



C19 National Foresight Group: Intelligence Briefing Paper 5

Open Data and Community Wellbeing

11/06/2020

Paper prepared by Dr Sally Andrews, Stacey Stewart, Stephanie Blanco and Adam Potter, edited and synthesised by Dr Rowena Hill

This briefing synthesizes data with systematic findings from across academic subjects. This evidence of empirical data and academic insight contributes to our existing knowledge on who is most likely to be experiencing adversity in our communities. To start to build a (provisional) picture about who is likely to be most affected by Covid-19 and the impacts from NPIs.

Contents

Context.....	1
Open data review.....	2
Taking Holiday.....	2
Age and Shielding.....	3
Wellbeing.....	5
Social Fragmentation.....	6
Anxiety.....	7
Happiness.....	8
School Readiness.....	10
YouGov Mood.....	11
Wellbeing and Mental Health.....	14
Healthcare workers.....	14
Key workers & volunteers.....	14
General population/community wellbeing.....	15
Children and families.....	15
Vulnerable groups.....	16
Xenophobia.....	16
Considerations following lockdown measures.....	16

Context

A data review is undertaken by academics at Nottingham Trent University every week to inform the C19 National Foresight Group. Evidence related to Covid – 19 psychological, social and economic trends are reviewed to inform, frame and prioritise discussions at national and local strategic decision-making level (LRFs). The C19 National Foresight Group synthesise data trends and academic findings across disciplines, with evidence of existing vulnerabilities and inequalities to start to build existing and emerging risk or adversity profiles of impacts from Covid-19.

Open data review

Taking Holiday

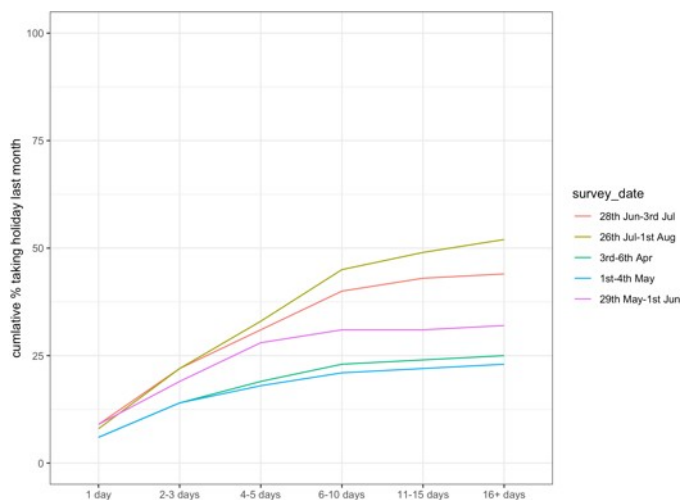
A couple of weeks ago we reviewed data which considered people's intent to travel internally within the UK given the Health Secretary's advice around taking holidays outside of the UK. We would like to pick up on this theme to provide foresight around the potential of individuals and family groups taking holidays and travelling within the UK over the summer months.

Each month YouGov polls those who are *currently in work* to find out how much annual leave had been taken in the previous month. As expected, there is an increase in the number of people who have not taken any holiday days. There are clear seasonal effects here, so caution must be taken in interpreting these data, however, comparisons with June and July 2019 suggest that approximately 20% *more* people have taken no annual leave days in the months since lockdown. Figures 2-5 show this trend across time for each demographic. The biggest change is in over 65s who are in work, who are most likely not to have taken any annual leave days, and those categorised as social grade E.

Figure 1 below shows the % of people taking any number of leave days, which shows that the largest reduction is in the percentage of people taking more than 4 days.

Evidence from other sources ([BMA](#), [Guardian](#)) suggests that lack of holiday may be a contributory factor to the perceived increase in burnout and fatigue across the workforce, which can be seen particularly across the emergency services.

Figure 1. Cumulative Days of leave taken the previous month



Notably, there are marginally more people who have taken some annual leave days both Scotland and Wales, relative to England – particularly in April and May this year. In addition, 25-49 year olds are most likely to have taken *some* leave days, with only a small difference in this age group relative to summer 2020.

These data suggest there is very little variation in the amount of leave taken across demographics (shown in Figures 2-5 below), though there may also be variation in leave taken across different occupations, which is not captured through this survey.

Figure 2. % of people taking no annual leave days the past month – by sex

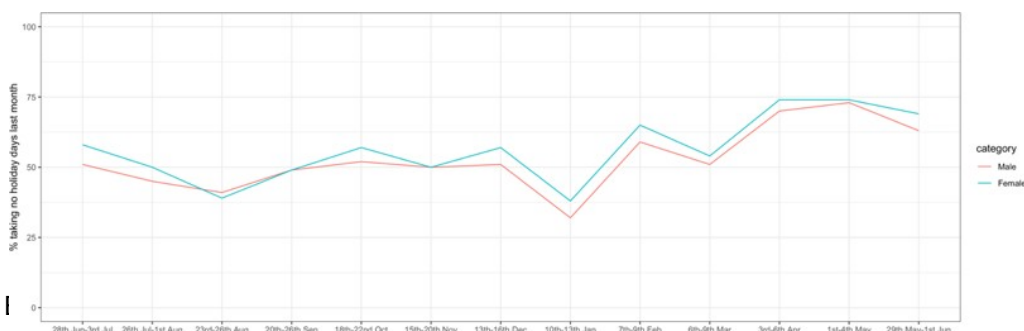


Figure 3. % of people taking no annual leave days the past month – by location

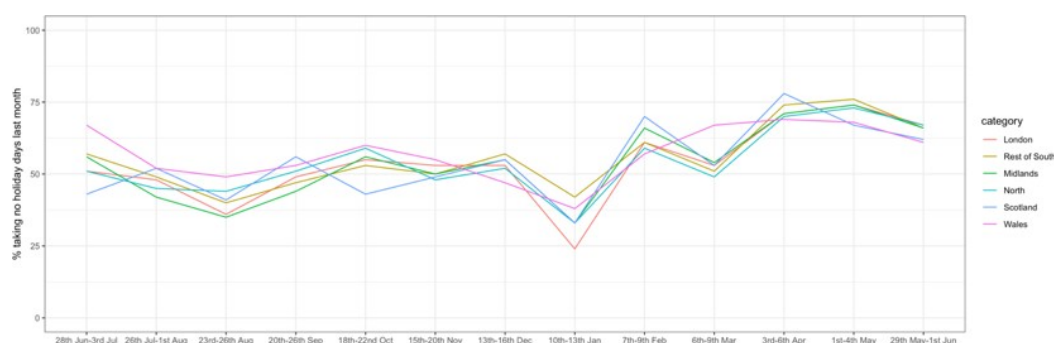


Figure 4. % of people taking no annual leave days the past month - by social grade

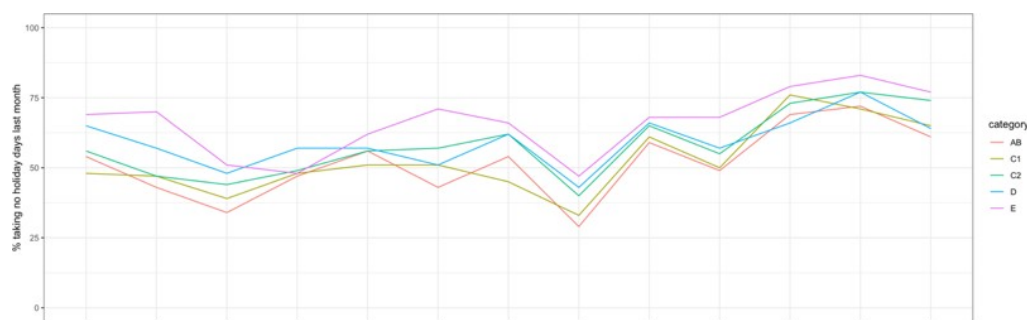
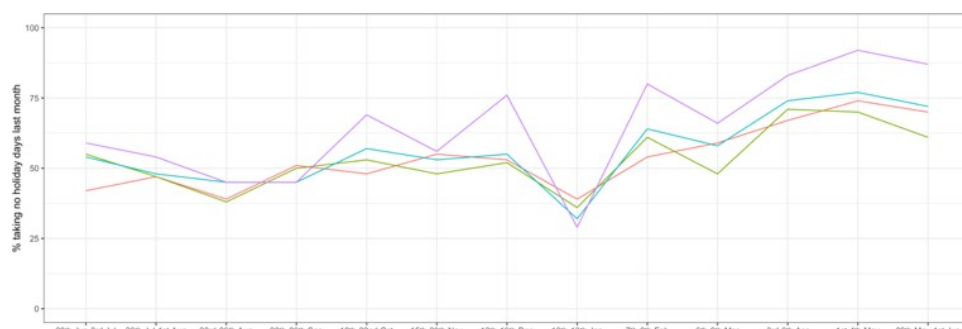


Figure 5. % of people taking no annual leave days the past month - by age



Age and Shielding

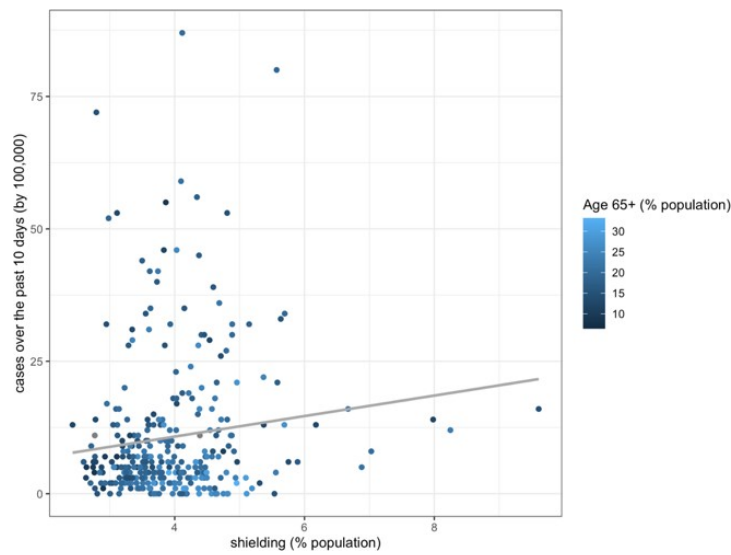
Data presented in our previous reports suggest that age is a protective factor, where local authorities with a greater proportion of over 65s have a smaller cumulative proportion of confirmed cases. This relationship has been maintained over the course of the pandemic.

Recent shielding data shows the % of people in each local authority who are considering clinically extremely vulnerable, and on the shielding list. Statistical analyses suggest that there is a relationship with shielding and confirmed cases, with more cases in local authorities with greater numbers of people shielding.

This contrasts with the findings for older adults, and is a potentially concerning feature. It should be noted that this includes confirmed cases across the duration of the pandemic, and does not relate to current R rates. It does however offer a reminder about the need to protect the most vulnerable in society.

Cumbria remains high on this list, though the rate of increase has slowed dramatically since mid-April.

Figure 6. Relationship between % population shielding and cases per 100,000 population over the past 10 days, by local authority



There are several local authorities where more than 6% of the population are CEV; these are in Cumbria (Barrow-in-Furness, 6.88%), Nottinghamshire (Bassetlaw, 6.67%), London (Ealing, 6.18%; Hounslow, 7.98%), & Merseyside (Liverpool, 9.61%; Sefton, 8.25%; St. Helens, 7.03%)

Wellbeing

The following data are taken from whatworkswelling, which models data on social impact several factors. These are taken from static open datasets, most of which are from 2011-2016, which capture different aspects of wellbeing. In the following figures we provide a snapshot across local authorities in England. Although older data, this could provide a baseline figure for any national and local intel cells, or recovery cells who aim to build in evaluation to the activities in their workstreams.

Figure 7. Life satisfaction across local authorities (values show standardised scores)

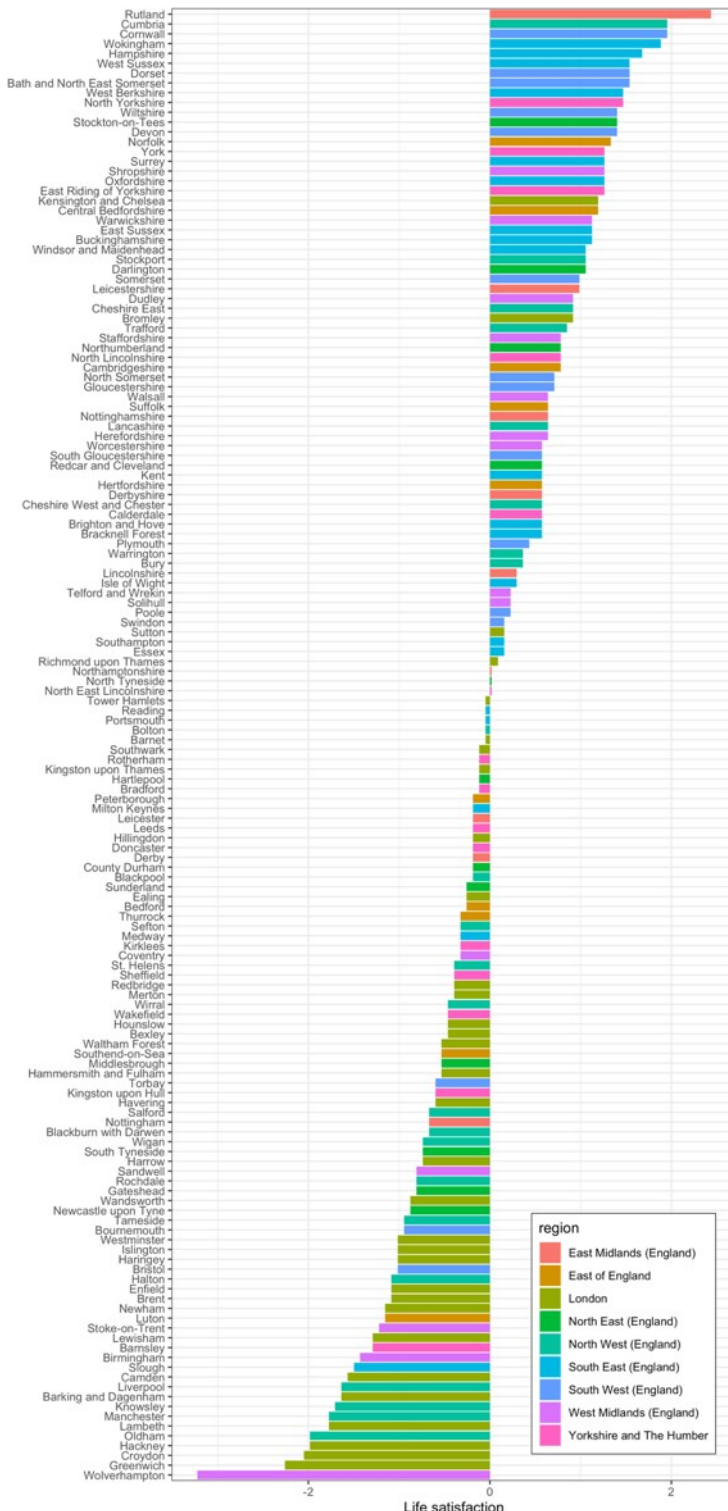
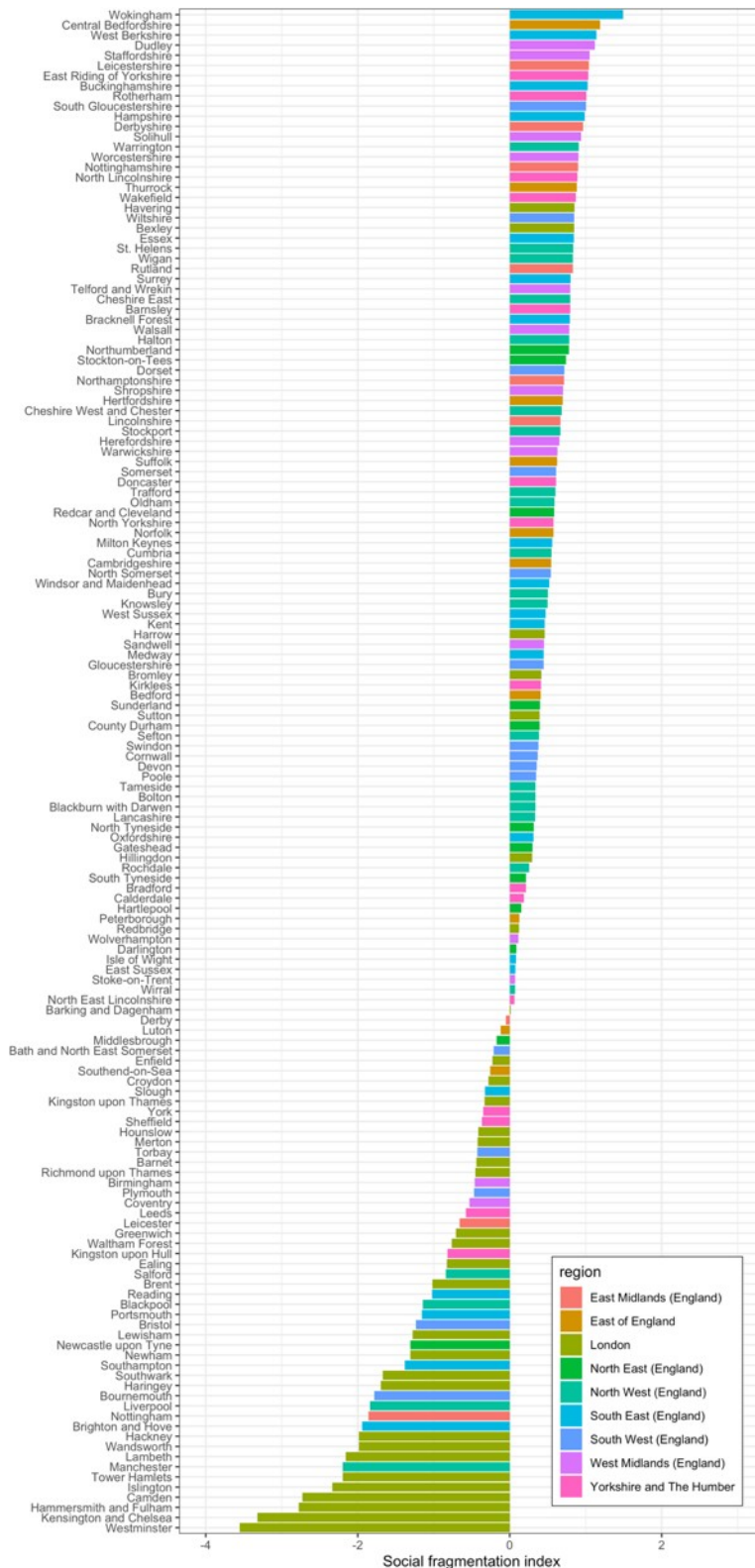


Figure 6 shows the standardised life satisfaction across local authorities. Those at the top are highest on life satisfaction, while those at the bottom are lowest.

While Wolverhampton has the lowest life satisfaction, the majority of the lowest are in London and the North- West of England.

Social Fragmentation

Figure 8. Social fragmentation across local authorities (values show standardised scores)



Social fragmentation measures the community cohesion of areas, from the 2011 census, and captures community cohesion.

It uses the following data from the 2011 ONS census:

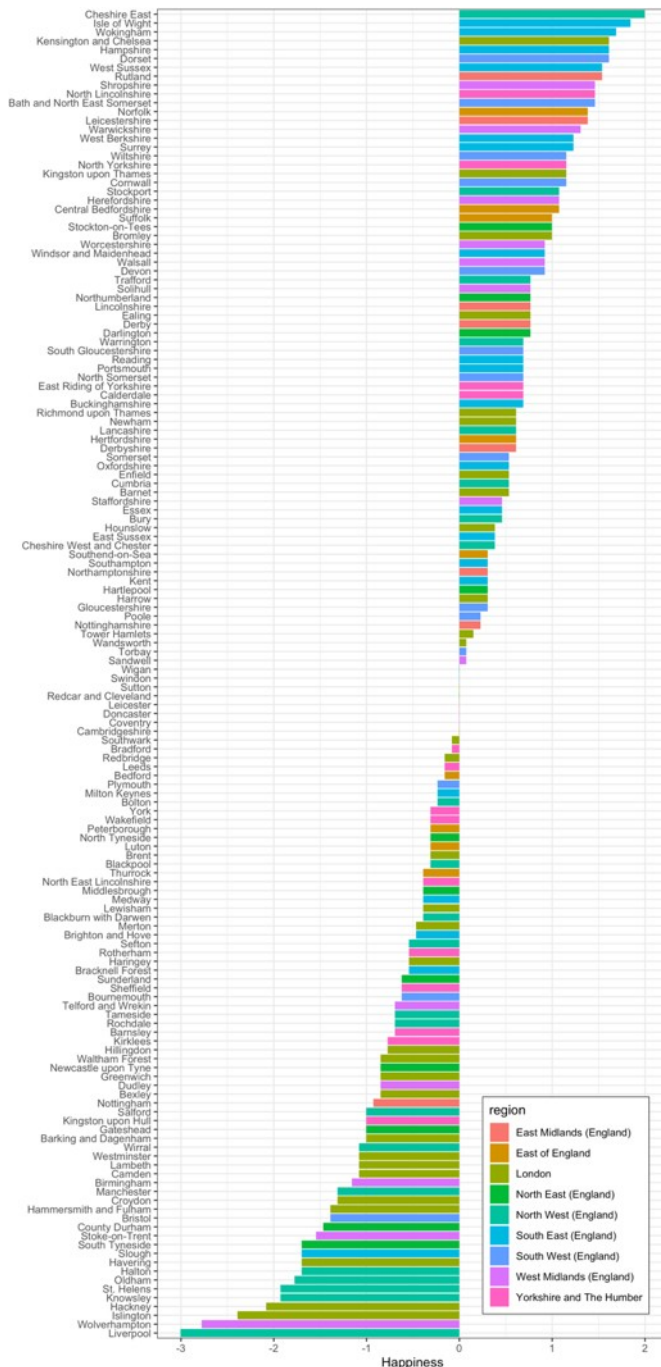
- % of adults not living as a couple
- % of 1-person households
- % of people renting privately
- of people who moved to their current address within the last year

Again, the greatest social fragmentation can be seen in London local authorities. The resulting figure reveals the greatest social cohesion in Northern regions.

Community cohesion may have a role in mitigating the effects of physical distancing efforts, and may also indicate to LRFs' community resilience within their communities during the pandemic.

Happiness

Figure 10. Happiness across local authorities (values show standardised scores)

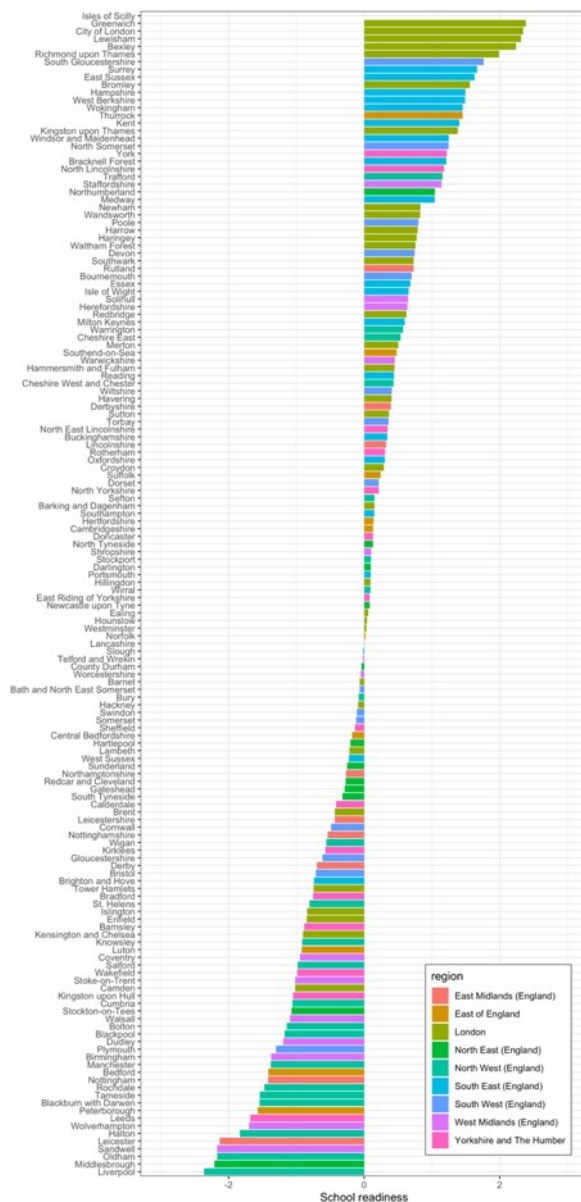


Happiness levels are also lowest in London boroughs, in addition to the North West of England. Conversely, the South East and West show the highest levels of happiness. These last two figures show a more nuanced measure of happiness and anxiety than the YouGov data we present each week, and may portray a longer-term picture of resiliency across local authorities.

While the data presented in YouGov show a different picture, this may be because those respondents are responding relative to their own experiences in previous weeks and months, and only captured the percentage of people reporting feeling Happy or Anxious. These data therefore give us a useful short-term and long-term picture that may be useful in predicting and supporting communities during response and recovery.

School Readiness

Figure 11. School readiness across local authorities (values show standardised scores)



There is general concern over the impact of many pupils being away from school for an extended period. School readiness measures the extent to which children achieve a good level of development by the end of reception, which affects reading and maths, social skills, and physical skills, and which impact children's' outcomes later in life, which can be captured in this [PHE guide to school readiness](#).

Many of the London boroughs come out highest in relation to school readiness, while those in the North of England have smaller proportions of school-ready children by the end of reception. This may be relevant when considering plans for schools reopening to more pupils, and in prioritising community needs.

YouGov Mood

Each week we present data from YouGov to show weekly changes in mood. We present all figures to help guide understanding of up-to-date social indicators, but comment only on those that may be particularly informative.

In particular, this week sees a small dip in happiness across all demographics between the 5th and 8th June. That this is evident across all sections of society suggests this is not random variability. The reason for this dip is not clear, but one possible interpretation may be the corresponding change in weather; while findings on the effects of weather on mood are inconsistent, there is some evidence that rain can reduce life satisfaction and happiness. Furthermore, this dip in happiness also corresponds to an ~50% reduction in use of parks relative to the previous week (Figure 12).

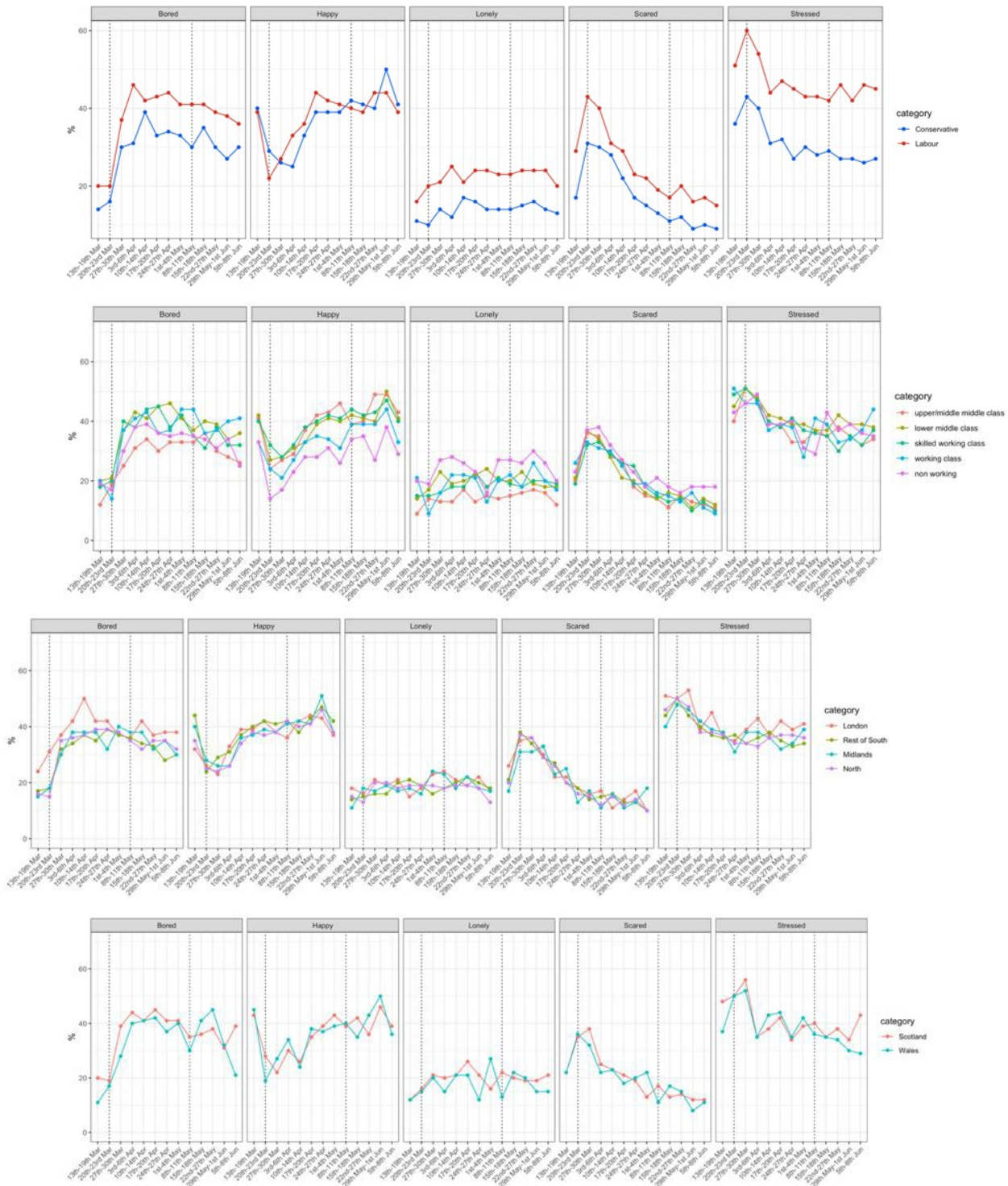
Figure 12. Google Mobility Data showing % change in UK park use

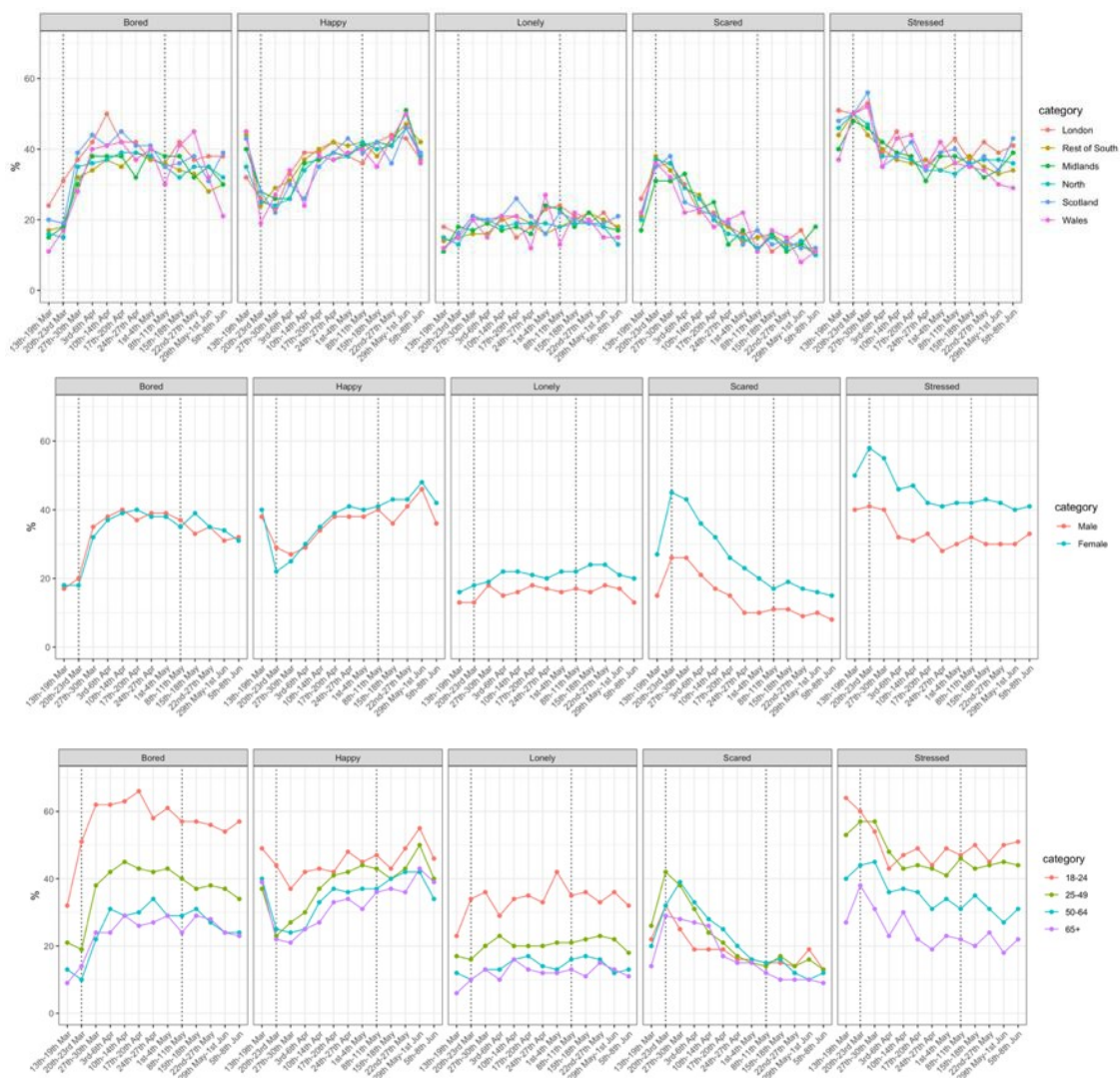


Fewer respondents reported feeling bored and stressed this week in Wales, relative to both Scotland and England. This may represent relative differences in the governance of the devolved nations and correspond to recent announcements about plans for easing lockdown restrictions.

Otherwise, previous trends continue to be evidenced across the board; most appear to be plateauing, while fear is gradually decreasing. The one exception to this trending reduction in fear is London, where there is an increase for the 2nd consecutive week. While % people reporting being scared is not greatly different to other regions, we will continue to monitor this trend in coming weeks.

Figure 13. YouGov mood data across all demographics; political affiliation, social grade, sex, age, and location.







Wellbeing and Mental Health

(gathered from systematic literature reviews, rapid reviews, webpages, academic articles, pre-prints, academic expertise)

N.B. This is not a literature review, but a review of the broad area (balanced with C19 specific literature) to see what topics lie within the area to inform future work. Predominantly based on systematic literature reviews and rapid reviews. This is to indicate the size of the literature review should we wish to commission one. Carried out by Adam Potter, Stacey Stewart and Stephanie Bianco with revisions and edits by Dr Rowena Hill, NTU. Please contact us if you require a list of sources consulted to develop your own literature review.

The subsequent section is to provide an overview ahead of the C19 National Foresight Group's third Roundtable event (11.06.2020) focussing on Wellbeing. It also provides a summary of the academic and research foresight on the developing areas of priorities for the latent and emergent wellbeing needs of the community. The roundtable report will be circulated within the next two weeks and when these are read together they should provide foresight from the current understanding of wellbeing needs in the UK.

What are the wellbeing and mental health impacts on the community during Covid-19? Rapid Scoping Review and changes in the literature/academic lines of enquiry

Narrative of scoping review

Initial rapid literature reviews highlighted a need to focus on the wellbeing impacts of keyworkers, particularly healthcare workers. The literature remains dominated by such lines of enquiry with the majority of studies being conducted on the mental health and wellbeing of those on the front line in healthcare settings. Studies are now citing the need to focus on the wellbeing needs of other first responders and the needs of non-traditional responders including volunteers and key workers. In addition to these areas, the literature has begun to identify vulnerable groups often citing multiple groups of concern, in some of which there are conflicting reports about that concern (for example the literature on the wellbeing of the elderly). Other areas for consideration were also raised, including a possible increase in xenophobia and the impact of this (particularly on students living overseas), and possible increases in dependence of alcohol and addictive behaviors, including technology and eating disorders. The literature also highlights the impact of wellbeing on children and families.

Healthcare workers

The most researched area of the literature on wellbeing in Covid-19 is healthcare workers. The most common areas identified are: fear of Covid-19 and the risk to health; moral injury; demoralization; burnout; stress; anxiety and depression; sleep issues; and feelings of vulnerability or lack of control. Further issues for healthcare professionals include coping with the deaths of colleagues, losing control, feeling vulnerable, working excessive hours, witnessing the breakdown of social support systems, managing family responsibilities and other life stressors that do not dissipate during the management of Covid-19. Many articles highlight the need for the provision of support services and equipment as well as peer support and additional support for trainees. Articles have begun to look at recommendations for reducing stress, introducing wellbeing tools or policy interventions and guidelines for good practice both during and after Covid-19 working.

Key workers & volunteers

The health and wellbeing of keyworkers (and non-traditional responders like construction, retail, delivery), core responders (e.g. police and fire) as well as non-traditional responders is being highlighted in the literature as an area of focus for wellbeing. The need to monitor and reduce the short and long- term impacts on wellbeing of these groups is highlighted by learning from other crises. Providing other more rounded, non-Covid-19 wellbeing support, such as work responsibilities and work life balance, as well as Covid-19 focused support is also highlighted as important.

The challenges for interventions for Healthcare, Keyworkers and Volunteers are:

- Demand: is likely to be high, but not yet. Learning from other incidents predicts that the demand will grow over months and years. Will the provision of support a) cope with that demand, and



- b) be sustained over that time period. It is better not to offer anything than offer something that is then withdrawn without an appropriate exit plan.
- **Complexity:** is likely to be a challenge. Established literatures from academia and practice understand certain occupations (bluelights, healthcare) have challenges through the nature of the roles they are in (pre-Covid-19 demand profiles of roles), and this does not stop in the light of Covid-19. So their exposure to harm or vulnerability or complex situations will continue. Therefore the interventions have to be not only sustained long enough to be meaningful, but they also need to be advanced enough to handle the complexity that is likely to be experienced by these key workers (i.e. not a low-level intervention).
 - **Uniqueness of experience of Covid-19:** for aspects such as moral injury, there are a high predicted number of individuals experiencing these situations. This is not a mental illness and it cannot be resolved with debriefing techniques (e.g. TRIM). It also cannot be screened for. There is an intervention being developed by a university team.

General population/community wellbeing

Literature has begun to explore and inform of the changes in mental health and wellbeing arising from the changes to the social environment during the pandemic with lessons learnt from previous pandemics and crises. Reports from China show an increased prevalence of depression, anxiety and serious impacts to perceived quality of life and wellbeing as a result of isolation measures. The general population reports evidence worries about the amount of health information available, fears about family members contracting the virus and higher levels of depression and anxiety when direct impacts of the measures are felt within their home life.

Studies are now identifying more at risk groups within the community exploring age (younger people may see bigger impacts to wellbeing than older individuals) and place of living with those living in urban areas (compared to suburban and rural) reporting higher levels of anxiety and depression. Other studies have highlighted that older people may be more at risk to impacts of wellbeing due to barriers to accessing mental health support, which was also seen as a prominent issue in migrant populations, Chinese students studying overseas, pregnant women and the homeless.

Literature also highlighted that lower rates of anxiety and depression were associated with feelings of belonging in neighborhood and trust in neighborhood. Institutional attitudes and trust toward the nation, society and government have also been related to wellbeing, along with trust in science, politicians and the police. Similarly, studies show that wellbeing in the general population can be influenced by terminology (terms like physical distancing helping to avoid interpretation of words like social distancing) and how this, along with miscommunication, social isolation and poorer socioeconomic status can impair wellbeing, particularly in vulnerable groups. Social connectedness and resilience are protective factors of wellbeing.

Children and families

Authors are exploring the impact of restrictions on children and families some of which raise concerns to the safety and health of children, maltreatment and reduced measures of prevention. Adverse effects are likely to have a severe impact on vulnerable parents and young children given the long-term impacts of early experiences and socioeconomic outcomes of the pandemic. Other highlighted issues were school closures, lack of outdoor activity, aberrant dietary and sleeping habits which can all disrupt children's lifestyle and promote monotony, distress and annoyance.

Literature suggests that the COVID-19 pandemic poses a threat to the well-being of children and families due to challenges related to social disruption such as financial insecurity, caregiving burden, and confinement-related stress (e.g., crowding, changes to structure, and routine). The consequences of these difficulties are likely to be longstanding, in part because of the ways in which contextual risk permeates the structures and processes of family systems. Other authors highlight the impact on demands of work-life balance and the detrimental impacts this can have on the wellbeing of children and of parents. Impacts of school closures on wellbeing are hypothesized in the literature including social inequalities which can have long lasting academic performance issues and the impact on health and wellbeing as long-term outcomes (please email: C19foresight@ntu.ac.uk for a copy of our recent write up about academic denial).



Vulnerable groups

The literature is identifying groups may be particularly vulnerable to wellbeing impacts from Covid-19 with such groups likely to experience short and long-term impacts, such as increased traumatic reactions, clinical depression, recurrent alcohol use problems, increased moral injury and increased suicidal ideation.

Identified vulnerable groups in the literature include children, adolescents, those with children living within the household, older adults, those with existing mental health problems, pregnant women, migrant workers, those with an underlying health condition or disability, people living alone, those in prison populations, students, those who are homeless, and those with lower income. Further issues arise when there are barriers to accessing mental health provisions. The British Psychological Society (2020) has issued guidance on, and outlines, the main causes of concern for those living with learning difficulties and disabilities with particular guidance for the family, and supportive workers of those who work with people with learning difficulties.

Women are reported as being more at risk of burnout and their wellbeing, stability and economic stability are more likely to be affected by the economic and social consequences of the pandemic. Disruptions to sexual and reproductive health services can have a negative impact on women and children specifically (see the WHO Covid-19 press briefing/update in the week beginning 8th of June 2020) for more detail on this, or email: C19foresight@ntu.ac.uk for more information).

Xenophobia

Studies are beginning to highlight reports of increased xenophobia directed toward those of Chinese ethnicity as a result of Covid-19. Some studies focus on the discrimination and stigmatization faced by Chinese studies overseas during the pandemic leading to anxiety and stress related disorders.

Considerations following lockdown measures

Addiction, suicide and suicidal ideation, depression and anxiety, eating disorders, technology.

The literature has highlighted some areas for consideration in wellbeing and safety from impacts of Covid-19 Non Pharmaceutical Interventions. This includes protracted periods of social isolation and increased technology based activity that solidify unhealthy lifestyle patterns. This in turn leads to difficulties when re-adapting to life once lockdown measures are eased. Increased alcohol consumption and dependence, problematic internet use, and gaming additions are also behaviours which increase the risk of unhealthy lifestyle patterns. Technology and use of social media are documented as being likely to increase anxiety and depression. There is more exploration of addictive behaviours in a previous SitRep (please email: C19foresight@ntu.ac.uk for a copy of our recent write up about addictive behaviours in the Covid-19 context).

Increased risk of suicide and suicidal ideation are also reported in the academic literature as being likely to increase due to the secondary impacts of Covid-19 such as adverse impact on life opportunities or economic fragility. There are also potential consequences from the pause of traditional methods of public service provision, such as child protection mechanisms, which have increased risk to the safety and wellbeing of children, and has resulted in a potential increased risk to young adults and adolescents experiencing violence.

Those with mental health disorders are reported as being likely to see an increase in behavior. A prominent area of concern was an increase in disordered eating in the general population and increased risk to those already living with an eating disorder. This is also likely to reduce the health and wellbeing of the general population and increase susceptibility to ill health.

What we do in this analysis, how and why (caution when interpreting)

A data review is undertaken by academics at Nottingham Trent University every week to inform the C19 National Foresight Group. Data related to Covid - 19 UK social and economic trends is reviewed to inform, guide and help prioritise discussions at national and local decision-making level (LRFs). The C19 National Foresight Group are keen to ensure that the data included has been ethically governed and structured to adhere to open access, data protection and GDPR regulations and principles.

For example, the data is to be manipulated in an ethical manner, and the content and context is to be fit for purpose in terms of the audience and decision timeframe in question.

Activity Completed

The following findings are based on a review of multiple data sources exploring Social, Economic, Psychological, Community aspects of Covid 19 in the UK. These could include:

- ONS: covers wellbeing, perceived financial precarity, objective indicators of UK economy, household financial pressures, perceived impact on work life
- OfCom: Public perceptions of information to help manage Covid 19, perceptions of preparedness and action
- ONS: Deaths from Covid - 19
- Gov UK: Relevant contextual information
- Census and geographical data: Geographical/location specifics
- IMD: Socio economic trends associated with spread or primary/secondary impacts
- LG Inform: Population, social, demographic, lifestyle and health data
- You Gov: Public mood
- NTU's own analysis of open source data (lead by Dr. Sally Andrews)
- Other academic survey work published within the last week

Limitations for Consideration

The National Foresight Group have been keen to quality assure the data assumptions, including the equity and representation of participants.

Internet use data indicates representational issues in older adults

Almost all of the data sets draw from online surveys. With this in mind the statistics behind online access were explored. The following is to be considered in the assumptions taken from the data sets.

The table below shows the estimated number of people who have never used the internet. The data are drawn from ONS 2019 Internet users:

Table 1: estimated number of people who have never used the internet

Age	Estimated number of people who have never used internet	Age	Estimated number of people who have never used internet
16-24	20,000	55-64	389,000
25-34	28,000	65-74	869,000
35-44	46,000	75+	2,482,000
45-54	158,000	Equality Act Disabled Not	2,336,000
		Equality Act Disabled	1,657,000

Table 1 shows that caution should be applied when considering the inferences made in the rest of the document as older adults could be underrepresented in the samples. The estimated numbers of those that have never used the internet begins to increase around age group category 35-44, the subsequent age categories increase by approximately twice as many non-users as the age category that precedes it. The numbers of 'over 75s' (2,482,000) for example not using the internet equates to almost a million more than the total of the other age group categories (1,510,000).

The interpretation of data should also consider the proportion of people known to be disabled by government agencies who do and do not meet the Act's criteria. These numbers make up 3,993,000 of the population, so this should be considered in the representativeness of the data.

END.

Contact us: If you have any questions about this output please email: c19foresight@ntu.ac.uk

Corresponding editing author Dr Rowena Hill is seconded full time to provide academic representation on the C19 National Foresight Group, and works at Nottingham Trent University.