## The concept of "fatigue" in tackling covid-19

Instead of using the concept of "fatigue" to understand patterns of adherence to rules and guidelines for preventing the spread of covid-19 we should focus on—and address—specific aspects of people's capability, opportunity, and motivation.

The concept of "fatigue" has been used to describe a presumed tendency for people naturally to become "tired" of the rules and guidance they should follow to prevent the spread of covid\_19. This fatigue, so the theory goes, eventually makes people less motivated to adhere to these rules over time. The idea appears to be gaining currency and has alternatively been referred to as "behavioural fatigue," "pandemic fatigue," "emergency fatigue," "public fatigue" and "adherence fatigue." A Google search on the phrase "pandemic fatigue" resulted in around 200 million hits, with articles on the first page with titles such as "10 reasons why pandemic fatigue could threaten global health," and "Europe experiencing pandemic fatigue." The question is whether the concept of fatigue, accurately captures what is happening. This question is important because it affects policies aimed at maximising adherence.

Outside of <a href="covid">covid</a>, the term fatigue has three main uses. One is a subjective feeling of mental or physical tiredness, which can be caused by mental or physical exertion, sustained activity, lack of sleep, or a health condition. It is a common symptom of <a href="covid-19">covid-19</a> and of diseases such as cancer, It is also found in healthy individuals as part of daily living. The exhaustion may or may not be accompanied by reduced motivation to engage in particular tasks.

Another use of the term fatigue is an impaired ability to perform a mental or physical task as a result of depleted mental or physical resources. This is well studied in endurance sports and tasks that require sustained mental effort. In this usage, loss of motivation could occur as a result but this would not necessarily be expected.

A third use of the term is distress resulting from prolonged exposure to an aversive set of circumstances. Such distress may have motivational consequences in that the person concerned may want to stop whatever it is that is causing it. It may lead to anger at those perceived as causing it. Alternatively, it may be accompanied by a feeling of hopelessness and passive acceptance of the

The question is whether there is any evidence for fatigue in any of these senses in relation to following covid-19 rules and guidance? We have examined evidence on this from the UK, a country that has suffered more than most from covid-19 and the restrictions to people's lives aimed at combating it.

## Is there evidence of declining adherence to rules and guidance?

Data from surveys are not showing evidence of a continued reduction in adherence to rules and guidance that might be a result of fatigue. For example, in the <a href="https://docume.com/UCL.covid\_19 Social Study\_"majority">UCL.covid\_19 Social Study\_"majority</a> adherence" has remained high since the start of the "lockdown" in March. <a href="https://www.while\_there.was.an initial">While\_there was an initial</a> decline in reported "complete adherence," <a href="https://while.there.was.an.initial">there's been\_little or no change since July. This is the</a> largest of the surveys of this kind and shows results that are broadly similar to <a href="https://www.willoutence.was.an.initial">other surveys</a>, including ones commissioned by the government.

The decline in complete adherence in late May in England appears to have been exacerbated by a large drop in trust in the government associated with its handling of the "Cummings incident," when the government defended a political adviser who was widely considered to have broken social distancing rules,

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Reported adherence <u>has been lower</u> in younger people, men, people living with others, key workers, people living with children, people living in cities, <u>and</u> people living in England compared with Wales and Scotland, Lower adherence to general rules and guidance <u>appears to be more</u> related to life circumstances, than to motivation,

One crucial area of behaviour where adherence is low is self-isolating if one has symptoms, which has been estimated to be around 20%. However, this appears to have been low throughout the pandemic so cannot readily be understood in terms of any factors that are getting worse over time. Evidence suggests that, as with other behaviours, low adherence to the rules around self-isolation may be largely because of people's life circumstances, such as the demands of their work or family life and lack of financial resilience,

## Is there evidence for decreasing motivation to adhere over time?

Levels of concern about <a href="covid\_-19">covid\_-19</a> peaked in March and April and then declined and have been steady ever since (10). Levels of <a href="ceported wellbeing">ceported wellbeing</a> increased after the first wave and have remained broadly steady ever since, Consistent with this, <a href="ceete-vellowers">Levels of anxiety</a> have remained broadly steady in recent months, although feeling stressed specifically about <a href="covid\_-19">covid\_-19</a> has increased in the past few weeks as infection rates have risen, Intention to adhere to rules and guidance has remained high throughout the pandemic (10).

Evidence suggests that stress associated with financial worries undermines support for policies that are likely to lead to reductions in income or loss of employment (10). However, this should not be construed as fatigue. Rather, it can be seen as people resisting hardships that they expect to be forced upon them by circumstances. Concerns about the government's approach and communications may also feed into a loss of trust and dwindling confidence in the government's position and legitimacy. This could in principle have an impact on adherence in the future, but again this shouldn't be classed as fatigue. There is also confusion around the rules and a substantial reduction in the proportion of people who believe that they have the information they need from the government (10). Again, in theory these may all negatively affect adherence, but if they did it would not be a matter of fatigue.

Overall, in the UK we have not yet seen evidence for the kind of decreasing trend in compliance with regulations that could be construed as fatigue but there are substantial capability, opportunity and motivational factors that could be contributing to lower levels of adherence than are needed to prevent the spread of the virus. A recent report by the World Health Organization has made a good start on suggesting ways of tackling this, even though the framing of the report was couched in terms of "pandemic fatigue."

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**Nigel Harvey** professor of Judgment and Decision Research, Department of Experimental Psychology, University College London

## References

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- 1. Harvey N. Behavioural fatigue: real phenomenon, naive construct or policy contrivance. Frontiers in Psychology. 2020;In press.
- 2. Okuyama T, Akechi T, Kugaya A, Okamura H, Imoto S, Nakano T, et al. Factors correlated with fatigue in disease-free breast cancer patients: application of the Cancer Fatigue Scale. Support Care Cancer. 2000 Mar 1;8(3):215–22.
- 3. Carfi A, Bernabei R, Landi F, for the Gemelli Against COVID-19 Post-Acute Care Study Group. Persistent Symptoms in Patients After Acute COVID-19. JAMA. 2020 Aug 11;324(6):603.
- 4. Aaronson LS, Teel CS, Cassmeyer V, Neuberger GB, Pallikkathayil L, Pierce J, et al. Defining and Measuring Fatigue. Image: the Journal of Nursing Scholarship. 1999;31(1):45–50.
- 5. Fancourt D, Bu F, Mak H, Steptoe A. UCL COVID-19 Social Study Results Release 22 [Internet]. Available from: https://b6bdcb03-332c-4ff9-8b9d-28f9c957493a.filesusr.com/ugd/3d9db5\_636933e8191d4783866c474fab3ca23c.pdf
- 6. Coronavirus and the social impacts on Great Britain Office for National Statistics [Internet]. [cited 2020 Jul 10]. Available from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/bulletins/coronavirusandthesocialimpactsongreatbritain/10july2020
- 7. Fancourt D, Steptoe A, Wright L. The Cummings effect: politics, trust, and behaviours during the COVID-19 pandemic. The Lancet. 2020 Aug 15;396(10249):464–5.
- 8. Atchison CJ, Bowman L, Vrinten C, Redd R, Pristera P, Eaton JW, et al. Perceptions and behavioural responses of the general public during the COVID-19 pandemic: A cross-sectional survey of UK Adults. medRxiv. 2020 Apr 3;2020.04.01.20050039.
- 9. Smith LE, Potts HWW, Amlot R, Fear NT, Michie S, Rubin J. Adherence to the test, trace and isolate system: results from a time series of 21 nationally representative surveys in the UK (the COVID-19 Rapid Survey of Adherence to Interventions and Responses [CORSAIR] study). medRxiv. 2020 Sep 18;2020.09.15.20191957.
- 10. Smith L, Potts H, R Amlot, Fear N, Miche S, Rubin G. The COVID-19 Rapid Survey of Adherence to Interventions and Responses [CORSAIR] study. 2020 [unpublished data].
- 11. Cushion S, Soo N, Kyriakidou M, Morani M. Different lockdown rules in the four nations are confusing the public [Internet]. LSE COVID-19 Blog. London School of Economics and Political Science; 2020 [cited 2020 Oct 14]. Available from: https://blogs.lse.ac.uk/covid19/
- 12. World Health Organisation. Pandemic Fatigue: Reinvigorating the Public to Prevent COVID-19. Copenhagen: WHO; 2020.

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