 2020), and are more likely to be carers (The Children's Society 2013). All of these factors may contribute to children who are not from White British backgrounds going missing as a response to increasingly adverse situations.

The proportion of other groups of children who go missing may also change within a pandemic. Usually, missing children reports constitute a large amount of those recorded by the police (NCA 2020), and a disproportionate amount of these children go missing from residential care (NCA 2020), frequently to escape from the setting or particular problems they are experiencing, to be with friends or family, or are drawn away by exploiters (Finkelstein 2004; Taylor 2013; Lipscombe 2019; Ofsted 2020). Although some reports suggest that the experiences of children in residential care homes has worsened during the pandemic, other suggest that some aspects of everyday life may have been improved for these young people. Vallejo-Slocker *et al.* (2020) found that young people living in residential care and those who came from vulnerable families (e.g. those now living with foster parents) suffered greater negative psychological well-being during lockdown than before. Additionally, analysis of interviews with children going missing from care in the UK found that young people often left settings to lockdown with their friends and/or family (Ofsted 2020). Alternatively, Montserrat *et al.* (2021) reported that both girls and boys in residential care reported better relationships with caregivers during lockdowns and that activities such as playing board-games and cooking increased. Such issues may play key roles in determining whether a higher or lower proportion of young people will go missing within a lockdown.

Another point to consider is the impact of staffing on missing behaviour during lockdowns. Monitoring capabilities in residential settings may have been reduced; the already challenging work residential care staff carry out has been exacerbated by COVID-19, leading to increased levels of stress and risk of burnout (Parry *et al.* 2021, Waring and Giles 2021). This may also have been compounded by requirements for staff to self-isolate or otherwise be absent from work (Bielicki *et al.* 2020). It may have been, therefore, more difficult to prevent young people from going missing due to issues with personnel or incidents may have been reported later than normal.

We may also see a rise in the proportion of children going missing as a response to other stressors. The current pandemic has exacerbated the rates of abuse and neglect towards children, due to increased levels of pressure on parents and guardians (Romanou and Belton 2020) and many children may need to escape adverse circumstances. Such young people, perhaps not previously identified as being vulnerable may not receive the support they usually get in school. Educators and social workers will not be able to play their usual, crucial role in identifying and reporting abuse (Baron *et al.* 2020, Fitzpatrick *et al.* 2020). Furthermore, Barnardos, a leading children's charity in the UK who support vulnerable children, found a significant decrease in the number of referrals to their front-line workers within the first lockdown (Barnardos 2020). Children who needed support may

have been unable to receive it (Barnados 2020), as well as those suffering from maltreatment, mental health issues, and other related vulnerabilities.

Even though a pandemic may drive down the number of missing person reports, the resource implications of having a shift in the proportion of different types of cases during a lockdown needs consideration. As resources are allocated in the UK policing according to risk level assigned to a missing case (Association of Chief Police Officers 2013), pandemics may cause a subsequent increase in demand on resources as a result of a higher number of vulnerable (i.e. high risk) cases. Increased levels of vulnerable children going missing will have not only an impact on resources as well as for multi-agency working, a practice that can be even more challenging in a pandemic (Laufs and Waseem 2020). Additionally, lockdown restrictions will limit the opportunity for the families and the public to assist in locating the missing person (Parr and Stevenson 2013). Finally, there may be fewer opportunities for people to go missing from locations other than their own home because they will be less likely to be travelling anywhere else.

The current research seeks to examine the profile of cases during the first lockdown in the United Kingdom compared to the same timeframe in the previous year. This will help highlight the risks exhibited by missing persons within a pandemic, with a view to providing a preliminary picture of how best to respond in such a difficult, resource-stretched time. This will help prepare the police for future public health emergencies in terms of both understanding how to meet the needs of those at risk of going missing within a pandemic as well as potential resource implications.

Method

Sample

The sample comprised of 19,159 reports of adults and children who went missing between 23rd March 2020 until 20th May 2020 (the initial period of 'lockdown' in England as designated by the UK government; Johnson, 2020), and the same time period in 2019 recorded by six UK police forces (see Table 1). All forces in the UK were asked to take part in this study. The data included all solved cases that meet the criteria of 'a missing person' as defined by College of Policing (2020). Cases, rather than persons, were adopted as the unit of analysis as it was not possible to distinguish individuals. Therefore, the current data set inevitably included repeat incidents.

Procedure

Data collection

Following University ethical approval forces were asked to retrieve data fields pertaining to anonymised case by running queries within their computer systems. In some cases, forces were not able to provide all the requested fields. Using police data in research can be a problematic task (Alison *et al.* 2001); issues such as consistency of the quantity and quality of information recorded

Table 1. Number of missing children and adults reports in 2019 (23rd March–20th May) compared with 2020 (23rd March–20th May) and percentage change for each UK force.

| Force | Children | | | Adults | | |
|--------------|-------------|-------------|---------------|-------------|-------------|---------------|
| | 2019 | 2020 | % Change | 2019 | 2020 | % Change |
| A | 174 | 185 | 6.32 | 256 | 125 | −51.17 |
| B | 326 | 269 | −17.48 | 205 | 165 | −19.51 |
| C | 5307 | 3602 | −32.13 | 2500 | 1766 | −29.36 |
| D | 249 | 131 | −47.39 | 110 | 46 | −58.19 |
| E | 855 | 466 | −45.50 | 785 | 478 | −39.11 |
| F | 443 | 155 | −65.01 | 416 | 145 | −65.14 |
| Total | 7354 | 4808 | −34.62 | 4272 | 2725 | −36.21 |

Note: It was only possible to retrieve 80% of reported cases to Force D in both 2019 and 2020.

across different officers and forces are recognised here. Equally, the representativeness or generalisability of the findings derived from recorded police data is limited as many missing people are not reported to the police, and the current study has not used all police forces within the UK. The present authors recognise the limitations of using recorded missing police data and are following up this research with a qualitative investigation, interviewing relevant officers to both provide context behind these results and to triangulate the current data.

Coding and derived variables

For the overall analysis using all six forces, it was possible to derive information for particular variables for all six forces (e.g. sex, age, risk). However, some variables were only seen in two forces (e.g. harm, found deceased). Only variables seen in two or more forces were used in the analysis. Although this method will not represent the national picture, by using the findings from more than one force, we can investigate broader patterns.

Tables 2–5 show the variables used within the data set and alongside how many forces were able to contribute data for the variables. Refinement was needed for several variables, those of which are indicated within the tables (e.g. variables may have needed to have been ‘collapsed’ in order to be consistently coded across all police forces).

Analysis

Dichotomous variables depicting the characteristics of the cases (e.g. sex) were compared across the 2019 and 2020 timeframes using cross-tabulations and 2×2 Pearson’s Chi-Square Tests for independence (χ^2) using IBM SPSS Statistics version 26. Fisher’s Exact Test was used if any of the cells within the contingency tables were less than 5 (Fisher 1922). Chi-square analysis was chosen above logistic regression modelling as the current study is concerned with examining any differences between the two timeframes rather than whether than a prediction (i.e. whether certain characteristics predicted lockdown or not). This type of analysis is often seen when examining pre- and post-interventions in forensic practice (e.g. Crane and Blud 2012). Differences were expressed through odds ratios with respective confidence intervals. For continuous variables (e.g. age, number of times missing), Kolmogorov–Smirnov tests were used to examine normality of the distributions. All were significant; however, as the sample size within this study was deemed sufficiently large enough not to require any assumption of normality (Lumley *et al.* 2002), between-groups t-tests were used to examine the mean differences between lockdown and the same period in 2019. The phi coefficient (ϕ) was used to measure effect sizes for the cross-tabulations (Sheskin 1997). Cohen’s *d* effect sizes were calculated for the t-tests (Cohen 1988). Effect sizes of ± 0.1 indicate a small effect size, while values of ± 0.3 and ± 0.5 indicate medium and large effect sizes respectively (Cohen 1977). Bonferroni corrections were applied to the critical *p* values for any multiple comparisons in order to control for a Type I error as there were no pre-planned hypotheses (see Streiner and Norman 2011). Thus the adjusted *p* values were as follows: sex, risk, found by ($p = .016667$); ethnic background ($p = .025$); missing from ($p = .0125$), associated risk factors ($p = .004545$), and distance from missing to found ($p = .008333$). All other dependent variables were considered at the $p = .05$ significance level.

Any differences in characteristics of those coming to non-fatal (Forces A and F) and fatal harm (Forces C and E) were examined. The same analysis as outlined above was carried out on cases where harm had occurred, although as the sample size for this sub-set of data was not considered large enough not to require any assumption of normality (Lumley *et al.* 2002). Therefore, Mann Whitney *U* tests were used to examine any differences between continuous variables. The effect size was calculated using the formula $r = Z/\sqrt{N}$ from the Mann–Whitney *U* tests (Newcombe 2006).

Results

In all, 19,159 cases were identified; 11,626 cases were reported in 2019 and 7533 cases were reported in 2020.

Table 2. Cross-tabulation table for $2 \times 2 \chi^2$, Odds Ratios (OR) with Confidence Intervals (CIs) measuring associations between characteristics of missing children reports in 23rd March–20th May 2019 compared with the same period in 2020 ($N = 12162$).

| Characteristics (No. of forces) | | 2019 | | 2020 | | χ^2 | <i>p</i> -value | ϕ | OR | CI |
|---|--|----------|------|----------|------|----------|-----------------|--------|------|------------|
| | | <i>n</i> | % | <i>n</i> | % | | | | | |
| Sex (6) | Male | 3685 | 50.1 | 2543 | 52.9 | 9.01 | .003 | .03 | 1.12 | 1.04–1.20 |
| | Female | 3661 | 49.8 | 2245 | 46.7 | 11.11 | .001 | -.03 | 0.88 | 0.82–0.95 |
| | Transgender | 5 | 0.1 | 16 | 0.3 | 11.83 | .001 | .03 | 4.91 | 1.80–13.41 |
| Risk (6) | Low | 605 | 8.8 | 574 | 12.6 | 43.55 | <.001 | .06 | 1.50 | 1.33–1.69 |
| | Medium | 5936 | 86.3 | 3763 | 82.8 | 25.52 | <.001 | -.05 | 0.77 | 0.69–0.85 |
| | High | 337 | 4.9 | 205 | 4.5 | 0.90 | .35 | -.01 | 0.92 | 0.77–1.10 |
| Ethnic background ^a (6) | Not White British | 3353 | 47.9 | 2310 | 50.1 | 6.35 | .01 | .02 | 1.10 | 1.02–1.19 |
| | White British | 3642 | 52.1 | 2280 | 49.7 | 6.35 | .01 | -.02 | 0.91 | 0.84–0.98 |
| Missing before ^a (4) | | 1419 | 80.7 | 888 | 86.4 | 14.62 | <.001 | .07 | 1.52 | 1.22–1.88 |
| Missing from (4) | Children's residential care | 532 | 29.6 | 400 | 37.2 | 17.83 | <.001 | .08 | 1.41 | 1.20–1.66 |
| | Home/residence | 1024 | 57.0 | 609 | 56.7 | 0.03 | .88 | -.003 | 1.00 | 0.85–1.15 |
| | Hospital | 31 | 1.7 | 7 | 0.7 | 5.93 | .02 | -.05 | 0.37 | 0.16–0.85 |
| | Street | 20 | 1.1 | 2 | 0.2 | 7.60 | .006 | -.05 | 0.17 | 0.04–0.71 |
| Found by ^a (4) | Family/friend/acquaintance | 267 | 14.8 | 101 | 9.4 | 17.85 | <.001 | -.08 | 0.60 | 0.47–0.76 |
| | Police | 623 | 34.6 | 412 | 38.4 | 4.02 | .05 | .04 | 1.17 | 1.00–1.37 |
| | Care home staff | 111 | 11.8 | 128 | 21.1 | 24.43 | <.001 | .13 | 2.00 | 1.51–2.64 |
| Found at ^a (3) | Home address | 250 | 30.9 | 93 | 24.3 | 5.50 | .02 | -.07 | 0.72 | 0.54–0.95 |
| Suffered harm whilst missing (2) | | 10 | 1.6 | 6 | 1.8 | 0.03 | 1.00 | .01 | 1.09 | 0.39–3.03 |
| Associated risk factors (2) | Modern day slavery exploitation, trafficking ^a | 24 | 3.9 | 17 | 5.0 | 0.66 | .41 | .03 | 1.30 | 0.69–2.46 |
| | School/college problems | 1445 | 25.1 | 761 | 20.3 | 30.30 | <.001 | -.06 | 0.76 | 0.69–0.84 |
| | Gang-related | 11 | 1.8 | 12 | 3.5 | 2.85 | .12 | .06 | 2.02 | 0.88–4.62 |
| | Violent, racial, transphobic, or domestic abuse ^a | 437 | 7.6 | 373 | 9.9 | 15.80 | <.001 | .04 | 1.34 | 1.16–1.55 |
| | Risk of suicide/self-harm | 690 | 12.0 | 508 | 13.5 | 4.78 | .03 | .02 | 1.15 | 1.01–1.30 |
| | Mental health issues including depression/anxiety ^a | 1060 | 18.4 | 797 | 21.2 | 11.17 | .001 | .03 | 1.19 | 1.08–1.32 |
| | Alcohol/drug dependency ^a | 1222 | 21.3 | 1068 | 28.4 | 63.97 | <.001 | .08 | 1.47 | 1.34–1.62 |
| | Relationship problems Inc. family conflict ^a | 1476 | 25.7 | 913 | 24.3 | 2.26 | .13 | -.02 | 0.93 | 0.85–1.02 |
| | Employment problems | 415 | 7.2 | 292 | 7.8 | 1.02 | .32 | .01 | 1.08 | 0.93–1.27 |
| | Financial problems | 434 | 7.5 | 341 | 9.1 | 7.08 | .09 | .03 | 1.22 | 1.05–1.42 |
| | Unaccompanied juvenile | 82 | 13.3 | 47 | 13.8 | .05 | .84 | .02 | 1.05 | 0.71–1.54 |
| Distance from missing to found (in miles) (2) | 0–5 miles | 419 | 71.7 | 232 | 73.4 | 0.29 | .64 | .02 | 1.09 | 0.80–1.48 |
| | 6–10 miles | 67 | 11.5 | 27 | 8.5 | 1.88 | .21 | -.05 | 0.72 | 0.45–1.15 |
| | 11–20 miles | 48 | 8.2 | 19 | 6.0 | 1.45 | .29 | -.04 | 0.71 | 0.41–1.24 |
| | 21–40 miles | 34 | 5.8 | 13 | 4.1 | 1.21 | .35 | -.04 | 0.69 | 0.36–1.34 |
| | 41–80 miles | 6 | 1.0 | 18 | 5.7 | 17.22 | <.001 | .14 | 5.82 | 2.29–14.81 |
| | Over 80 miles | 10 | 1.7 | 7 | 2.2 | 0.28 | .61 | .02 | 1.30 | 0.49–3.45 |

^aVariable was 'collapsed' into broader categories due to differing recording systems.

In 2019, 7354 cases (63.3%) involved a child, whilst 4808 cases (36.7%) involved a missing adult. The same percentages were found in 2020 (63.8% and 36.2% respectively). Children were aged 0–17 years in both 2019 and 2020 (2019; $M = 15.4$, $SD = 2.03$, 2020; $M = 15.53$, $SD = 1.94$). Adults were aged 18–99 years ($M = 32.3$; $SD = 17.2$) and 18–93 years ($M = 31.7$, $SD = 17.4$) in 2019 and 2020 respectively.

Table 3. Means and standard deviations for age, time missing, and number of times previously missing across missing children reports in 23rd March–20th May 2019 compared with the same period in 2020 ($N = 12,162$).

| Characteristics (no. of forces) | 2019 | | 2020 | | <i>p</i> -value | <i>d</i> |
|--|----------|------------------------|----------|------------------------|-----------------|----------|
| | <i>n</i> | <i>M</i> (<i>SD</i>) | <i>n</i> | <i>M</i> (<i>SD</i>) | | |
| Age (in years) (6) | 7352 | 15.40 (2.03) | 4808 | 15.53 (1.94) | <.001 | -.07 |
| Time missing (in hours) (6) | 6432 | 57.65 (320.02) | 4205 | 46.03 (106.88) | <.001 | .04 |
| Number of times previously missing (2) | 617 | 13.99 (18.93) | 340 | 12.10 (14.3) | .08 | .11 |

Table 4. Cross-tabulation table for $2 \times 2 \chi^2$, Odds Ratios (OR) with Confidence Intervals (CIs) measuring associations between characteristics of missing adult reports in 23rd March–20th May 2019 compared with the same period in 2020 ($N = 6997$).

| Characteristics (No. of forces) | | 2019 | | 2020 | | χ^2 | <i>p</i> -value | ϕ | OR | CI |
|---|--|----------|------|----------|------|----------|-------------------|--------|------|------------|
| | | <i>n</i> | % | <i>n</i> | % | | | | | |
| Sex (6) | Male | 2584 | 60.5 | 1619 | 59.4 | 0.85 | .37 | −.01 | 0.96 | 0.87–1.05 |
| | Female | 1659 | 38.9 | 1080 | 39.6 | 0.42 | .53 | .01 | 1.03 | 0.94–1.14 |
| | Transgender | 25 | 0.6 | 25 | 0.9 | 2.58 | .11 | .02 | 1.57 | 0.90–2.74 |
| Risk (6) | Low | 771 | 19.4 | 491 | 19.4 | 0.00 | 1.00 | .00 | 1.00 | 0.88–1.13 |
| | Medium | 2599 | 67.2 | 1570 | 63.5 | 8.78 | .003 | −.04 | 0.85 | 0.77–0.95 |
| | High | 500 | 12.9 | 409 | 16.6 | 16.20 | <.001 | .05 | 1.34 | 1.16–1.54 |
| Ethnic background ^a (6) | Not White British | 1512 | 37.0 | 1030 | 39.6 | 4.72 | .03 | .03 | 1.12 | 1.01–1.24 |
| | White British | 2576 | 63.0 | 1569 | 60.4 | 4.72 | .03 | −.03 | 0.89 | 0.81–0.99 |
| Missing before ^a (4) | | 830 | 53.2 | 429 | 50.6 | 1.44 | .23 | −.02 | 0.90 | 0.76–1.07 |
| Missing from ^a (4) | Children's residential care home | 86 | 5.2 | 14 | 1.5 | 20.95 | <.001 | −.09 | 0.29 | 0.16–0.51 |
| | Home/residence | 1039 | 62.6 | 661 | 72.4 | 25.47 | <.001 | .10 | 1.57 | 1.32–1.87 |
| | Hospital | 344 | 20.7 | 170 | 18.6 | 1.61 | .22 | −.03 | 0.88 | 0.71–1.08 |
| | Mental Health | 43 | 2.6 | 17 | 1.9 | 1.37 | .28 | −.02 | 0.71 | 0.41–1.26 |
| | Residential care (elderly) | 32 | 2.3 | 19 | 2.4 | 0.04 | .88 | .00 | 1.06 | 0.60–1.88 |
| Found by ^a (4) | Family/friend/acquaintance | 120 | 11.4 | 66 | 9.8 | 1.12 | .30 | −.03 | 0.84 | 0.61–1.16 |
| | Police | 499 | 47.3 | 377 | 55.8 | 11.83 | .001 | .08 | 1.41 | 1.16–1.71 |
| | Care home staff | 50 | 10.8 | 25 | 8.6 | 0.98 | .38 | −.04 | 0.78 | 0.47–1.28 |
| Found at ^a (3) | Home address | 250 | 30.9 | 93 | 24.3 | 5.50 | .02 | −.07 | 0.72 | 0.54–0.95 |
| Suffered harm whilst missing (2) | | 52 | 7.7 | 36 | 13.3 | 7.12 | .009 | .09 | 1.83 | 1.17–2.88 |
| Associated factors (2) | Modern day slavery exploitation, trafficking ^a | 2 | 0.3 | 1 | 0.4 | | 1.00 ^b | .01 | 1.25 | 0.11–13.79 |
| | Gang-related | 3 | 0.4 | 0 | 0 | 14.24 | .56 ^b | −.04 | 1.00 | 0.99–1.00 |
| | Violent, racial, transphobic, or domestic abuse ^a | 259 | 8.9 | 234 | 12.2 | 24.31 | <.001 | .05 | 1.43 | 1.19–1.73 |
| | Risk of suicide/self-harm | 542 | 18.6 | 468 | 24.5 | 10.91 | <.001 | .07 | 1.42 | 1.24–1.63 |
| | Mental health issues including depression/anxiety ^a | 1222 | 41.9 | 893 | 46.7 | 16.15 | .001 | .05 | 1.22 | 1.08–1.37 |
| | Alcohol/drug dependency ^a | 957 | 32.8 | 735 | 38.5 | 9.09 | <.001 | .06 | 1.28 | 1.13–1.44 |
| | Relationship problems inc. family conflict ^a | 631 | 21.6 | 485 | 25.4 | 2.11 | .003 | .04 | 1.23 | 1.08–1.41 |
| | Employment problems | 415 | 14.2 | 301 | 15.8 | 6.54 | .15 | .02 | 1.13 | 0.96–1.32 |
| | Financial problems | 431 | 14.8 | 335 | 17.5 | | .01 | .04 | 1.23 | 1.05–1.43 |
| | | | | | | | | | | |
| Distance from missing to found (in miles) (2) | 0–5 | 398 | 61.8 | 165 | 64.5 | 0.55 | .49 | .03 | 1.12 | 0.83–1.52 |
| | 6–10 | 74 | 11.5 | 27 | 10.5 | 0.16 | .73 | −.01 | 0.91 | 0.57–1.45 |
| | 11–20 | 43 | 6.7 | 22 | 8.6 | 1.00 | .32 | .03 | 1.31 | 0.77–2.25 |
| | 21–40 | 33 | 5.1 | 13 | 5.1 | 0 | 1.00 | 0 | 0.99 | 0.51–1.91 |
| | 41–80 | 27 | 4.2 | 10 | 3.9 | 0.04 | 1.00 | −.01 | 0.93 | 0.44–1.95 |
| | Over 80 | 27 | 4.2 | 10 | 3.9 | 0.04 | 1.00 | −.01 | 0.93 | 0.44–1.95 |
| | Out of the UK | 5 | 0.8 | 2 | 0.8 | | 1.00 ^b | 0 | 1.01 | 0.19–5.22 |

^aVariable was 'collapsed' into broader categories due to differing recording systems.^bFisher's Exact Test was used as cells less than 5.**Table 5.** Means and standard deviations for age, time missing, and number of times previously missing across missing adults reports in 23rd March–20th May 2019 compared with the same period in 2020 ($N = 6997$).

| Characteristics (no. of forces) | 2019 | | 2020 | | <i>p</i> -value | <i>d</i> |
|--|----------|------------------------|----------|------------------------|-----------------|----------|
| | <i>n</i> | <i>M</i> (<i>SD</i>) | <i>n</i> | <i>M</i> (<i>SD</i>) | | |
| Age (in years) (6) | 4271 | 32.26 (17.22) | 2725 | 31.74 (17.43) | .23 | .03 |
| Time missing (in hours) (6) | 3050 | 70.53 (291.01) | 1978 | 50.72 (198.61) | .01 | .08 |
| Number of times previously missing (2) | 672 | 6.68 (10.43) | 270 | 3.86 (7.01) | <.001 | .32 |

Between the same period in 2019 and 2020, there was a 35% decrease in missing children reports from 7354 to 4808 ($n = 2546$ fewer cases) and 36% reduction in missing adult reports from 4272 to 2725 ($n = 1547$ fewer cases).

The overall analysis presented in [Tables 2–5](#) are shown in descending order, whereby results are shown for variables common to all six forces first, then for variables common to all five forces, and so on.

As [Tables 2–5](#) show, there were several significant differences in the proportion of cases featuring particular characteristics in the first lockdown compared with the same time in 2019. In terms of the demographic profile of those who were reported missing, there were small but significant increases in the proportion of children who were not from a White British background and those who were male during 2020 (47.9% to 50.1% and 50.1% to 52.9% respectively). The mean age of children missing within lockdown increased slightly but significantly (15.40 years to 15.53 years). Notably, the odds of a case involving a transgender child going missing was 4.91 times higher in lockdown compared with the same time in 2019; although the proportion of cases across both time frames was small, there was a significantly higher proportion of cases in 2020 (0.1% in 2019, 0.3% in 2020). There were no significant changes in terms of the proportion of adults with particular demographic characteristics reported missing within the first UK lockdown.

There were significant changes in the proportion of both children and adults assigned particular risk assessment levels. A higher proportion of children were deemed at low risk from coming to harm overall across the six forces (8.8% compared with 12.6%) but a lower proportion of children were deemed as medium risk (86.3% compared with 82.8%). For adults, this picture was different whereby the odds of an adult being deemed as high risk during the 2020 was 1.34 times higher than 2019 (12.9% of cases were high risk in 2019, compared with 16.6% in 2020). Conversely, there was a lower proportion of adults being classified as low risk in 2020 (67.2% of cases) compared with 2019 (63.5% of cases).

It does seem, that within lockdown, a smaller proportion of children who had gone missing before were represented in the figures (80.7% compared with 86.4%), although in terms of the number of times these children had gone missing for, there were no significant differences (see [Table 3](#)). For adults, a different picture emerged. Although there was not a significant change in terms of the proportion of people who had gone missing before, the number of times adults were reported missing during lockdown was significantly lower than the same period the year before (2019, $M = 6.68$, $SD = 10.43$; 2020, $M = 3.86$, $SD = 7.01$).

In terms of potential triggers, antecedents, or factors associated with going missing, there were some similarities between both children and adults across the two forces where it was possible to derive data around these issues. Notably, compared with 2019, during lockdown there was an increase in the proportion of both children (7.6% compared with 9.9%) and adults (8.9% compared with 12.2%) thought to have suffered from violent, racial, transphobic, or domestic abuse. This was also the case with mental health issues (including anxiety and depression) as well as the risk of suicide and self-harm. Here, the odds of a child being at such risk was 1.46 times higher in lockdown compared with the same time in 2019. There was also a rise in the proportion of both children and adult cases whereby the person going missing was known to have alcohol and/or drug dependency issues. This was particularly pertinent for children; in lockdown, the odds of a case including a child going missing with this characteristic was nearly 1.5 times higher than the same period in 2019.

Other changes in terms of the profile of cases with particular characteristics associated with going missing were seen. A higher proportion of adult missing cases involved the person having relationship issues in lockdown compared with 2019 (25.4% in 2020 compared with 21.6%), whilst a lower proportion of children were known to have been suffering from school or college problems in 2020 (20.3% compared with 25.1% in 2019).

In terms of the circumstances of the cases, overall across all six forces, both children and adults were found to have been missing for a significantly shorter mean period in lockdown (children went missing for a mean time of 46.03 h compared with 57.65 h in 2019, whilst adults were missing, on average, for

50.72 h compared with 70.53 h). Where reported, there was a higher proportion of children going missing from residential care in lockdown (37.2% in 2020 compared with 29.6% in 2019), whilst children going missing from the street made up a smaller proportion of cases in lockdown than in 2019 (1.1% compared with 0.2%). Adults transitioning from care constituted a significantly smaller proportion of cases within lockdown compared to the year previously (5.2% of cases in 2019, 1.5% in 2020).

A smaller proportion of people were found at home during lockdown than the same period in 2019 (for children and adults, this was 30.9% in 2019 and 24.3% in 2020). A smaller proportion of children were found by a family member, friend, or acquaintance (14.8% in 2019 versus 9.4% in lockdown), whilst for adults, a higher proportion of people were found by the police in lockdown (47.3% in 2019 compared with 55.8% in lockdown).

Harm and fatal outcomes

As [Tables 2](#) and [4](#) show, there was only a statistically significant change in terms of harmful outcomes in the proportion of adult cases during lockdown, with a small increase in the percentage of adults suffering from harm across the two forces from which data was derived (1.6% in 2019, 1.8% in 2020). There were no significant changes in terms of the proportion of harmful outcomes for children, although children who came to harm whilst missing in lockdown were missing for a shorter period ($Mdn = 1.18$ h, $min = 0.20$ h, $max = 14.52$ h) than those who came to harm whilst missing in 2019 ($Mdn = 16.75$ h, $min = 0.92$ h, $max = 13519.63$ h). No children were found deceased across either time periods across the two forces that provided data for this and there was not a statistically significant difference in terms of the proportion of adult cases resulting in a fatal outcome.

Discussion

Overall, the lockdown period led to a substantial reduction in the *number* of missing persons with around 35% fewer missing children and 36% fewer adult reports than the previous year. At a general level, these trends support the expected trends, and indicate that fear of fines, reluctance to report others missing, and simple lack of opportunity may have been important factors (C/F Laufs and Waseem [2020](#)). For certain groups of people, particular drivers of going missing may have been removed during the pandemic (e.g. being bullied at school), and this may be reflected in the decrease in the proportion of overall reports.

We know that during the first UK lockdown in 2020, stricter monitoring of the movement and allowance of visitors in residential care settings were in place e.g. in homes for the elderly (Gordon *et al.* [2020](#)), and within acute mental health institutions (Care Quality Commission, [2020](#)). Given that a proportion of people go missing, sometimes repeatedly from such establishments (Bartholomew *et al.* [2009](#); Hayden and Shalev Greene [2016](#)), this may have meant that people within these settings would have been less likely to go missing. Similarly, the drop in numbers of those attending Accident and Emergency units seen at the beginning of the pandemic (NHS England [2020](#)) may have had an impact on the rates of people going missing from this type of location.

Despite a reduction in cases, there were notable and statistically significant changes in the *proportion* of cases characterised by particular features.

Missing children

The data reveal a disproportionate increase in the proportion of cases of children with particular markers. Across two of the forces, there was around a 50% increase in the proportion of missing person reports relating to children with alcohol and drug dependency, 30% increase in the proportion of children suffering abuse, and 20% increase in the proportion of children experiencing mental health problems. These rises could be explained by the conditions caused by the lockdown restrictions such as stay at home orders and instructions to socially distance. For example, studies

have showed being locked down within households may have exposed more children to domestic violence (Romanou and Belton 2020). Similarly, we know restrictions such as school closures have impacted on well-being, leaving many children feeling anxious, stressed, and angry (Lee 2020; UNESCO 2020), with some children unable to retreat to the 'safe haven' of schools to escape conflict and violence at home (Young Minds 2020a). The absence of face-to-face contact with professionals may have meant vital opportunities to identify issues, or refer and signpost children to relevant services were lost for some children not previously identified as vulnerable (see Baron *et al.* 2020, Fitzpatrick *et al.* 2020). These factors, in turn may have meant that children living with such adverse circumstances may have gone missing as a way to cope or to escape (e.g Huey and Ferguson 2020).

Across four of the police forces, there was a proportional increase in reports of children going missing from residential care homes. Vulnerable children may have gone missing from care for reasons outlined above and/or to travel to see their friends and families (Ofsted 2020). Personnel issues such as burn out, stress, and staff absences due to COVID-19 (Parry *et al.* 2021) may have led to a higher proportion of children going missing from these settings. Indeed, across two forces, children (although not necessarily from residential care homes) were found further distances away from home in 2020, which may indicate travel back to familiar areas.

The increase in the proportion of missing children reports amongst ethnic minority populations overall across all of the forces involved raises questions about the wider impacts of COVID-19 and may also be related to the higher proportion of children going missing from residential care home settings. Increases in the proportions of both children and adults from ethnic minorities going missing during the pandemic support the earlier hypotheses that structural inequalities have been further compounded by restrictions (see Labgold *et al.* 2020), and that minority groups are especially vulnerable to antecedents being exacerbated. However, the exact mechanisms by which lockdown influenced these requires additional research to understand fully. It is interesting to note that unlike within the sample of young people, and unlike for ethnicity, there were no changes in terms of the proportion of males, females, and transgender adults who went missing within the pandemic.

Overall for the six forces involved, the proportion of male and transgender children who went missing increased, whilst the proportion of female children decreased. These findings warrant further attention, although research has suggested that COVID-19 has exacerbated mental health issues in transgender and gender non-conforming young people (Perl *et al.* 2021) which may have had an effect on missing behaviour within the pandemic. The reason behind the change in proportions may also be due to decrease in the proportion of cases involving high risk children as descriptive reports suggest that female children are more likely to be classified as high risk (NCA 2020).

The broad efficacy of lockdown measures may also have been reflected in the changing patterns seen in missing children reports; for example, across four forces, there was a reduction in children reported missing from the street and being found by family members. There may have also been a change in terms of partner responses to missing children; initial observations from on-going qualitative research interviewing officers suggests many forces were effective in pushing the Philomena protocols which encourages carers to search for missing children (Humberside Police n.d). This perhaps reflected the higher proportion of 'looked after' children found by care home staff within the lockdown compared with the previous year.

Furthermore, there are outstanding questions as to the way in which risk assessments have been applied to children especially and use of the 'low risk' category across the six forces. Indeed, the increase of missing children with vulnerability markers such as mental health issues would lead to an expectation there would be a concomitant rise in high risk classifications, but this was not widely observed. These findings highlight a potential need to re-examine varying approaches to risk assessment processes, and to examine whether this leads to any potential disparity in response (Tarling and Burrows 2004).

Missing adults

Across four forces, markers, such as discrimination and abuse, alcohol and drug dependency and relationship issues were slightly increased for missing adults. This accords with others' observations about domestic abuse, poor wellbeing and risk of suicide as a result of the pandemic and lockdowns (Bradbury-Hones & Isham, 2020; de Maio Nascimento 2020, Groarke *et al.* 2020, Gunnell *et al.* 2020, Ho *et al.* 2020, Peterman *et al.* 2020, Ramírez-Ortiz *et al.* 2020, Rehm *et al.* 2020; White and van Der Boor 2020). Adults were clearly affected by considerable social (reduction in social networks) and financial pressures (job losses and business closures) including increased challenges and responsibilities at home (children at home, looking after ill relatives and loved ones). Across two forces, there was also an increase in the proportion of adults experiencing non-fatal harm compared to the same time period in 2019. Although it was not possible to statistically explore whether this was in the context of other factors due to low frequencies, it could have been the case this was related to rise in issues such as mental health difficulties. Moving forward, a key concern would be for the exacerbated risk for suicide and self-harm through the course of a pandemic given the demonstrated seasonal winter and spring peaks in suicide (e.g. Partonen 2004, Laido 2017). In general, the findings indicate that lockdown introduced some protective factors against going missing, such as increased surveillance; however, for certain groups, particularly those that were already vulnerable- lockdown exacerbated existing antecedents, removed protective factors, or introduced risk factors such as mental ill health.

Our work identified that adults were more likely found by the police, and given the slight increase in adults classed as 'high risk' this tends to suggest the general efficacy of lockdown measures (relatives were not necessarily out looking for them) as well as good practise amongst police forces in allocating resource to 'high risk' cases and helping to contribute positive outcomes for vulnerable missing adults. However, the resource implications of this need to be considered.

Implications

This study may inform some practice in subsequent lockdowns and public health emergencies. In terms of encouraging people to keep reporting cases, adequate communication and social media strategies need to be in place to improve police-community relationships (Laufs and Waseem 2020). There needs to be clear, timely and continuous messaging from government and police reassuring families and care homes about public fines. There have been clear steps to avoid criminalising children who go missing from care homes (Howard League 2017). This will be even more important within pandemics.

The increased proportions of both vulnerable children and adults missing during lockdown highlights the increased need to redirect resources away from routine missing person investigations to multi-agency targeting and monitoring of vulnerable groups. There is a particular urgency to respond and support children in residential care homes, especially if there continues to be further lockdowns. For those regularly missing, it may be possible to have dedicated persons working alongside them, independently of services, to build different relationships (e.g. buddy systems). There is a need for agencies to work together and communicate changing landscape of risk, and to debrief and strengthen ties post-lockdown (Laufs and Waseem 2020). Working together, agencies can learn from each other and continue to make adaptive changes. Furthermore, the increased prevalence of vulnerability further highlights the importance of including agencies besides the police in order to promote a welfarist approach to missing persons, and to ensure this is done transparently and visibly.

Future research

There are number of ways in which this work could be developed. Whilst we identify clear 'high risk' vulnerable profiles in our analysis, further work is needed to break the adult and child

populations down further so we can understand the exact mechanisms by which people were affected at a more granular level. Future research to understand the differences found in terms of ethnicity and sex (including transgender children) will be required to make sense of the exploratory, but currently non-significant differences recognised in this study, particularly around harm profiles.

Research examining different types of lockdown may be useful to help explore potential underlying mechanisms. For example, comparing tiered approaches that removed certain services (e.g. school closures) could help to explore causation (see Ofsted 2020). A shift in attention is needed during a pandemic; although overall numbers of missing person reports may decrease, a clearer focus needs to be placed on the types of cases that make up a higher proportion of the total number of reports. Future research should also consider the potential for lockdown to provide 'protective' factors for some (e.g. protecting vulnerable children from exploitation) or removing other pressures that might otherwise act as antecedents to a despondent episode. Lastly, it is imperative that we try to listen to the voices of those who have gone missing to inform both research and practice (see Parr and Stevenson 2013).

Limitations

A limitation of the current study is that cases rather than persons are adopted as the unit of analysis; we do not know, therefore, the extent to which repeat individuals bias the odds ratios presented here. This study is also not a representation of all the missing cases reported to UK police forces within the time periods requested given not all forces provided data to the project. Forces need to consider local patterns and contexts to inform their work.

The use of police data for research purposes has its limitations; for example, there may also be variations in terms of recording information across forces, the effects of which may mask certain trends and patterns. We have to be mindful that the figures do not accurately present the missing person population; not all people who go missing are reported missing and so findings of this study will inevitably be an underrepresentation of the nature of missing within a pandemic. In addition, the number of variables derived from each of the participating police forces varied considerably. It was also only possible to retrieve approximately 80% of the reported cases to Force D. Findings relating to time spent from missing also need to be treated with caution. The 2019 cases were likely to have been updated after the time period requested in longer running cases. Therefore, it is expected the average time people were missing for in 2019 would be greater than 2020. Further, examining changes in individual characteristics of reported cases does not help us understand the complex social and relational aspects of missing episodes. Lastly, it is important to note, overall, effect sizes were small, showing low strength in terms of the association between the characteristics examined and the two time frames.

Conclusion

The issues faced by the police and those who go missing during a pandemic are challenging and complex. The findings of this study go some way in understanding the issues that may lead adults and children to go missing under lockdown restrictions, and how this will have an impact on policing. Attention must be given to clear messaging and multi-agency strategies and responses in order to protect vulnerable people from going missing in future public health emergencies.

Disclosure statement

No potential conflict of interest was reported by the author(s).

ORCID

Freya O'Brien  <http://orcid.org/0000-0001-7765-3147>
 Craig Collie  <http://orcid.org/0000-0002-7625-095X>
 Karen Shalev Greene  <http://orcid.org/0000-0002-7440-1929>
 Susan Giles  <http://orcid.org/0000-0002-3435-3010>

References

- Ali, S.A., et al., 2020. The outbreak of coronavirus disease 2019 (COVID-19) – an emerging global health threat. *Journal of infection and public health*, 13 (4), 644–646.
- Alison, L.J., Snook, B., and Stein, K., 2001. Unobtrusive measurement: using police information for forensic research. *Qualitative research*, 1 (2), 241–254.
- Allsop, C., Shalev Greene, K., and O'Brien, F., 2020. *Evidence base for reviewing Missing People APP*. Report prepared by the University of South Wales, the University of Portsmouth, & the University of Liverpool, for the NPCC.
- Association of Chief Police Officers & National Policing Improvement Agency (ACPO). 2013. *Interim guidance on the management, recording & investigation of missing persons*. London: College of Policing. <http://www.acpo.police.uk/documents/crime/2013/201303-cba-int-guid-missing-persons.pdf>.
- Barnados. 2020. *Locked down and locked out – vulnerable children missing out on vital support due to COVID-19*. Barnardo's frontline workers speak up about the adverse effects the COVID-19 pandemic is having on the lives of vulnerable children | Barnardo's. [barnados.org.uk](https://www.barnados.org.uk).
- Baron, E.J., Goldstein, E.G. and Wallace, C.T., 2020. Suffering in silence: How COVID-19 school closures inhibit the reporting of child maltreatment. *Journal of public economics*. doi:10.2139/ssrn.3601399.
- Bartholomew, D., Duffy, D. and Figgins, N., 2009. *Strategies to reduce missing patients: a practical workbook*. London, UK: National Mental Health Development Unit.
- Biehal, N., Mitchell, F., and Wade, J., 2003. *Lost from view: missing persons in the UK*. Bristol: The Policy Press.
- Bielicki, J.A., et al., 2020. Monitoring approaches for health-care workers during the COVID-19 pandemic. *The Lancet infectious diseases*, 20 (10), 261–267.
- Blundell, R., et al., 2020. COVID-19 and inequalities. *Fiscal studies*, 41 (2), 291–319.
- Bradbury-Jones, C., and Isham, L., 2020. The pandemic paradox: the consequences of COVID-19 on domestic violence. *Journal of clinical nursing*, 29 (13-14), 2047–2049. doi:10.1111/jocn.15296.
- Care Quality Commission. 2020. *Monitoring the mental health act in 2019/2020: the mental health act in the COVID-19 pandemic*. https://www.cqc.org.uk/sites/default/files/20201127_mhareport1920_report.pdf.
- The Children's Society. 2018. *Young carers of Black and minority ethnic families*. [young-carers-of-bame-families.pdf](https://www.childrensociety.org.uk). [childrensociety.org.uk](https://www.childrensociety.org.uk).
- Cohen, J., 1977. *Statistical power analysis for the behavioural sciences*. New York: Academic.
- Cohen, J., 1988. *Statistical power analysis for the behavioural sciences*. Hillsdale, NJ: Erlbaum.
- College of Policing. 2020. *Major investigation and public protection – risk assessment*. <https://www.app.college.police.uk/app-content/major-investigation-and-public-protection/missing-persons/risk-assessment/>.
- Collie, C.J., 2019. Exploring the boundaries of missing persons: hidden interplay between policing and private entities in relation to cases on the periphery. *Policing: a journal of policy and practice*. doi:10.1093/policing/paz061.
- Crane, M.A.J., and Blud, L., 2012. The effectiveness of prisoners addressing substance related offending (P-ASRO) programme: evaluating pre and post treatment psychometric outcomes in an adult male category C prison. *British journal of forensic practice*, 14 (1), 49–59. doi:10.1108/14636641211204469.
- de Maio Nascimento, M., 2020. COVID-19: U3A students' report on the impacts of social isolation on physical and mental health and access to information about the virus during the pandemic. *Educational gerontology*, 46 (9), 499–511.
- Drakulich, K., and Rodriguez-Whitney, E., 2018. Intentional inequalities and compounding effects: The state of race and justice theory and research. In: M. Hollis, J.I. Stowell & R. Martinez, eds. *The handbook of race, ethnicity, crime, and justice*. Oxford: Wiley, 17–38.
- Ettman, C.K., et al., 2020. Do assets explain the relation between race/ethnicity and probable depression in US adults? *Plos one*, 15 (10), e0239618.
- Farrow, K., 2020. Policing the pandemic in the UK using the principles of procedural justice. *Policing: a journal of policy and practice*, 14 (3), 587–592.
- Finkelstein, M., et al., 2004. *Youth who chronically AWOL from foster care: why they run, where they go, and what can be done*. New York: Vera Institute of Justice.
- Fisher, R.A., 1922. On the interpretation of χ^2 from contingency tables, and the calculation of P. *Journal of the royal statistical society*, 85 (1), 87–94.
- Fitzpatrick, K.M., Harris, C.T., and Drawve, G., 2020. Fear of COVID-19 and the mental health consequences in America. *Psychological trauma: theory, research, practice, and policy*. doi:10.1037/tra0000924.

- Fyfe, N.R., Stevenson, O., and Woolnough, P., 2015. Missing persons: the processes and challenges of police investigation. *Policing and society*, 25 (4), 409–425. doi:[10.1080/10439463.2014.881812](https://doi.org/10.1080/10439463.2014.881812).
- Gentithes, M., and Krent, H.J., 2020. Pandemic surveillance – the new predictive policing. *ConLawNOW*, 12, 57.
- Gordon, A.L., et al., 2020. Commentary: COVID in care homes – challenges and dilemmas in healthcare delivery. *Age and ageing*, 49, 701–705.
- Groarke, J.M., et al., 2020. Loneliness in the UK during the COVID-19 pandemic: cross-sectional results from the COVID-19 Psychological wellbeing study. *Plos one*, 15, 9. doi:[10.1371/journal.pone.0239698](https://doi.org/10.1371/journal.pone.0239698).
- Gunnell, D., et al., 2020. Suicide risk and prevention during the COVID-19 pandemic. *The Lancet psychiatry*, 7 (6), 468–471.
- Halvorsrud, K., et al., 2018. Ethnic inequalities and pathways to care in psychosis in England: a systematic review and meta-analysis. *BMC medicine*, 16. doi:[10.1186/s12916-018-1201-9](https://doi.org/10.1186/s12916-018-1201-9).
- Hartmann, J., 2020, April 21. Several police departments say they've seen an uptick in domestic violence calls since start of COVID-19 pandemic. WPXI. <https://www.wpxi.com/news/top-stories/several-police-departments-say-theyve-seen-an-uptick-domestic-violence-calls-since-start-covid-19-pandemic/JJLDGXYPJVH3DALTO3LOFVIODY/>.
- Hayden, C., and Shalev Greene, K., 2016. The blue light social services? Responding to repeat reports to the police of people missing from institutional locations. *Policing & society*, 1–17.
- Ho, C.S., Chee, C.Y., and Ho, R.C., 2020. Mental health strategies to combat the psychological impact of COVID-19 beyond paranoia and panic. *Annals, academy of medicine*, 49 (1), 1–3. <http://www.anmm.org.mx/descargas/Ann-Acad-Med-Singapore.pdf>.
- Howard League. 2017. *Ending the criminalisation of children in residential care. Briefing two: best practice in policing*. Howard League for Penal Reform. <https://howardleague.org/wp-content/uploads/2017/12/Ending-the-criminalisation-of-children-in-residential-care-Briefing-two.pdf>.
- Huey, L., and Ferguson, L., 2020. 'Going missing' as a maladaptive coping behaviour for adults experiencing strain. *Deviant behavior*. <https://doi-org.liverpool.idm.oclc.org/10.1080/01639625.2020.1773175>.
- Humberside Police. n.d. *The philomena protocol*. <https://www.humberside.police.uk/philomena-protocol>.
- Humphrey, A., and Parr, H., 2020. *Missing Black lives*. <https://blog.geographydirections.com/2020/07/09/missing-black-lives/>.
- Jago, S., Arocha, L., Brodie, I., Melrose, M., Pearce, J. J., & Warrington, C. (2011). *What's going on to safeguard children and young people from sexual exploitation? How local partnerships respond to child sexual exploitation*. <https://uobrep.openrepository.com/handle/10547/315159>.
- Kagi, J., 2020. *Crime rate in WA plunges amid coronavirus social distancing lockdown measures*. ABC News Australia. <https://www.abc.net.au/news/2020-04-08/coronavirus-shutdown-sees-crime-ratedrop-in-wa/12132410>.
- Labgold, K., et al., 2020. Measuring the missing: greater racial and ethnic disparities in COVID-19 burden after accounting for missing race/ethnicity data. *Medrxiv*, pre-print.
- Laido, Z., et al., 2017. Epidemiology of suicide among children and adolescents in Austria, 2001–2014. *The central European journal of medicine*, 129, 121–128.
- Laufs, J., and Waseem, Z., 2020. Policing in pandemics: a systematic review and best practices for police response to COVID-19. *International journal of disaster risk reduction*, 51. doi:[10.1016/j.ijdrr.2020.101812](https://doi.org/10.1016/j.ijdrr.2020.101812).
- Lee, J., 2020. Mental health effects of school closures during COVID-19. *Lancet child and adolescent health*, doi:[10.1016/S2352-4642\(20\)30109-7](https://doi.org/10.1016/S2352-4642(20)30109-7).
- Leslie, E., and Wilson, R., 2020. Sheltering in place and domestic violence: evidence from calls for service during COVID-19. *Journal for public economics*, 189, doi:[10.1016/j.jpubeco.2020.104241](https://doi.org/10.1016/j.jpubeco.2020.104241).
- Lipscombe, S., et al., 2019. *Sexual and criminal exploitation of missing looked after children*. House of Commons Library. www.parliament.uk/commons-library | intranet.parliament.uk/commons-library.
- Lumley, T., et al., 2002. The importance of the normality assumption in large public health data sets. *Annual review of public health*, 23, 151–169.
- Mahase, E., 2020. COVID-19: EU states report 60% rise in emergency calls about domestic violence. *BMJ*, 369. doi:[10.1136/bmj.m1872](https://doi.org/10.1136/bmj.m1872).
- Montserrat, C., et al., 2021. The views of children in residential care on the COVID-19 lockdown: implications for their well-being and psychosocial intervention. *Child abuse & neglect*, 120. doi:[10.1016/j.chiabu.2021.105182](https://doi.org/10.1016/j.chiabu.2021.105182).
- Murphy, T., Akehurst, H., and Mutimer, J., 2020. Impact of the 2020 COVID-19 pandemic on the workload of the orthopaedic service in a busy UK district general hospital. *Injury*, 51 (10), 2142–2147. doi:[10.1016/j.injury.2020.07.001](https://doi.org/10.1016/j.injury.2020.07.001).
- National Crime Agency. 2020. *Missing persons data report 2018/2019*. London: NCA. <https://www.missingpersons.police.uk/en-gb/resources/downloads/missing-persons-statistical-bulletins>.
- Newcombe, R.G., 2006. Confidence intervals for an effect size measure based on the Mann-Whitney statistic: part 1: general issues and tail-area-based methods. *Statistics in medicine*, 25, 543–557.
- NHS England. 2020. *Annual report and accounts 2019/2020*. <https://www.england.nhs.uk/wp-content/uploads/2021/01/nhs-england-annual-report-2019-20-full.pdf>.
- Office for National Statistics. 2020. *Coronavirus (COVID-19) related deaths by ethnic group, England and Wales: 2 March 2020 to 10 April 2020*. Coronavirus (COVID-19) related deaths by ethnic group, England and Wales – Office for National Statistics. ons.gov.uk.

- Ofsted. 2020. *COVID-19 series: briefing on children's social care providers*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/924352/COVID-briefing-childrens-homes-Sept-2020.pdf.
- Parr, H., and Stevenson, O., 2013. *Missing people, missing voices: stories of missing experience*. Glasgow: University of Glasgow.
- Parry, S., Williams, T., and Oldfield, J., 2021. Reflections from the forgotten frontline: 'The reality for children and staff in residential care' during COVID-19. *Health & social care in the community*, 00, 1–13.
- Partonen, T., et al., 2004. Analysis of the seasonal pattern in suicide. *Journal of affective disorders*, 81 (2), 133–139.
- Perl, L., et al., 2021. Effects of the COVID-19 pandemic on transgender and gender non-conforming adolescents' mental health. *Psychiatry research*, 302, doi:10.1016/j.psychres.2021.114042.
- Peterman, A., et al., 2020. *Pandemics and violence against women and children*. Washington, DC: Center for Global Development Working Paper 528. <https://www.cgdev.org/publication/pandemics-and-violence-against-women-and-children>.
- Piquero, A.R., et al., 2020. Staying home, staying safe? A short-term analysis of COVID-19 on Dallas domestic violence. *American Journal of criminal justice*, 45, 601–635.
- Ramírez-Ortiz, J., et al., 2020. Mental health consequences of the COVID-19 pandemic associated with social isolation. *Columbian journal of anesthesiology*, 48, 4. doi:10.5554/22562087.e930.
- Rehm, J., et al., 2020. Alcohol use in the times of the COVID-19: implications for monitoring and policy. *Drug and alcohol review*, 39, 301–304. doi:10.1111/dar.13074.
- Romanou, E., and Belton, E., 2020. *Isolated and struggling. Social isolation and the risk of child maltreatment, in lockdown and beyond*. NSPCC Evidence Team. Isolated and struggling: social isolation and the risk of child maltreatment, in lockdown and beyond. nspcc.org.uk.
- Shalev Greene, K., Hayler, L., and Pritchard, D., 2019. A house divided against itself cannot stand: evaluating police perception of UK missing person definition. *European journal on criminal policy and research*, 1–17. doi:10.1007/s10610-019-09428-0.
- Shalev Greene, K., and Pakes, F., 2013. The cost of missing person investigations: implications for current debates. *Policing: a journal of policy and practice*, 8 (1), 27–34. doi:10.1093/policing/pat036.
- Sheskin, D.J., 1997. *Handbook of parametric and nonparametric statistical procedures*. London: Chapman & Hall/CRC.
- Sidebottom, A., et al., 2019. Missing children: risks, repeats and responses. *Policing and society*, 30 (10), 1–14. doi:10.1080/10439463.2019.1666129.
- Stevenson, O., et al., 2013. *Geographies of missing people; processes, experiences, responses*. The University of Glasgow. ISBN: 978-0-85261-936-0.
- Streiner, D.L., and Norman, G.R., 2011. Correction for multiple testing: is there a resolution? *Chest*, 140, 16–18. doi:10.1378/chest.11-0523.
- Tarling, R., and Burrows, J., 2004. The nature and outcome of going missing: the challenge of developing effective risk assessment procedures. *International journal of police science & management*, 6 (1), 16–26.
- Taylor, J., et al., 2013. Young people's experiences of going missing from care: a qualitative investigation using peer researchers. *Child abuse review*, 23 (6), 387–401.
- Taylor, C., Woolnough, P., and Dickens, G.L., 2019. Adult missing persons: a concept analysis. *Psychology, crime, & law*, 396–419. doi:10.1080/1068316X.2018.1529230.
- Tolan, C., 2020, April 4. *Some cities see jumps in domestic violence during the pandemic*. CNN. <https://www.cnn.com/2020/04/04/us/domestic-violence-coronavirus-calls-cases-increase-invs/index.html>.
- UK Department for Education. 2020. *Adopted and looked-after children*. Adopted and looked-after children – GOV.UK Ethnicity facts and figures. ethnicity-facts-figures.service.gov.uk.
- UNESCO. 2020. *Adverse consequences of school closures*. <https://en.unesco.org/covid19/educationresponse/consequences>.
- Vallejo-Slocker, L., Fresneda, J., and Vallejo, M.A., 2020. Psychological wellbeing of vulnerable children during the COVID-19 pandemic. *Psicothema*, 32 (4), 501–507. doi:10.7334/psicothema2020.218.
- Waring, S., & Giles, S. (2021). Rapid evidence assessment of mental health outcomes of pandemics for health care workers: implications for the covid-19 pandemic. *Frontiers in public health*, 9:629236. doi:10.3389/fpubh.2021.629236.
- White, R.G., and van Der Boor, C., 2020. Impact of the COVID-19 pandemic and initial period of lockdown on the mental health and well-being of adults in the UK. *BJPsych open*, 6, 1–4. doi:10.1192/bjo.2020.79.
- World Health Organisation. 2020. COVID-19: Interim guidance, 7 March 2020 (No. WHO/2019-nCoV/Community_Actions/2020.3). https://apps.who.int/iris/bitstream/handle/10665/331422/WHO-COVID-19-Community_Actions-2020.1-eng.pdf.
- Young Minds. 2020a. *Coronavirus: Impact on young people with mental health needs*. YoungMinds. <https://youngminds.org.uk/about-us/reports/coronavirus-impact-on-young-people-with-mental-health-needs/>.