C19 National Foresight Group: Intelligence Briefing Paper 12

Data Trends, Adherence within HPAs and Child Social Development

29/07/2020

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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 and the impacts from NPIs.

Contents

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 psychological, social and economic trends are reviewed to inform, frame and prioritise discussions at national and local strategic decision- making level (LAs and 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.

Who is this for?

This is most useful for the following roles. Please pass this on to those people in the following roles in your area:

- National thought leaders
- Local strategic decision-makers
- Intel cells
- Head of the MAIC

- SCG and TCG Chair
- Directors of Public Health
- Head of Health Protection Boards
- LA Chief Execs
- Head of Recovery Groups/Cells
- Multi-Agency Support Teams
- LRF Secretariat

Focussed theme this week: This week we cover the national mood data, and we also cover adherence to measures introduced to manage the spread of the virus at the local level. Data trends included: National Mood and Adherence Behaviours.

Academic Insights: We are providing a summary of work relating to adherence to local measures implemented to protect the health of communities. Focussing on the social and health inequalities, commonly referred to when we seek to understand the proportionally higher rates of infection amongst the members of the BAME community.

1) Scoping review of the literature to inform discussions on the adherence to local measures introduced to manage the viral spread.

Academic Synthesis

(gathered from systematic literature review s, 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 li e 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 Stephanie Bianco, Adam Potter, Dr Stacey Stewart, 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 section is to provide an overview of the academic and research foresight on the developing areas of latent and emergent economic needs of the community. *Due to the low number of published papers to date in these specific areas we have included the number of papers in this briefing so that you can see the weight of evidence behind our insights.

Data Trends

We will start with the mood data and then move on to the data exploring the adherence to local measures.

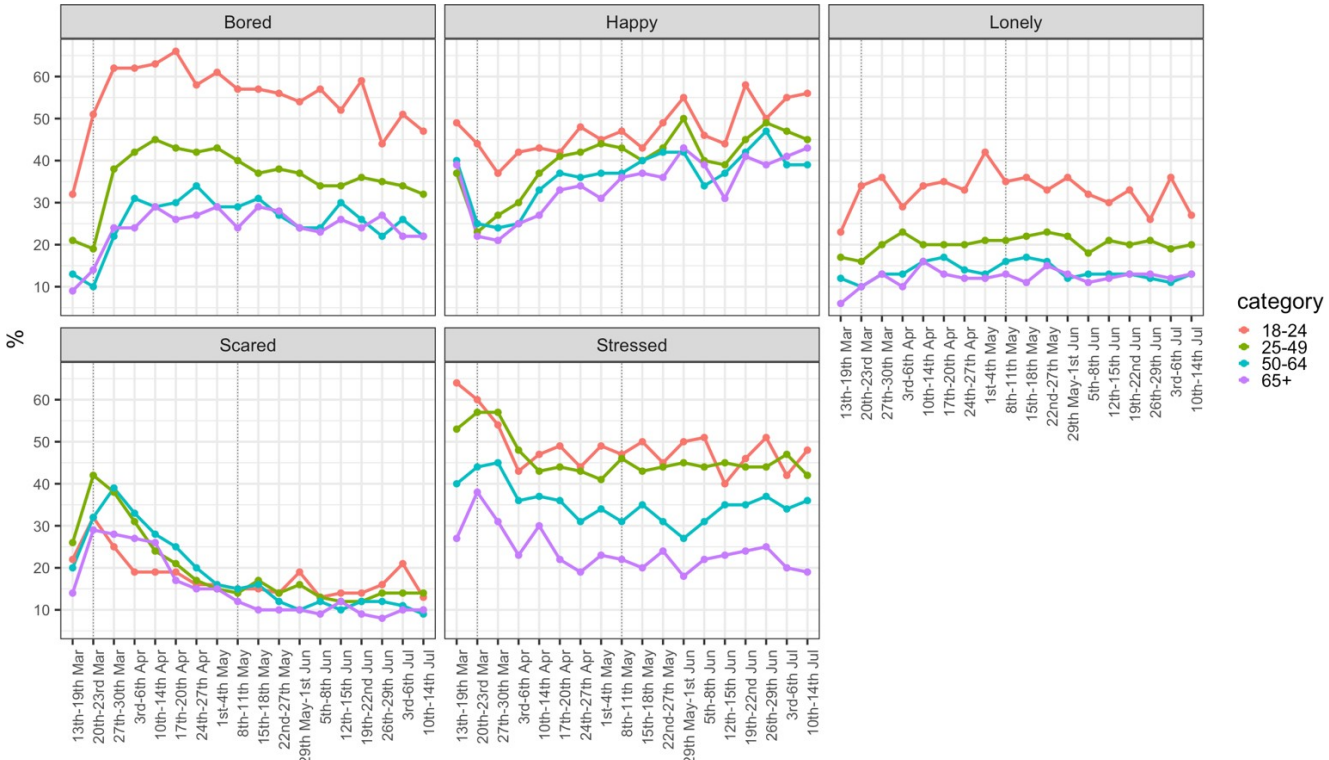
YouGov Mood Data (Up to 20 July 2020)

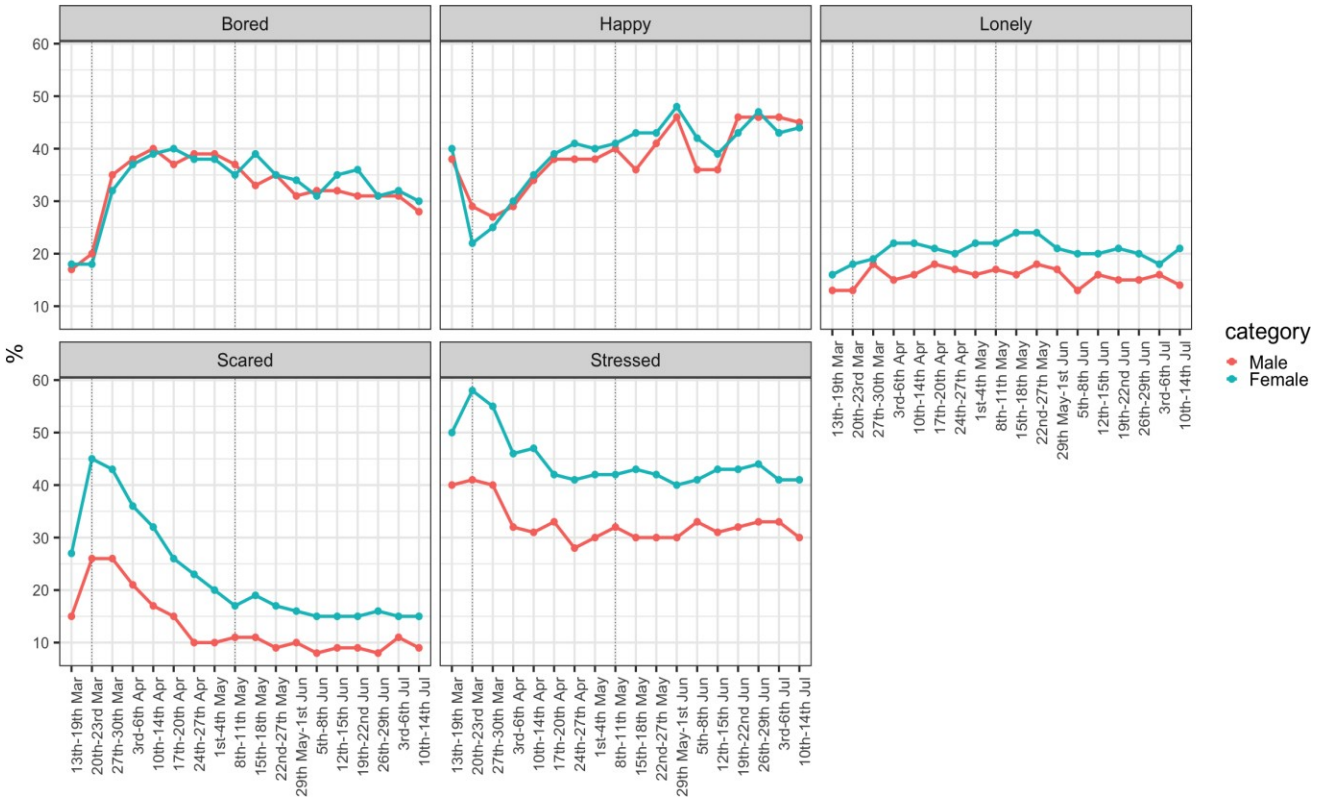
The percentage of people reporting feeling happy has increased for the second consecutive week young adults (18-24 years). Non-working adults also showing a slight increase although this group still remains around 15% lower than all other working categories. Most other groups appear to follow a general upwards or plateauing trend for happiness.

Boredom appears to be plateauing or decreasing for all groups, although more young adults (18-24 years) report feeling bored than any other age category.

The percentage of individuals reporting loneliness in Wales has increased for the third consecutive week, whilst those in Scotland show a decreasing trend for the second consecutive week. For most other groups, this trend is plateauing.

Feeling scared and feeling stressed both seem to be plateauing for most groups.


Bored
Happy
Lonely
Scared
Stressed
%
60
50
40
30
20
10
13th-19th Mar
20th-23rd Mar
27th-30th Mar
3rd-6th Apr
10th-14th Apr
17th-20th Apr
24th-27th Apr
1st-4th May
8th-11th May
15th-18th May
22nd-27th May
29th May-1st Jun
5th-8th Jun
12th-15th Jun
19th-22nd Jun
26th-29th Jun
3rd-6th Jul
10th-14th Jul
category
18-24
25-49
50-64
65+


Bored
Happy
Lonely
Scared
Stressed
%
60
50
40
30
20
10
13th-19th Mar
20th-23rd Mar
27th-30th Mar
3rd-6th Apr
10th-14th Apr
17th-20th Apr
24th-27th Apr
1st-4th May
8th-11th May
15th-18th May
22nd-27th May
29th May-1st Jun
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3rd-6th Jul
10th-14th Jul
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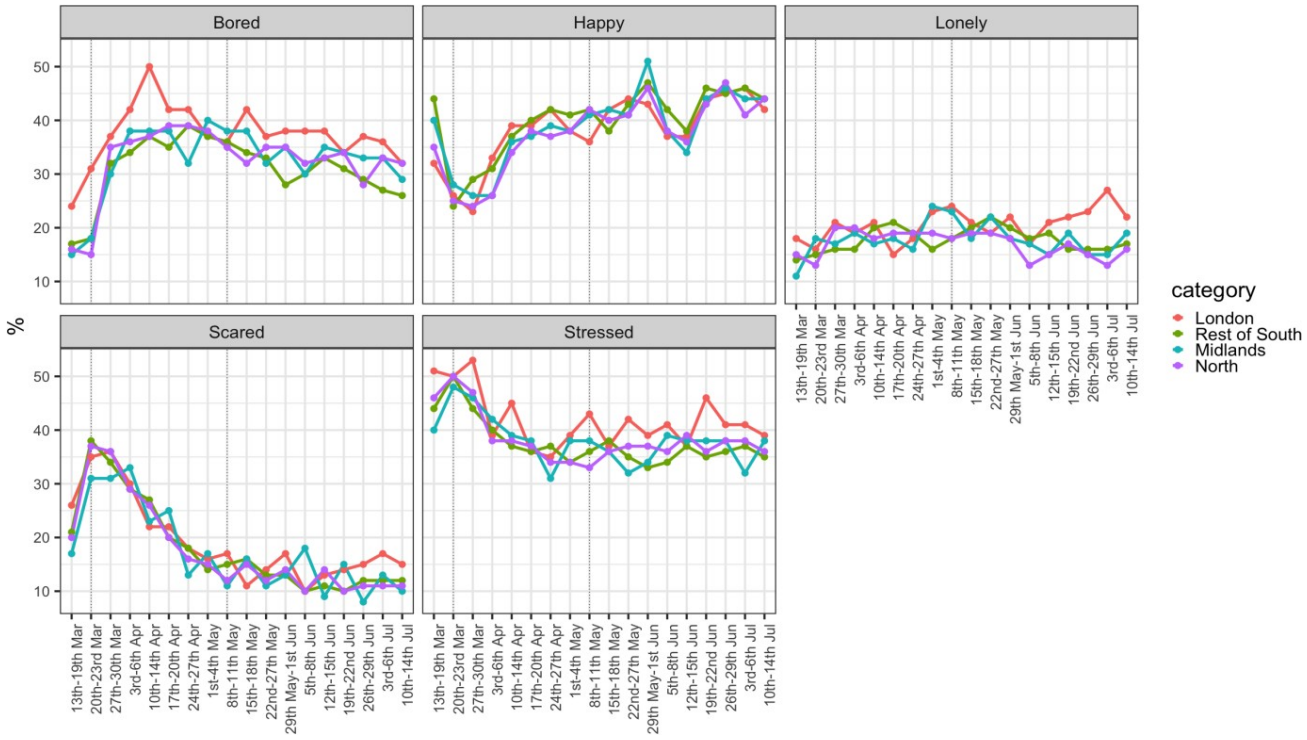
Bored
Happy
Lonely
Scared
Stressed
%
50
40
30
20
10
13th-19th Mar
20th-23rd Mar
27th-30th Mar
3rd-6th Apr
10th-14th Apr
17th-20th Apr
24th-27th Apr
1st-4th May
8th-11th May
15th-18th May
22nd-27th May
29th May-1st Jun
5th-8th Jun
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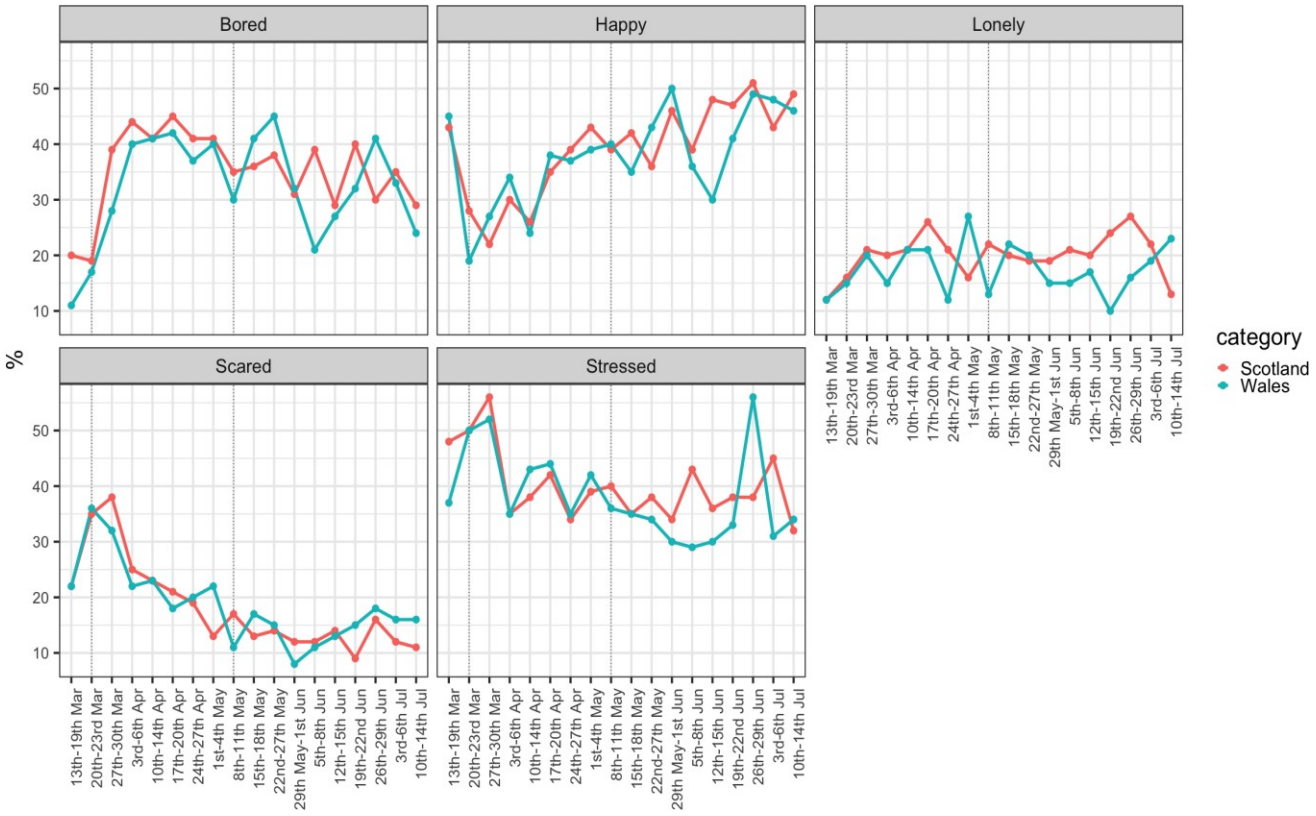
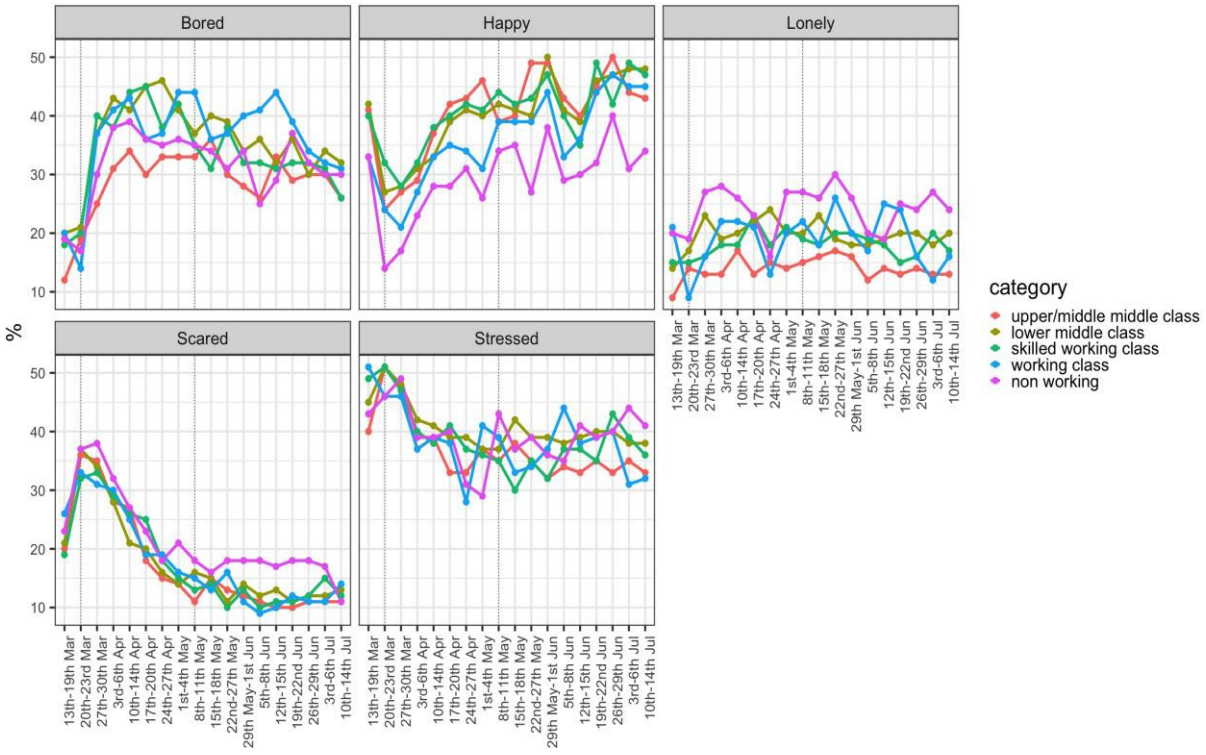
26th-29th Jun
3rd-6th Jul
10th-14th Jul
category
London
Rest of South
Midlands
North


Bored
Happy
Lonely
Scared
Stressed
%
category
Scotland
Wales


Bored
Happy
Lonely
Scared
Stressed
%
category
upper/middle middle class
lower middle class
skilled working class
working class
non working

Local Health Protection Area (HPA) 'lockdown' measures compliance

Compliance with governmental advice and the national lockdown measures

Savanta (https://savanta.com/coronavirus-data-tracker/) asked over 1,000 UK respondents "Given what you know about COVID, using a scale from 0 - 10, to what extent have you followed the government's advice (where 0 is not at all and 10 entirely)?". Throughout Jul y around 75% of respondents responded with entirely or mostly agree, with around 10% answering with mostly not or not at all. Therefore, compliance with government advice since mid-March has been, and continues to be, high.

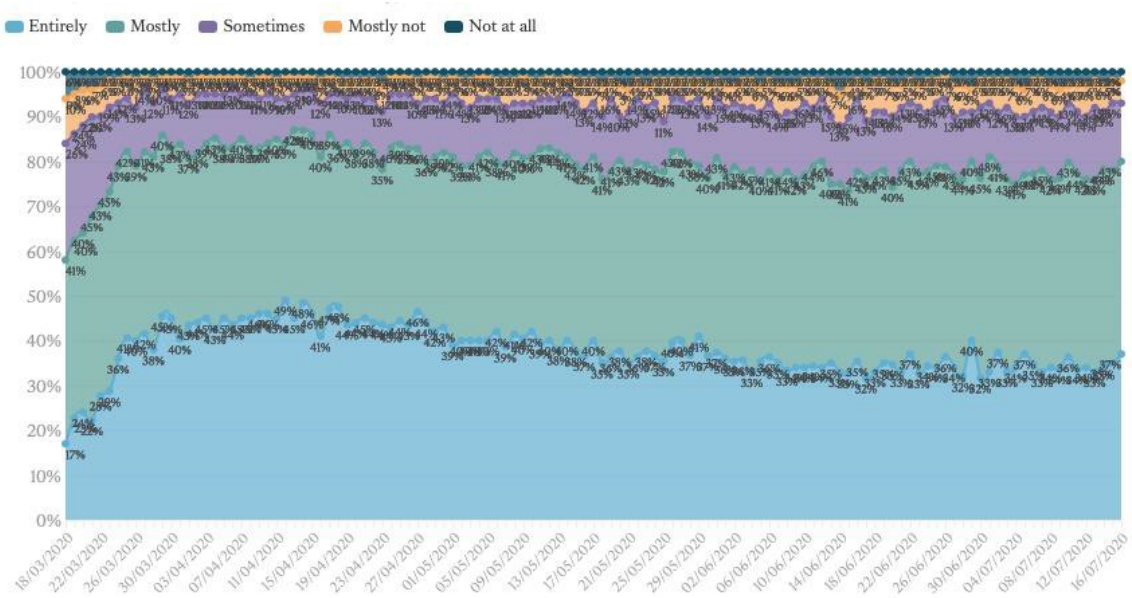


Figure 1.

These figures are supported by data gathered during the Law and Compliance During Covid Study (https://www.nuffieldfoundation.org/project/law-and-compliance-during-Covid), which show that for the week 8th-12th June, 85% of respondents responded that they maintained at least some compliance with the lockdown restrictions (answer categories 5 -7).

How strict was/is your compliance with the lockdown restrictions...	... when they were first introduced in March?	... now? (8th – 12th June)
Not compliant at all - 1	1%	1%
2	1%	1%
3	1%	4%
4	3%	8%
5	6%	19%
6	16%	27%
Strict compliance - 7	72%	39%

Table 1.

Support for local Health Protection Areas

On June 29, 2020, YouGov asked 1,271 adults "It has been announced that the current lockdown will be extended in Leicester for another two weeks past July 4. In the event of a surge in cases in one particular area, do you support or oppose local lockdowns such as this?"

Aggregated across all groups, 90% of respondents supported, to some extent, the use of local HPAs with only 4% opposing, to some extent.

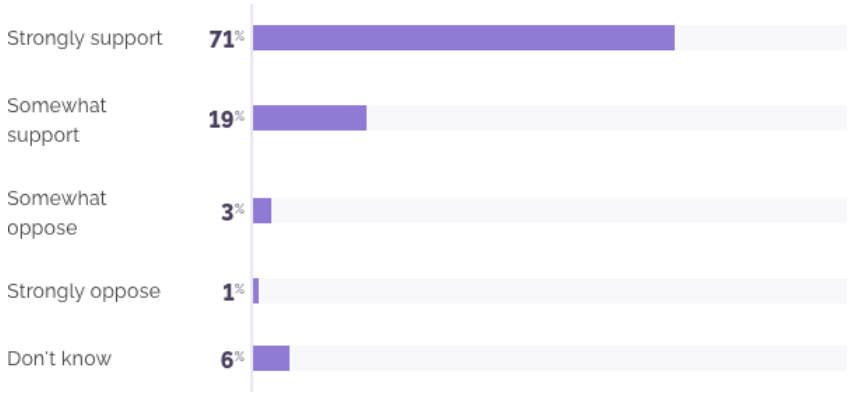


Figure 2.

Across regions London showed the lowest level of support at 84%, with the Rest of South showing the most at 93%.

	All	London	Rest of South	Midlands Wales	North	Scotland
Strongly support	71%	60	77	66	70	75
Somewhat support	19%	24	16	25	19	16
Somewhat oppose	3%	4	1	3	3	2
Strongly oppose	1%	1	1	2	1	0
Don't know	6%	10	5	4	7	6

Figure 3.

There was little difference in the support of a local HPA between genders.

	All	Male	Female
Strongly support	**71** %	69	72
Somewhat support	**19** %	22	17
Somewhat oppose	**3** %	2	3
Strongly oppose	**1** %	1	1
Don't know	**6** %	6	6

Figure 4.

Support increased with age, with 96% of respondents in the 65+ group supporting local HPAs to some extent. 7% of young adults opposed a local HPA to some extent with only 1% of older adults (65+) opposing local HPAs.

	All	18-24	25-49	50-65	65+
Strongly support	**71** %	58	65	78	81
Somewhat support	**19** %	23	23	16	15
Somewhat oppose	**3** %	5	4	1	0
Strongly oppose	**1** %	2	1	1	1
Don't know	**6** %	12	7	4	3

Figure 5.

Support for local HPAs was slightly higher in ABC1 (middle) than C2DE social grades (working and non-working).

	All	ABC1	C2DE
Strongly support	**71** %	70	71
Somewhat support	**19** %	22	17
Somewhat oppose	**3** %	2	3
Strongly oppose	**1** %	1	1
Don't know	**6** %	4	8

Figure 6.

Support for financial help for areas in local HPAs

On June 9, 2020, YouGov asked 1889 adults "Do you think that the people and businesses in Leicester should, or should not receive additional financial support from the government as a result of being put into local lockdown?"

Aggregated across all groups, 46% supported providing additional help whilst 30% did not support this. Nearly a quarter of the respondents said that they did not know.

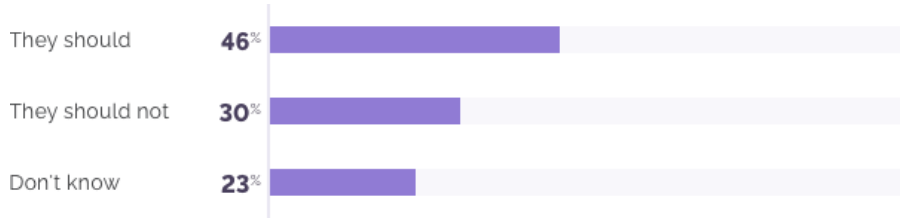


Figure 7.

Respondents from London had the highest rate of support at 56% with the other regions having similar levels of support (44% - 47%). Over a third of respondents from Scotland and the North said that financial help should not be provided, whilst one fifth of those from London gave this response. A quarter of respondents in London, Rest of South and Midlands/Wales said they did not know whilst around a fifth in North and Scotland gave this response.

	All	London	Rest of South	Midlands Wales	North	Scotland
They should	**46 %**	56	44	47	46	45
They should not	**30 %**	20	31	29	34	35
Don't know	**23 %**	24	25	24	20	21

Figure 8.

Males and females had similar percentages of individuals stating that they would support financial help, but more males said they would not support as compared to females. Around a fifth of males said that they did not know, rising to a quarter for females.

	All	Male	Female
They should	**46 %**	47	46
They should not	**30 %**	32	29
Don't know	**23 %**	21	25

Figure 9.

There were large differences across ages with support for financial help decreasing as age increased. Nearly two thirds of young adults (18-24) supported the notion whilst a third of older adults did. Opposition to financial help increased with age, with 9% of young adults opposing and 44% of older adults opposing. Younger adults had the highest levels of "don't know" responses at 28% with 50-65 year old respondents having the lowest at 19%.

	All	18-24	25-49	50-65	65+
They should	**46** %	63	51	44	32
They should not	**30** %	9	25	37	44
Don't know	**23** %	28	24	19	24

Figure 10.

Adherence Behaviours in the Context of Health Protected Areas (HPAs)

This document considers the factors that may influence adherence to Health Protected Area (HPA) restrictions in the context of a previously termed 'local lockdown'. Many of the same principles as the national lockdown applies at the local level. However, social identities, social networks and social norms are likely to be particularly important, as unlike during a national lockdown, local restrictions affect some people and not others.

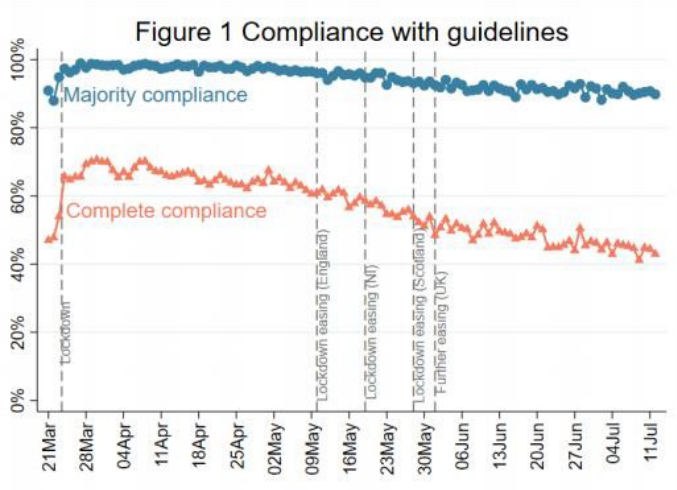
Compliance behaviours – current data

YouGov mood tracking data shows that the percentage of people who say they are wearing a face mask in public places has increased to its highest point since the start of the pandemic, and currently sits at 38% (July 12th).

Report 16 from UCL's C19 Social Study shows that majority and complete compliance are dropping, with complete compliance dropping the most.

Further breakdowns of this data are available, for both Complete and Majority compliance. Breakdowns available consider compliance by; age groups, living arrangement, household income, mental health (those with/without diagnosis), nations, keywork status, living area, and living with children.

Figure 1 Compliance with guidelines



Report 14 from UCL's C19 Social Study focussed on respondents' feelings of HPA. This included enjoying lockdown, missing being in lockdown and feelings about future HPAs; as before, each category is broken down to consider each groups feelings of enjoyment (age groups/living arrangement/household income etc.). The report shares that older people, those living alone and those with lower household income were least likely to miss being in lockdown, whereas adults aged 30-59, people with a diagnosed mental illness, people from BAME groups, those living in England, keyworkers and people living with children were more likely to miss lockdown. These findings are again broken down by the different groups.

In terms of gauging feelings about future HPAs, Report 14 shares that people aged 30-59 were most likely to look forward to another HPA, with smaller indications for other groups such as people living with others, those from higher household incomes, people in England, key workers, those with children and people from BAME groups. Important to note is that people with mental illness are more likely to dread a future HPA, with 1 in 4 dreading it, and 1 in 2 feeling overall negative about it, however, a further 1 in 4 would still feel overall positive. These feelings of dread, or welcoming another HPA are again broken down into the individual groups – age/living arrangement/household income etc.

The Metro report on an update Mayor of London Sadiq Khan gave to the House of Commons on 22nd July 2020. Speaking about face coverings on public transport becoming mandatory, Mr Khan shared that 33,5000 people have been questioned by Transport for London enforcement officers due to non-compliance. In response to being challenged, people either put on a face covering, or explained a medical reason for not wearing one. Mr Khan said that 1,983 passengers have been prevented from boarding, 473 were ejected for not obeying the rules and 109 people have been given a fine of up to £100.

Business Enforcement

The Telegraph (2020) reports that many supermarkets and businesses have said that whilst they hope the public will wear face masks in their stores, and they strongly encourage them to, this will not be something they enforce and they will not be patrolling the aisles. This includes supermarkets such as Asda, Lidl, Sainsburys, Co-Op and Costa. Aldi and Waitrose have shared a statement that customers need to wear a face covering but have not stated that they will be enforcing this, or how. Tesco have shared that people need to wear a face covering, and that they will have face coverings for sale near the front of the store for people to buy if they have forgotten theirs.

Some businesses have explained this is because some members of the public are exempt from wearing face coverings, so they will not know if the customer is exempt or simply not wearing

one, and they do not want to challenge their customer.

Social Identity

Social identity theory describes the way in which individuals derive their self-concept from perceived membership of relevant social groups. Individuals may have multiple social identities based on a range of different group memberships, and their behaviour will be affected by which social identity is currently relevant and active.

Social identity is important for adherence with local HPA restrictions. Lunn et al (2020) report that ***public-spirited behaviour is most likely when there is strong group identity, clear and frequent communication and social disapproval for those who do not comply***. Furthermore, Jetten et al (2020) write that unless people (a) see themselves as part of a larger collective 'we' (e.g., as 'us New Yorkers') and (b) identify with the cause of that collective, then they are unlikely to compromise on their personal self-interest (Haslam & Reicher, 2017).

During national lockdown, there may have been a strong national social identity, with the feeling that we are 'all in it together'. This strengthened the 'norm internalisation' of social distancing practices and subsequent behaviour. However***, in the context of local restrictions, individuals may not have access to this social identity and therefore may be less likely to compromise their own self-interest***. Furthermore, local HPAs ***risk individuals affected by restrictions feeling unfairly singled out and targeted***. Jetten et al (2020) suggest people want to be respected and treated fairly in terms of a group membership that they share with policy makers (e.g., as Canadians, as Scots), and that if they feel that they are disrespected or treated unfairly, they are unlikely to comply (Tyler & Blader, 2003).

Social identity theory therefore suggests that it is ***important for leaders to act as 'identity entrepreneurs' or 'identity impresarios' who strive to build and then embed a shared sense of 'us' within the individuals affected by local HPA restrictions*** (Haslam et al., 2020; Jetten et al, 2020).

Jetten et al (2020) outline three key ways in which leaders need to manage social identity in order to be effective:

1. ***by representing us,***
2. ***by doing it for us, and***
3. ***by crafting and embedding a sense of us***.

Both local and national social identities may be useful in supporting adherence to local restrictions, a local identity with a sense of being in it together in adhering to restrictions, and a national identity to maintain a national sense of 'us' and to prevent feelings of exclusion or unfair treatment.

Social Networks

An individual's processing of risk information is highly social and dependent on their social contexts. After receiving information about possible risks, the individual interprets the information and formulates a personal understanding, and then communicates with their social networks to verify their understanding and determine whether the risk is credible and relevant to them personally (Zhong, 2016).

In a local HPA, it is probable that the social networks of individuals inside a HPA area will include people outside of the HPA area, even if those people are very close by (geographically). It is ***possible that if some members of an individual's social network are outside of the local HPA, then they will perceive the risk of Covid-19 to be lower, which may influence the risk perception of those under local restrictions***. This may be the case particularly when the

members of the social network are just outside of the area of local restrictions. This was not a consideration with national lockdown measures.

Media

Media reporting has a powerful effect on health behaviours during a pandemic. During the H1N1 outbreak, although a vaccine was offered before, or at the onset of, the second epidemic wave that caused most of the fatal cases in Europe. Vaccination rates for that season were lower than expected. The findings of Reintjes el al (2016) suggest that different patterns existed over time between the media curves and epidemiological curves that may potentially explain this. Media attention on influenza A H1N1 in Europe declined long before the epidemic reached its peak, and public risk perceptions and behaviours may have followed the pace of the media focus, rather than the epidemiological trend. Furthermore, Olowokure et al (2012) found that the number of laboratory tests carried out for H1N1 positively correlated with the volume of media reports about H1N1. The increased volume of media reporting may have raised population concern leading to an increased demand for diagnostic testing.

However, it is likely that when compared to before the easing of national lockdown, media reports are focussing more on the lifting of restrictions and the associated opportunities for socialising, therefore less on the risk of infection and the importance of physical distancing measures. ***It is highly probable that the 'local epidemiological curve' may fall out of sync with the 'national media curve' which may influence the risk perceptions and subsequent adherence behaviours of individuals affected by local HPAs***.

Trust

Perceived reliability and trust in the source of information during a pandemic influences the likelihood that individuals will adopt recommended behaviours. The higher the **trust** in the government, health agencies and media sources (Prati, Pietrantoni & Zani, 2011; Siegrist & Zingg, 2014; v an der Weerd et al, 2011; Setbon et al, 2011), the higher the **belief in their expertise and responsibility to protect** (Prati, Pietrantoni & Zani, 2011), and the higher the **perception that their information as useful and reliable** (Agüero et al, 2011; Bults et al, 2011) the higher the likelihood that individuals will follow the recommended behaviours. There is no reason that this would not exist at local level with the Health Protection Boards, SCG, Director of Public Health, LA and other local bodies fulfilling the categories of government, health agencies and media sources.

The latest figures from the March Covid Social Study suggest that levels of confidence in the central government to handle the Covid epidemic have risen slightly more in devolved nations but remain lower and unchanged in England. Confidence is also lower in urban areas, which are more likely to come under local HPA restrictions compared to rural areas. YouGov mood tracking data shows that the percentage of people who think the government is handling the issue of coronavirus 'very' or 'somewhat' well is currently (July 9th) at 43%. At its highest, this figure was 72% on March 27th. At its lowest, this figure was 39% on 5th June. UCL Social Study report 16 results show that confidence in the government for England continues to decrease; this data is also broken down and analysed in categories such as confidence by; age groups, living arrangements, household incomes, mental health diagnosis, nations, keyworker status, living with children and living area.

This work suggests that adherence to local HPAs requires confidence in both national and local leaders and their expertise, and trust that the information provided is useful and reliable. This requires clear and consistent communication about the reasons for local restrictions (Rosseau et al, 2015), and accurate and timely information about the details of restrictions, such as the exact areas affected, the specific restrictions to be applied, and the likely duration of the HPA.

Communication

Framing

Research shows that the way in which health and risk information is presented and framed influences how it is received. Rosseau et al (2015) found that advocating for **clear information** and **coordination between health authorities and the media** promoted adherence to preventive behaviour, however, **over exaggerating the risks** and **minimizing the population's agency** may undermine health authority credibility. In studies which have explored differences in immunisation uptake in previous pandemics, it was found that uptake of immunisations was lower when the populations opinion was framed by negative factors such as blaming organisations for lack of information, unclear or inconsistent information or a lack of transparency portrayed within the media (Sandell, Sebar & Harris, 2013).

Data visualisations can shape how risks are perceived, (Welhausen, 2015) the use of data visualisation during the Ebola outbreak concluded that language-based content may communicate a very different message from ***data visualisations***. Warm colours increase risk perception, and data visualizations that are high-context, collectivistic forms of visual communication, which lessen risk perception among experts but intensify risk perception among nonexperts. Recommending that communicators: show quantitative information using a variety of visualization strategies, include explanatory text and/ or visuals to more fully contextualize data visualizations, and add comparative data visualizations. These strategies and methods could be used to promote coherence with local HPAs.

Rumours

Problematic responses to pandemics include the victimisation of certain groups and the spread of rumours. A systematic review by Barrelet et al (2013) suggests that rumours respond to a need for information and can be described as an "act of intensified collective information seeking." Rumours especially emerge when the public does not trust the "institutionalized channels of communication".

Rumours are usually understood by public health professionals as "untrue" narratives, "misunderstandings," and "obstacles" to official prevention programs. They consider rumours "as failures in communication, to be rectified by the provision of more accurate information." However, it is argued that: "even when 'accurate' information is provided, the rumours will continue, because they express a social reality, which no amount of alternative information can change." That social reality which is more like the lived reality of individuals than the information provided via official means. Furthermore, rumours can help to solidify agency in the general population, whereby the general public feels more in control of the situation (Sunstein, 2014).

Local HPAs communication and stigma

Misinformation, communication and other facilitators can produce stigma and should mitigate against this, particularly in the context of local HPAs (Logie & Turan, 2020). Research from previous epidemics (such as HIV and Ebola) and an understanding of the historical construction of illnesses can be used to frame and mitigate stigma around Covid-19 and local containment (Turnan et al., 2017; Stangel et al., 2019; Logie & Tu ran, 2020). To date, Covid-19 public health responses, which are essential for containment and prevention, also have the potential to exacerbate stigma (UNAIDS, 2020). The way in which health and risk information is presented to the general public influence's public perception, and their ability or justification to follow guidelines.

Terminology

Military metaphors including terms such as 'targets' and 'fighting', frames the illness as an infiltrator on society, this both spurs paranoia and infers social order, which in turn can exacerbate pre-existing social inequalities (Jones, 2020; Wiggins, 2020). Responses to illnesses are shaped by their unpredictability and perceived contagion as well as their portrayal through official channels (Jones, 2020). Historically, illnesses have been constructed as both evil

predators and personal responsibilities, such approaches can contribute to a social rejection whereby public responses fail to see the illness as a serious problem (Jones, 2020). Government actions, such as isolation, can exacerbate power imbalances between civilians and the state and can also lead to the blaming of a foreign other, as the illness originated elsewhere, which has been experienced in previous pandemics. A change in ***terminology can help to build connections via a caring and kindness approach, rather than simply fear of the Covid-19 infection***. This can motivate the uptake of non-stigmatising physical distancing whilst ensuring blame is not placed on those who become ill (UNAIDS, 2020; WHO, 2020).

Movement restrictions and quarantines are often legally enforced, and whilst these approaches help with the management of Covid-19 and allows greater responsiveness to an overstretched health system, some may facilitate stigma. Jones (2020) suggests caution is aired ***in framing the social construction of an illness as a foreign invasion, as this may promote stigma and xenophobia, in turn reinforcing social hierarchies and power inequities***. Enforcement of travel bans, movement restrictions, and quarantines may disproportionately affect already stigmatised persons, including homeless persons (Tsai & Wilson, 2020), persons who are incarcerated (Kinner et al., 2020), migrants and refugees (Daniels, 2020; Page et al., 2020) and BAME individuals (UNIAIDS, 2020). Recent studies suggest that ***all quarantine measures and bans on travel should include anti -stigma and anti-xenophobia public messaging and training of legal authorities*** (Strangle et al., 2019; Logie & Turan, 2020). UNAIDS (2020) recommends that in lieu of criminalization for breaching Covid-19, ***public health policies should be delivered from a local level and*** *approaches should focus on empowering and strengthening communities to support* people to protect their own and one other's health.

Stigma toward social groups

Anxiety caused by HPAs, the unknowns around Covid-19, and fear of being infected, gives rise to stigma within local communities facilitates discrimination and could increase attacks against the vulnerable (Sotgui & Dobler, 2020).

Recent reports for example have highlighted that BAME individuals might be more susceptible to adverse impacts from Covid-19 due to their risk profile (including intergenerational living, larger household sizes and risks from types of occupation). However, these findings ***can then used to place stigma toward, or even place blame on BAME individuals for spikes in certain geographical locations***. Chowdhury et al (2020) also highlight that stigma could be attached to an area where a localised HPA is enforced and this has been explored within the context of Leicester. Such factors may also have a prolonged economic impact on those in the city, as well as impacts on wellbeing, and the city's population being perceived as "at fault" for the spike in transmission (Cartwright et al., 2020; Mahase, 2020, Hall, 2020).

There has been growing support for localised HPAs, a recent YouGov Study showed that 71% of the general population were in support of extending HPAs in local areas (2020). However, the location of respondents is not known and in accessing the need for increased support, there was little overall support for those in Leicester receiving additional support as a result of prolonged measures. Others have reported that such localised HPAs would benefit from an inclusive and coordinated public health response that is locally led, agile, and responsive to prevent unnecessary morbidity and mortality and that is locally directed, using clear messaging that can be accessed easily by the community (Nazareth et al., 2020).

Stigma facilitating social inequalities

Stigma mitigation also needs to tackle facilitators such as social inequities (Stangl et al., 2019), including racism and xenophobia. Public health strategies that improve access to Covid-19 testing and employment sick leave benefits, have the potential to reduce stigma. Yet addressing underlying social inequities and healthcare access require s long-term investment in transforming

values, laws, and policies. The tension therefore emerges between the immediate work of providing information during the Covid-19 crisis and the need for long-term investment in reducing social inequities. Stigma-reduction strategies for HIV and other health issues have largely targeted intrapersonal and interpersonal dimensions, far fewer have addressed structural factors such as legal issues, policies, and rights (Rao et al., 2019). Interventions should address both drivers (knowledge, misinformation) and facilitators (health policies, institutional practices; Nyblade et al., 2019).

Taran et al., (2017) informs that multiple stigma dimensions can negatively impact on health practices and outcomes:

- *enacted stigma*—acts of discrimination and mistreatment,
- *felt-normative stigma*—demeaning community norms and values,
- *internalized stigma*—the ways that persons accept negative perspectives toward a group(s) they may belong to,
- *anticipated stigma*—concerns that one will experience future discrimination and bias

It is argued within the literature that social inequalities are exacerbated by the impact of Covid-19 (Logie & Turan, 2020). For example, marginalised communities such as refugees and undocumented immigrants have been particularly impacted in the pandemic, yet these social needs have not been further addressed through policy (Daniels, 2020; Page et al., 2020). Similarly, the ***engagement of persons most affected by Covid-19 is also important in the development of stigma mitigation strategies***, though they may experience social and health disparities that present as barriers to research participation.

Lived experiences of Covid-19 and intersecting factors can inform contextually specific and stigma-informed public health approaches (Lohie & Turan, 2020). For example, gendered roles as family caregivers and front-line healthcare workers may elevate women's exposure to Covid-19 (Wenham, Smith & Morgan, 2020) requiring a gender -based analysis of social and health impacts of public health measures such as self-isolation. Social disparities are associated with health disparities and those diagnosed with Covid-19 may encounter further stress and mental health impacts (WHO, 2020; Ho, Chee & Ho, 2020). Strategies therefore need to factor in multiple health conditions and social identities to understand and reduce Covid-19 stigma. A multifaceted approach could be useful in mapping the ways that social inequities contribute to the production of multiple interacting health issues, including Covid- 19 (Singer 2020). ***Creative, web-based, and community-engaged strategies can aim to reduce participation barriers to involve persons most impacted by Covid-19 stigma in research and program development*** (e.g., addressing access barriers posed by Covid-19 caregiving and/or healthcare provider roles, quarantine, mental health challenges).

Recommendations for Communication

In addition to further information and resources, multilevel strategies can address underlying stigma drivers and facilitators (Jones, 2020). Public health actors can challenge military metaphors and other stigmatizing language in public health messaging and media (Wiggins, 2012). Applying an intersectional lens can improve understanding of the ways that Covid-19 stigma intersects with gender, race, immigration status, housing security, and health status, among other identities (Wenham, Smith & Morgan, 2020). Balancing tensions between stigma mitigation and Covid-19 prevention and containment can inform immediate and long - term strategies to build empathy and social justice in current and future pandemics.

National, regional, and local healthcare services that communicate transparently and work reliably and efficiently can also alleviate fears among the community and reduce stigmatization and social discrimination (Sotgui & Dobler, 2020). An example of a successful initiative to counteract misconceptions, misinformation and stigma is the Trinità health

educational model. The initiative was implemented in a small Sardinian town, where, after a local Covid-19 outbreak, the mayor and the main political party decided to use an interactive educational program based on the WHO principles of health education. The local population had an opportunity to interact with an expert online and to get answers to their questions, which helped to address general and specific concerns about Covid-19.

Communications strategies should seek to:

a) build local identities with strong social norms;
b) maintain a national identity;
c) build trust in the government and local authorities;
d) emphasise the effectiveness of local HPAs;
e) address the psychosocial aspects of HPAs including health beliefs, self -efficacy and boredom
f) be sensitive to the specific demographics of the area under local restrictions.

Health Beliefs Associated with Protective Behaviours

A number of health beliefs affect the likelihood that individuals will engage in recommended protective behaviours. **Risk perceptions** of a disease (Tooher et al, 2013; Wang, Wei & Shi, 2018) including the **perceived severity** of the disease (Bults et al, 2011; Cho & Lee, 2015; de Zwart et al, 2010; Prati, Pietrantoni & Zani, 2011; Setbon et al, 2011) and the **perceived personal susceptibility** to catching the disease (Agüero et al, 2011; de Zwart et al, 2010; van der Weerd et al, 2011) increase the likelihood that an individual engages in protective behavioural measures, as does the degree to which individuals **believe the behaviours will be effective** (Agüero et al, 2011; Bults et al, 2011; Wang, Wei & Shi, 2018).

These health beliefs are affected by a number of factors. As discussed above, media reporting and communication with social networks outside of a local HPA may reduce individuals' risk perceptions and perceived personal susceptibility, and negatively affect their perceived social norms as they see news reports and hear from their social networks stories of others being able to reduce their social distancing measures. All of this would likely reduce their adherence to local HPA measures.

However, individuals with higher self-efficacy, confidence in their ability to carry out a behaviour, are more likely to engage in protective health behaviours (Bults et al, 2011; Cho & Lee, 2015; de Zwart et al, 2010; von Gottberg et al, 2016) as are those who believe the behaviours will be effective (Agüero et al, 2011; Bults et al, 2011; Wang, Wei & Shi, 2018). Previous experience of the national HPA may increase individuals' self-efficacy to carry out physical distancing, as they have done it before, and their belief in the effectiveness of physical distancing restrictions, as they have seen them work at a national level.

Therefore, to encourage adherence to local HPA restrictions, leaders should:

I. emphasise the risk to individuals within the HPA area and seek to differentiate it from the risk to those outside the HPA area;
II. seek to build a local social identity with strong social norms for adherence to HPA restrictions;
III. highlight the effectiveness of HPA restrictions and build self-efficacy in carrying out social distancing measures.

These measures may be particularly important for individuals who believe that they have already had Covid-19, as the number of people who believe they have had Covid-19 is likely to increase the longer the pandemic goes on. Smith et al (2020) found that individuals who believed that they had had Covid-19 were: more likely to agree that they had some immunity to Covid-19; less likely to report adhering to social distancing measures; less worried about Covid-19 and; less likely to

know that cough and high temperature/fever are two of the most common symptoms of Covid-19. As the perceived risk during the H1N1 pandemic of infection of *self* was significantly lower than that of the *community* (Xu & Peng, 2015), and Smith et al (2020) found that the number of people in the UK who thought they have already had Covid-19 was about twice the rate of the current prevalence estimates, communicating the risk and importance of adherence to these individuals is likely to be important during local HPAs.

The Impact of Boredom

Psychological factors other than health beliefs may also impact adherence to local HPA measures. Martarelli and Wolff (2020) suggest that boredom may decrease adherence to HPA measures. Wolff et al (2020) found that individuals more prone to boredom reported lower adherence to physical distancing measures and were more likely to have contracted Covid-19. *The association between boredom and adherence was mediated by* perception of difficulty; those with higher boredom proneness perceived physical distancing as more difficult and so were less likely to adhere to restrictions.

The thwarted expectations of an easing in HPA measures coupled with the knowledge that others are able to enjoy reduced physical distancing may compound this sense of boredom and therefore lower adherence to local HPA restrictions. Measures to reduce boredom and increase self-efficacy in carrying out local physical distancing measures may improve adherence to local HPAs.

The Impact of Demographic Factors

Demographics are important for communicating adherence to recommended health behaviours. Being **older** (Bults et al, 2011; de Zwart et al, 2010; Setbon et al, 2011; Tooher et al, 2013) more **educated** (de Zwart et al, 2010; Setbon et al, 2011) and **female** (Agüero et al, 2011; Cirakoglu, 2011; Ibuka et al, 2010; Park et al, 2010; Tooher et al, 2013) increases the likelihood that an individual will **engage in recommended health behaviours**.

Cultural differences should also be considered. For example, Matthews Pillemer et al (2015) found that support for recommended health behaviours following the SARS outbreak varied substantially between different regions in Hong Kong, Singapore, Taiwan, and the United States, and that minority groups tended to be less supportive of the health behaviours when arrest was the consequence of non-compliance.

Therefore, as the ***demographics of different areas under local HPAs are likely to differ significantly, the communications approach must also vary to account for these differences***. Dissemination of ***information by health authorities should be culturally sensitive*** (Ferng et al, 2011), and ***messages specific to ethnic groups can also improve engagement*** (Lunn et al, 2020).

Child Social Development During Covid-19

The focus of the early years and children has provided limited Covid -19 research to date. Compared to other areas of literature, this area seems to be limited in the amount of work that has been possible in the academic research arena. This is possibly due to the practicalities of researching this age group are challenging anyway. Once the opportunities of face to face research and practical research methods (observation and play) are reduced as is the case in most universities, this becomes very challenging to progress. This rapid scoping review plots the Covid-19 published papers and areas of relevant literature and topics to date.

During this period of unprecedented disruption to daily life, children's social development may be negatively impacted by social distancing measures due to damage to attachment relationships, stress and the impact of Covid-19 on family life. This negative impact may be particularly severe

for young children in early childhood; however, there is a lack of research on this population.

The Effects of the Covid-19 Pandemic on Child Socialisation

The social and family lives of children have been severely impacted by Covid -19 and physical distancing measures. Many children have had no physical access to friends, peers, schoolmates and relatives for several months, and limited or no opportunity for outdoor play and socialisation, all of which is likely to have an adverse impact on children, making them easily bored, angry and frustrated (Kumar, Nayar & Bhat, 2020). Research on previous disasters shows that children often suddenly lose essential resilience factors, namely the support of parents, friends, neighbours and the social infrastructure that is normally in place to ensure their safety and provide assistance (Danese et al, 2020). According to a narrative review of the literature, anxiety, lack of peer contact and reduced opportunities for stress regulation are the main concerns for child and adolescent mental health during the pandemic- especially for children and adolescents with special needs or disadvantages, such as disabilities, trauma experiences, already existing mental health problems, migrant background and low socioeconomic status (Fegert et al, 2020). Disruption to children's social lives is likely to have a significant impact on their wellbeing and social development.

Attachment and Social Development

NICE guideline [NG26], 2015:

"Children are born with a range of innate behaviours to maximise their survival. Among these is attachment behaviour, which allows the child to draw their primary caregivers towards them at moments of need or distress. Children whose caregivers respond sensitively to the child's needs at times of distress and fear in infancy and early childhood develop secure attachments to their primary caregivers. These children can also use their caregivers as a secure base from which to explore their environment. They have better outcomes than non-securely attached children in social and emotional development, educational achievement and mental health. Early attachment relations are thought to be crucial for later social relationships and for the development of capacities for emotional and stress regulation, self-control and mentalisation. Children and young people who have experienced insecure attachments are more likely to struggle in these areas and to experience emotional and behavioural difficulties."

Attachment can be understood as being the enduring emotional closeness which binds families in order to prepare children for independence and parenthood. Attachment influences preconceptions of the value and reliability of relationships, close and otherwise. Attachment allows children the 'secure base' necessary to explore, learn and relate, and the wellbeing, motivation, and opportunity to do so. It is important for safety, stress regulation, adaptability, and resilience (Rees, 2007).

Attachment is a vital part of child social development. Both the quantity and the quality of attachment relationships predict long-term psychosocial wellbeing. Given the disruption to children's social lives- being unable to see important attachment figures such as grandparents, teachers and peers- it is possible that children will have fewer attachments of poorer quality. This is particularly problematic for children in early childhood, who are within the 'sensitive period' for attachment (up to the age of 5), which may be particularly important for brain development. Trauma during this period can affect threat processing and social behaviour throughout life due to long term impacts of changes in the systems and processes of the brain (Opendak, Gould & Sullivan, 2017). However, there is a lack of research on the effects of the pandemic on this population specifically. Research is needed on how physical distancing measures are affecting young children and the quality and quantity of their attachments, and consideration given to the potential long -term effects of this disruption.

Parental Stress and the Family System

The economic and health uncertainties arising from the Covid-19 pandemic have potentially caused significant amounts of stress and anxiety. This stress and anxiety affects parents, which have consequential effects on parenting styles and family life, disrupting the ecological systems in which children develop, exacerbating threats to their safety and increasing their vulnerability to future mental ill health (Cuartas, 2020). The increased demand on parental resources, combined with reductions in parental capacity due to problematic mental health and/or coping behaviours (e.g., substance use), places parents at risk to rely more heavily on problematic forms of parenting. This includes coercive cycles in the parent where the parent reacts emotionally to a misbehaving child, which leads to further negativity from the child and the eventual escalation of the conflict or parental avoidance. Over time, these negative cycles of behaviour have been linked to poor relationship quality and poor child psychosocial adjustment (Patterson, 2016; Prime, Wade & Brown, 2020).

Family stress due to economic uncertainty and difficulty leads to a reduction in authoritative parenting- characterised by nurturance, guidance, and protection (Walsh, 2015) and an increase in less effective parenting approaches such as harshness and coerciveness. These effects are worse for families with more difficult economic situations prior to the pandemic.

Sibling relationships may also suffer as a result of the Covid-19 pandemic due to the negative impact of pandemic-related stressors on marital relationships and parenting behaviour, with spill over effects into the sibling subsystem. Such a deterioration in the sibling relationship may put families at risk for further relational disruptions and family stress.

One suggestion of the ways in which Covid-19 could impact on the family system are shown below in a figure from Prime, Wade & Brown (2020):

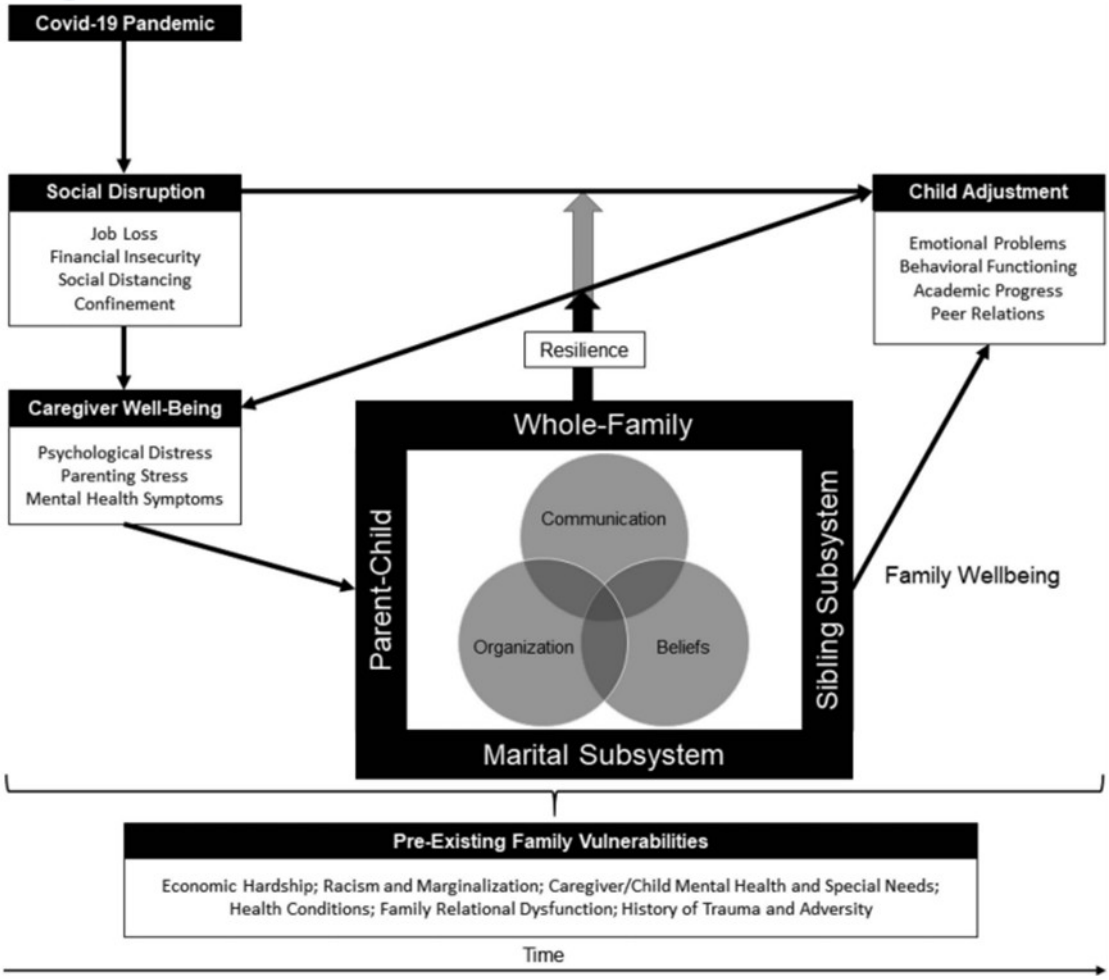


Figure 1. How social disruption due to COVID-19 may impact child adjustment. The conceptual framework purports that the COVID-19 pandemic will influence children's adjustment in a cascading fashion. Social disruptions from the pandemic will infiltrate family processes across subsystems and the whole family, through their detrimental impact on caregiver well-being. In turn, children's adjustment across several domains will be compromised, given the extent to which children's well-being is contingent on the health and well-being of the family. Processes of moderation will also be at play, with some families and individuals at heightened risk for poor outcomes and others in a position to maintain adaptive functioning and/or thrive, thus signaling resilience in the face of adversity.

Intervention and Support

Support for children during and following the pandemic needs to be multi -layered, systemic and integrated. Many children and adolescents suffer distress even long after a traumatic event because of the unaddressed traumatic atmosphere in schools or families. Zhou (2020) proposes a cooperative model of psychological services provision for children and adolescents in response to the Covid-19 pandemic. This model suggests that psychological services should simultaneously include social, school, and family systems, which interact and have a synergistic effect. The social system provides direct services not only for children and adolescents but also for their school and family systems; school and family systems cooperate to support children and adolescents. Psychological work also needs to emphasize the key elements of school and family systems. Attention should be given to teachers' distress, teacher-student relationships, and peer relationships in the school system, as well as to parents' distress, parent-child relationships, and the marital relationship in the family system.

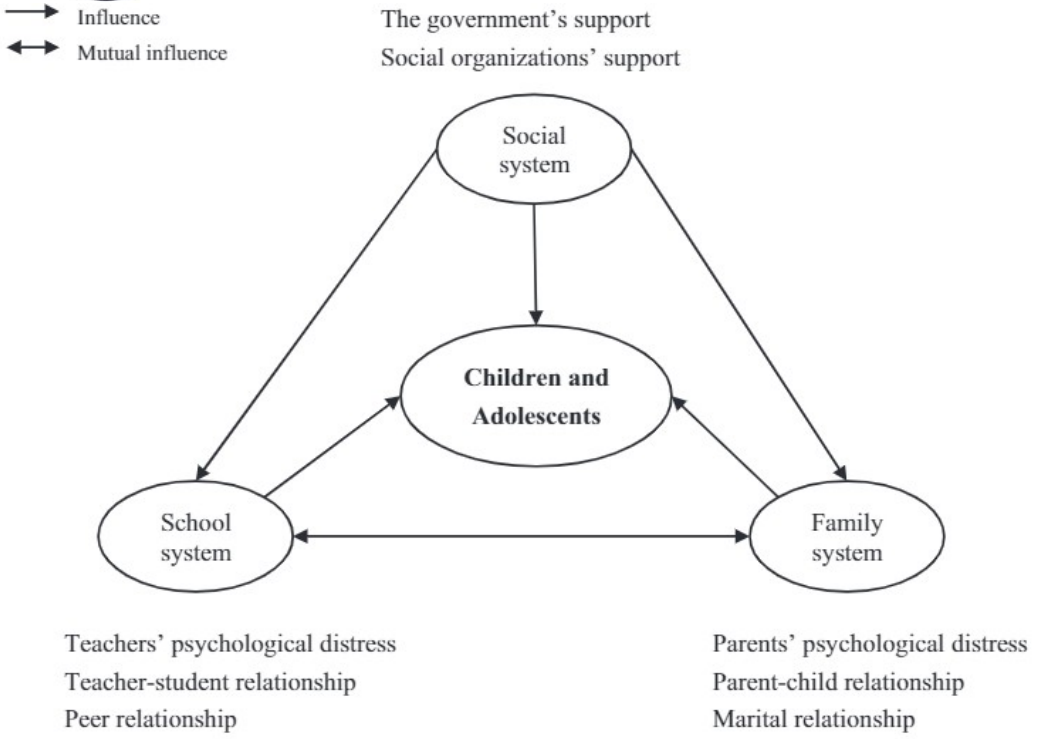


Figure 1. Cooperative model of psychological services provision to children and adolescents.

Conclusion: More knowledge and understanding is needed in this area, so we will continue this review over the coming weeks.

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 term s 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 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 D Lucy Justice and 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. Th e 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 Equality Act Disabled	2,336,000 1,657,000

Table 1 show s 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 know n 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
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