

# COVID-19 Survey

## BRIEFING NOTE

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ETHNIC DIFFERENCES IN EFFECTS OF COVID-19:  
**household and local context**

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# The *Understanding Society* COVID-19 study is a monthly survey on the experiences and reactions of the UK population to the COVID-19 pandemic.

The survey is an integral part of *Understanding Society*: the UK Household Longitudinal Study. Researchers can link the data from the COVID-19 survey to answers respondents have given in previous (and future) waves of the annual *Understanding Society* survey.

The survey is funded by the Economic and Social Research Council and the Health Foundation.

## Fieldwork

The COVID-19 survey is an online questionnaire.

The first wave of the COVID-19 survey was fielded in April 2020. Fieldwork for Wave 2 took place in late May and fieldwork for Wave 3 was carried out in late June.

A telephone interview is offered to respondents who wish to take part but live in a household where no-one is a regular internet user. Fieldwork for the telephone interviews was in late-May to early-June 2020.

Fieldwork for the online survey is carried out by Ipsos MORI and for the telephone survey by Kantar.

## The sample

All *Understanding Society* adult sample members aged 16+ invited to participate in Wave 1 of the web survey were invited to participate in subsequent waves.

17,450 participants completed the web survey in the first Wave. 14,607 participants completed the web survey in Wave 2 and 14,123 completed the web survey in Wave 3.

For researchers wishing to analyse the data, weights are provided.

For more information on the design, fieldwork and using the COVID-19 survey data please see the [User Guide](#).

## Cite the data

The COVID-19 survey data is available to researchers via the UK Data Service, Study Number 8644.

University of Essex, Institute for Social and Economic Research. (2020). *Understanding Society: COVID-19 Study*, 2020. [data collection]. 3rd Edition. UK Data Service. SN: 8644, 10.5255/UKDA-SN-8644-3.

## Cite this briefing note

A Nandi and L Platt (2020) *Understanding Society* COVID-19 Survey Briefing Note: Ethnic differences in effects of COVID-19: household and local context, *Understanding Society Working Paper No 14/2020*, ISER, University of Essex.

## Acknowledgment

Kind assistance with constructing the combined Wave 1 and Wave 2 weights was provided by Tom Crossley and Paul Fisher.

## Survey content

In Waves 1 – 4 the survey carried questions on:

- Coronavirus symptoms and test results
- Management of long-term health conditions
- Housing
- Caring responsibilities
- Loneliness
- Employment, training and looking for work
- Financial situation
- Partnership changes and 'living apart together'
- Division of domestic labour
- Relationships within the household
- Life satisfaction
- Mental wellbeing
- Sleep
- Nutrition
- Diet and food security
- Home schooling
- Special educational needs (age 12-17)
- Food and alcohol consumption
- Exercise and smoking
- Travel to work
- Contact with family and friends outside the household
- Contact with grandchildren
- Transport use
- Neighbourhood cohesion
- Religion
- Volunteering

Core content is repeated to track changes through the outbreak and rotating content is added on new topics reflecting the changing social, economic and policy context, as well as question proposals from researchers.

# Ethnic differences in effects of COVID-19: household and local context

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## Key findings

### COVID-19 related symptoms

- Black Africans are more likely than White UK to report experiencing COVID-19 symptoms.
- This is the case when controlling for a range of relevant measures, and cannot be explained by greater chances of overcrowding or of being a keyworker.

### Mental (ill) health

- All ethnic groups, including the White UK majority, have experienced declines in mental health since the onset of the pandemic.
- Pakistani and Bangladeshi men have experienced higher declines than White UK men with otherwise similar individual and household characteristics.
- Pakistanis and Bangladeshis who live in areas with relatively high concentrations of own ethnic group residents have not experienced the same declines in mental health.
- Women as a whole have experienced larger declines than men, even after adjusting for family and employment, but there are no significant differences across women by ethnic group.

### Perceptions of neighbourhood cohesion

- All ethnic groups report lower levels of interpersonal contact within the neighbourhood, than before the pandemic, consistent with the impact of lockdown and social distancing requirements.
- After taking account of individual, household and neighbourhood characteristics, these reductions in perceived neighbourhood communication appear to be greatest for Pakistanis and Bangladeshis and Black Caribbeans.

There has been substantial attention paid to the differential effects of the current pandemic across ethnic group. In particular, a number of studies and reports have highlighted excess mortality of certain groups,<sup>i</sup> and increasing attention is also being paid to the economic impacts.<sup>ii</sup>

At the same time there is a lot we do not know about the context and drivers of differences.

We use the specific features of *Understanding Society*, including its longitudinal design and ethnic and immigrant oversamples, and the available measures collected in the three *Understanding Society* COVID-19 monthly surveys currently released (covering April, May and June) to enhance understanding of the extent to which household and local context alongside individual characteristics and experiences are implicated in three outcomes:

- 1) Reporting of COVID-related symptoms
- 2) Mental health
- 3) Perceptions of neighbourhood communication



## How far can ethnic differences in reporting COVID-19 symptoms be accounted for by being a key worker or by living in overcrowded housing?

Studies have suggested that both occupational exposure<sup>iii</sup> and household overcrowding<sup>iv</sup> may lead to higher rates of infection, and consequently help to explain greater mortality rates. But we do not have direct evidence on the extent to which being in certain occupations or experiencing overcrowding is associated with greater risks of reporting COVID-19 related symptoms.

We first established that overcrowding differs across ethnic groups and is higher for most minority groups than for the White UK majority. We also identified that the probability of working as a keyworker is higher on average for Black Africans than for the White UK majority.<sup>v</sup> We then go on to investigate whether these factors are associated with the probability of reporting symptoms of or receiving a positive test result for COVID-19 by the time of the Wave 1 COVID-19 survey (April 2020).

### Sample and measures

We use information on household context from Wave 9 of the main annual survey (2017/18). Specifically we use information on bedrooms and household composition to construct a measure of overcrowding, which we combine with information on reported symptoms / diagnosis, local area deprivation and keyworker status at Wave 1 of the COVID-19 survey. We construct a measure of employment status that distinguishes key workers from other workers. We measure area deprivation in decile groups of the Indices of Multiple Deprivation (IMD). Given our use of the IMD, our sample is restricted to England only. We disaggregate ethnic groups as far as possible making sure that sample sizes of the groups are sufficiently large for statistical analysis, and focus on the following categories: White UK (UK born only), Other White, Indian, Pakistani and Bangladeshi (combined), Black Caribbean and Black African.

We provide the level of reported symptoms based only on ethnic group, and then in subsequent estimates adjust for sex, age group, overcrowding, key worker status, and IMD decile.

Our analytical sample comprises 11,082 respondents; and all analyses are adjusted for sample design and non-response weights.

**Figure 1 Probability of reporting COVID-19 symptoms at COVID-19 Wave 1 Survey (April 2020), by ethnic group.**

Estimates with and without adjusting for relevant individual, household and neighbourhood characteristics.

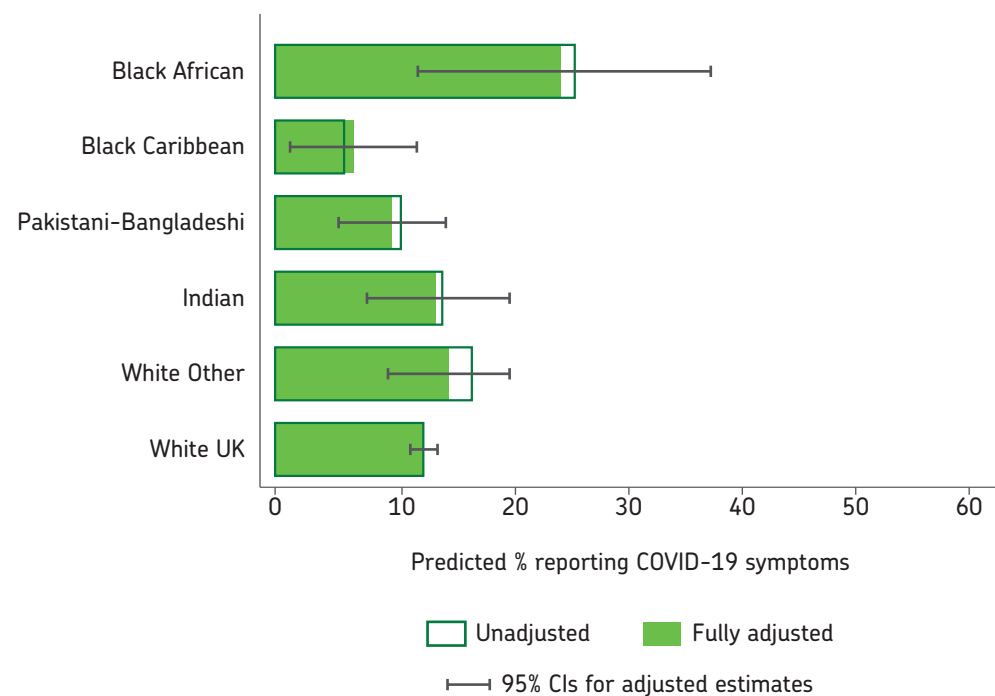


Figure 1 shows that Black Africans had higher probabilities of reporting symptoms, and that adjusting for relevant individual factors as well as overcrowding and key work status does not account for this, with the difference remaining similar in magnitude and significant at the 10% level. These results were unchanged when we used alternative measures of overcrowding. Local area deprivation also did not help to explain differences in reporting symptoms.

While key workers reported more symptoms than those not in employment, the failure of this measure to explain ethnic differences may stem from the fact that it cannot capture the particular type of occupation and consequent exposure, which have been shown to be relevant for risks.<sup>vi</sup>

In relation to overcrowding, while we cannot dismiss the possibility that within household infections in more overcrowded households is an important conduit for the disease, as has been suggested, we cannot provide evidence in support of this contention.

We also observe that Black Caribbeans are less likely than White UK to report relevant symptoms. This again remains the case after adjusting for relevant individual and contextual factors. While the sample sizes for these two Black groups are smaller than for the other ethnic groups we focus on, these findings do highlight again that the experiences of the pandemic of Black Caribbeans and Black Africans differ in important ways.

**Are there differences across ethnic groups in changes in mental health since before the pandemic?**

**And if so, how far are these accounted for by individual, household and neighbourhood context?**

**Do they differ by sex; and are they moderated by local area ethnic composition?**

There is growing attention to the mental health consequences of the lockdown, including the impacts on families with children, women combining work and care responsibilities, greater stress due to the pandemic, and possible job loss and financial strains.<sup>vii</sup> However, while one study indicated that there might be differences across ethnic groups in the mental health and well-being impacts,<sup>viii</sup> it was unable to take into account the fact that differences in wellbeing might have preceded the lockdown rather than being a consequence of them. It is therefore crucial to look at change in mental health rather than levels, especially as we know that there are differences in levels of mental ill-health across ethnic groups.<sup>ix</sup> We also know that mental health and wellbeing are influenced by household and neighbourhood context.<sup>x</sup>

### **Sample and measures**

We identify baseline mental health using GHQ score at Wave 9 of the main annual survey (2017-18). GHQ is a set of 12 questions where the respondent can choose from one of 4 responses for each question with higher values representing worse outcomes (0-3). These response scores are summed to produce the final GHQ score which is a measure of mental ill-health and ranges from 0-36 with higher values reflecting worse mental health. We reverse-coded the GHQ score by subtracting the score from 36 so that a higher score represents better mental health. We then calculated the change in mental health during the pandemic by subtracting GHQ score at Wave 9 from the GHQ score at the 1st wave of the COVID-19 survey (in April 2020). Those Wave 9 respondents who did not respond to the April 2020 survey but responded to the 2nd COVID-19 monthly survey (in May 2020) were also included, subtracting the Wave 9 GHQ score from their GHQ score at the COVID19 Wave 2 survey in the same way. As a result, a negative score for change represents a decline in mental health.

As with Question 1, we control for age group and sex and additionally for individual, household and local area factors that might affect mental health and differ across groups. These are: couple status and change in couple status, number of children (0–4 years, 5–15 years), employment status (current and change from before the pandemic), access to the internet and access to space in the house (persons per room), and local area deprivation (IMD). We also include a measure of own ethnic group density at the neighbourhood level, which takes a value of 1 if the respondent lives in an LSOA<sup>xi</sup> with above median share of their own ethnic group, and a value of 0 otherwise. We estimate unadjusted and fully adjusted GHQ change across ethnic groups. In addition, we interact sex with ethnic group to identify any group differences between men and women, and we also interact share of own group with ethnic group, to ascertain if having more of one's own group moderates any impacts.

Our analytical sample size comprises 11,163 respondents; and all analyses are adjusted for sample design and non-response weights.

Figure 2 Baseline GHQ at Wave 9 (2017/18). A lower score represents worse mental health.

Sample restricted to those who responded to the COVID-19 Wave 1 or Wave 2 survey (April/May 2020)

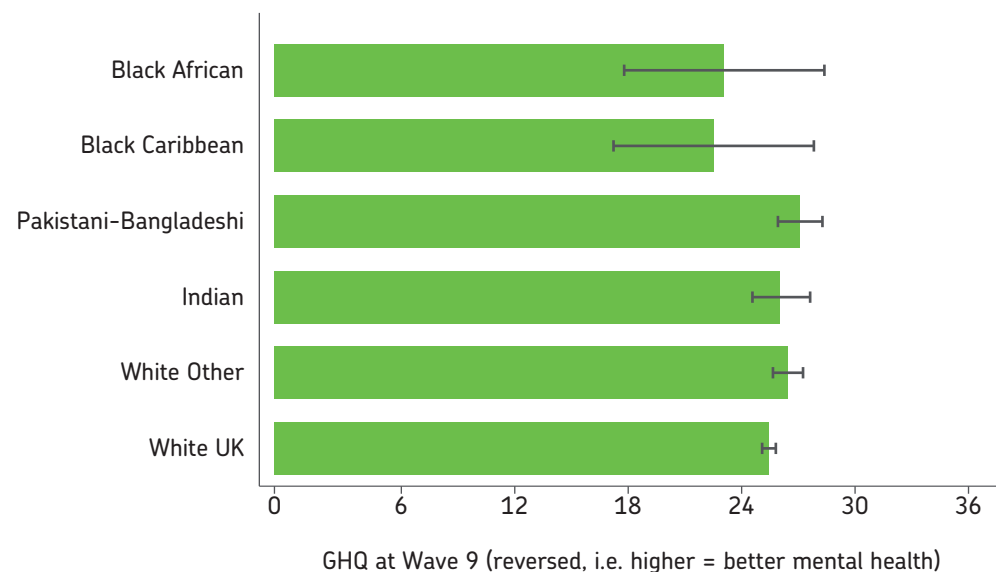


Figure 2 shows the baseline GHQ at the Wave 9 main annual survey, without further adjustment. Pakistani and Bangladeshi and White Other groups reported slightly better mental health than that of White UK; differences in mental health between White UK and other ethnic groups were not statistically significant. These baseline results, do not however, take into account the very different demographic profiles of the ethnic groups, which tend themselves to be associated with different levels of mental distress.

Figure 3 Change in GHQ between Wave 9 (2017/18) and COVID-19 survey Wave 1 or Wave 2 (April/May 2020). Positive change indicates improvement in mental health.

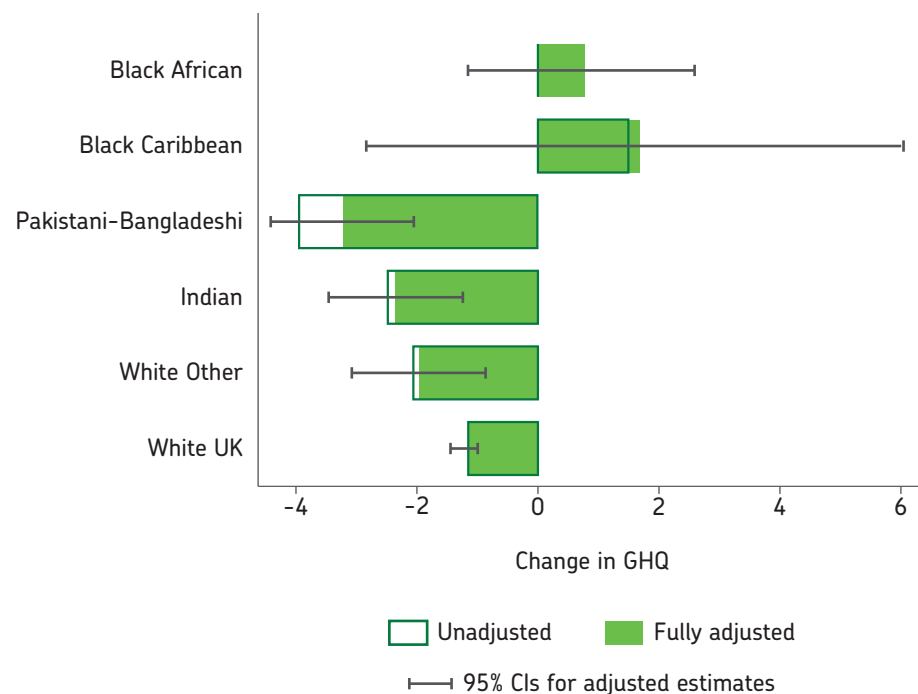


Figure 3 shows that most groups experienced a decline in mental health on average between Wave 9 of the main annual survey (2017–18) and the first wave or the second wave of the COVID-19 survey (April–May 2020). The exception was individuals who self-identified as Black African, where, surprisingly there was on average a slight improvement in mental health, though when adjusting for individual level and contextual factors this ceased to be statistically significant from no change. Nevertheless, it is interesting that Black Africans did not experience the reduction in mental health faced by other groups, especially given their greater reporting of COVID-19-related symptoms described in question 1 and the higher risks of COVID-19-related mortality faced by this group.<sup>xii</sup>

The biggest decline in mental health was faced by Pakistanis and Bangladeshis, and while it was to some degree accounted for by individual and contextual factors, the decline was still significantly greater than that faced by the White UK majority.

When we looked at whether the mental health impacts were moderated by living in an area with more (or less) of one's ethnic group we found that Pakistanis' and Bangladeshis' decline in mental health was only observed for those living in areas with lower shares of own ethnic group. This suggests that own group concentration provided some support for mental health for this group. Other groups were not affected by the share of own ethnic group.

We also looked at whether the declines in mental wellbeing were greater or lesser for women compared to men. We found that among Pakistanis and Bangladeshis, the specific negative effect for the group was only found for men. Pakistani and Bangladeshi women suffered smaller mental health declines than men in those groups, which were not significantly different from those experienced by White UK women. Women across the board, however, experienced more of a decline in mental health than men. This is consistent with arguments about the additional burdens the lockdown brought for women, though the finding is still notable given that we control for number and ages of children. Among men, not only Pakistanis and Bangladeshis but also men from other minority ethnic groups faced larger reductions in mental health than their White UK counterparts. The exception was Black African men who fared better than their White UK peers.

## Has perceived levels of social interaction in the neighbourhood changed?

### If so, does this differ across ethnic groups; and are any differences moderated by the composition of the neighbourhood?

The lockdown brought dramatic changes in the nature of social interaction. While there is some evidence of increases in neighbourliness, much social intercourse has been reduced.<sup>xiii</sup> At the same time, there have been suggestions that some people have continued to socialise in their locality; and there is evidence that more fixed penalty notices have been handed out to ethnic minorities, which could be interpreted as consistent with such suggestions.<sup>xiv</sup> All of this raises the question of how far people see their neighbourhood as somewhere where individuals interact, and in particular whether that has changed since the lockdown.

#### Sample and measures

We use a measure of perceived neighbourhood communication that was asked both at Wave 9 and at the COVID-19 Wave 3 survey. The question took the form: “Do you talk regularly to your neighbours?” with a five-point agree/ disagree response scale which we coded so that higher values reflect greater agreement. We interpret this measure, therefore as representing perceived neighbourhood communication, and so higher values represent perception of more social interaction. We measure both the baseline at the Wave 9 main annual survey and then estimate the change, as captured by subtracting this score from the COVID-19 Wave 3 score. A negative value for change thus represents a reduction in perceived neighbourhood communication.

As for the previous questions we present unadjusted averages for each ethnic group and those adjusted for relevant characteristics: we control for the same measures used for Question 2. As with Question 2, we investigate whether patterns differ for men and women, and whether the ethnic composition of the neighbourhood moderates any ethnic differences.

Our sample comprises those who responded in both the main annual survey Wave 9 (2017-18) and COVID19 Wave 3 (June 2020) resulting in an analytical sample size of 9,575 respondents. Analyses are adjusted for sample design and non-response weights.



Figure 4 **Baseline responses to question on neighbourhood communication at Wave 9 main survey (2017/18). Higher scores indicate higher levels of perceived neighbourhood interaction.**

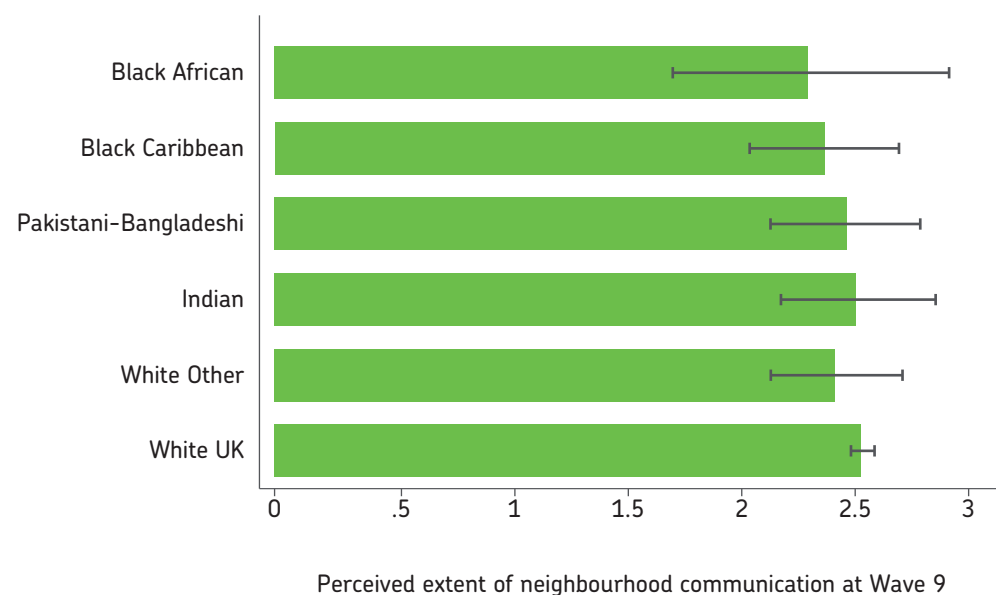


Figure 4 shows that there were no ethnic differences in perceived neighbourhood communication at Wave 9 of the main survey, on average. These estimates do not, however, account for differences in individual characteristics such as age and work status, which are likely to affect levels of and perceptions of interaction.

Figure 5 Change in responses to question on neighbourhood communication between Wave 9 (2017/18) and COVID-19 Wave 3 (June 2020). Negative scores indicate declines in perceived neighbourhood interaction since Wave 9.

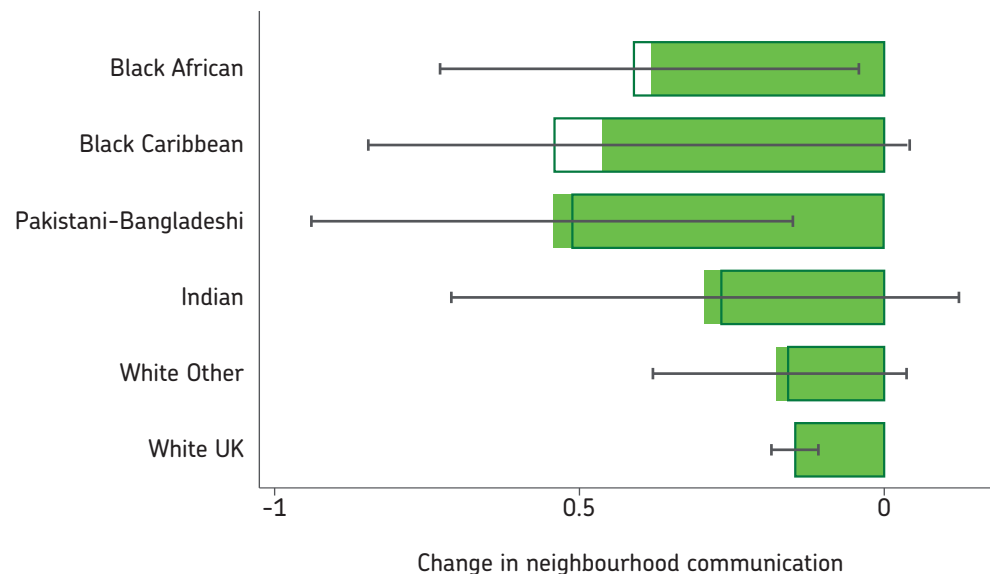


Figure 5 shows that there was a decline in communication reported by all groups between 2017-18 and June 2020. This is consistent with a reduction in interaction consequent on lockdown and social distancing requirements, as has been reported elsewhere. In the fully adjusted analysis, there were few statistically significant differences, though results did suggest that declines in neighbourhood communication were greater for Black Caribbeans and for Pakistanis and Bangladeshis than that for the White British (the differences in the estimates were marginally statistically significant). When examining interactions between ethnic group and sex, it appeared that the reduced levels of neighbourhood interaction among Pakistanis and Bangladeshis, were experienced by women specifically. There was no evidence for variation in declines in social interaction across groups according to the ethnic density of the area.

Overall, the findings offer little supportive evidence that the pandemic enhanced neighbourhood sociability on average; nor do they support arguments suggesting that some minority groups participated less in social distancing.

## Conclusions

This short briefing has aimed to enhance understanding of ethnic differences in the experience of the current crisis by bringing in household and neighbourhood context explicitly to the analysis. The different patterns of COVID-19 vulnerability across more and less deprived areas, the different implications of greater ethnic concentration for different ethnic groups, alongside ethnic differences in family structures, occupational patterns, mortality risks, and chances of living in overcrowded accommodation all suggested the need to pay attention to context in investigating outcomes of interest. In addition, compared to much analysis currently taking place on the wellbeing and community impacts of COVID-19, *Understanding Society* provides the opportunity to look at these questions longitudinally.

We showed that household and neighbourhood in fact provided little additional explanation for the distinctive outcomes engendered by the current crisis, though greater own group concentration did seem protective for Pakistanis' and Bangladeshis' mental health. By looking at change over time, we were also able to modify claims that ethnic minority women have suffered most in terms of wellbeing from the pandemic. Women overall experienced declines in mental health; but with the exception of Black African men, minority group men faced larger mental health impacts than White UK men, while minority group women did not differ significantly from White British women in their declines in mental health. We were also able to show that neighbourhood interaction was perceived to have fallen off in line with social distancing, and, if anything, more so for those groups where lower adherence to the rules has been suggested.

The value of these findings is that they use the unique properties of contemporaneously collected data, combined with pre-pandemic measures and local area information to pay attention to existing claims and narratives. They present some novel insights, raise further questions, and should prompt additional analysis that carefully investigates some of the posited inequalities arising from the pandemic and the purported mechanisms driving them. For example, it will be interesting to ascertain how far mental health and perceptions of neighbourhood cohesion recover, and for whom; and there is still further light to be shed on ethnic inequalities in COVID-19 risks.

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- i ONS (2020) Coronavirus (COVID-19) related deaths by ethnic group, England and Wales: 2 March 2020 to 15 May 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/coronaviruscovid19relateddeathsbyethnicgroupenglandandwales/2march2020to15may2020>; Platt, L. and Warwick, R. (2020), COVID-19 and Ethnic Inequalities in England and Wales. Fiscal Studies, 41: 259-289. doi:[10.1111/1475-5890.12228](https://doi.org/10.1111/1475-5890.12228); Harrison, E.M., Docherty, A.B., Barr, B. et al. (2020) Ethnicity and Outcomes from COVID-19: The ISARIC CCP-UK Prospective Observational Cohort Study of Hospitalised Patients (5/31/2020). Available at SSRN: <https://ssrn.com/abstract=3618215> or <http://dx.doi.org/10.2139/ssrn.3618215>
- ii Platt, L. and Warwick, R. (2020), COVID-19 and Ethnic Inequalities in England and Wales. Fiscal Studies, 41: 259-289. doi:[10.1111/1475-5890.12228](https://doi.org/10.1111/1475-5890.12228); Hu, Y. (2020). Intersecting ethnic and native-migrant inequalities in the economic impact of the COVID-19 pandemic in the UK. Research in Social Stratification and Mobility, 68: 100528.
- iii ONS (2020) Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 25 May 2020 <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand25may2020>
- iv Public Health England [PHE] (2020). Disparities in the risk and outcomes of COVID-19. 2020. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/892085/disparities\\_review.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892085/disparities_review.pdf); Christopher A. Martin 1 Martin, C.A., Jenkins, D.R., Minhas, J.T. et al. (2020) Socio-demographic heterogeneity in the prevalence of COVID-19 during lockdown is associated with ethnicity and household size: Results from an observational cohort study. The Lancet, DOI:<https://doi.org/10.1016/j.eclinm.2020.100466>
- v This is consistent with Warwick and Platt (2020). Warwick and Platt also found that Black Caribbeans had a higher probability of being a key worker, and while we do not find a statistically significant relationship in weighted data, in unweighted estimates the relationship shows a higher share of Black Caribbeans in key worker roles. Unlike Warwick and Platt (2020) we are unable to break down the category of key worker further which would enable more insight into the role of occupation.
- vi ONS (2020) Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered between 9 March and 25 May 2020 <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/coronaviruscovid19relateddeathsbyoccupationenglandandwales/deathsregisteredbetween9marchand25may2020>

- vii Andrew, A., Cattan, S., Costa Dias, M. et al. (2020) How are mothers and fathers balancing work and family under lockdown? <https://www.ifs.org.uk/publications/14860>
- viii Fawcett Society, Women's Budget Group, Queen Mary University of London and the London School of Economics (2020) BAME women and Covid-19 – Research evidence. <https://www.fawcettsociety.org.uk/Handlers/Download.ashx?IDMF=cae4917f-1df3-4ab8-94e7-550c23bdc9cf>
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- xi LSOAs or lower layer super output areas are geospatial units constructed for administrative purposes, with an average population size of around 1,500.
- xii Platt and Warwick (2020). Details as above.
- xiii ONS (2020). Coronavirus and the social impacts on the countries and regions of Britain: April 2020. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsonthecountriesandregionsofbritain/april2020>
- xiv NPCC (2020) Policing the Pandemic: Detailed analysis on police enforcement of the Public Health Regulations and an assessment on disproportionality across ethnic groups. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsonthecountriesandregionsofbritain/april2020>

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