The problem of underestimating the importance of social sciences for pandemic policy

When we sideline social science and hand policy decisions over to biomedical disciplines, we ignore crucial tools that can help us to manage a pandemic. ***Simon Lohse (University of Lübeck)*** *and* ***Stefano Canali (Politecnico di Milano)*** *look at why the social scientists need a seat at the table, and how they might get it.*

Never has the influence of science on policy been so visible as during the pandemic. Scientific experts have informed governments, sophisticated epidemiological computer projections have been used to guide policy, and talk of R numbers and the biological properties of SARS-CoV-2 has become ubiquitous.

However, not all scientific disciplines have contributed equally to policymaking. While biomedical disciplines, in particular epidemiology, have had a regular seat at the table, other potentially relevant sciences have largely been excluded – especially the social sciences. Consider the responses to the pandemic in Italy and German. In both cases, the government has predominantly (although not exclusively) relied on experts in infectious disease research, virology, and epidemiological modelling. Overall, European governments have justified pandemic policy mainly on the basis of epidemiological insights and indicators, such as incidence and hospitalisation rates. Of course, policymakers have also considered non-biomedical aspects of both the pandemic and their mitigation policies, for example the impact of lockdowns on education, the labour market and the economy. Yet for the most part policy decisions have not been informed by social scientific evidence and expertise.

From a philosophical point of view, this lack of disciplinary diversity in public health policy can be understood as a case of "insufficient epistemic pluralism". This means that there has been an excessive focus on only one scientific perspective. A lack of epistemic pluralism is problematic when dealing with complex real-world problems such as a pandemic. The social sciences in particular can make crucial contributions to understanding and managing public health crises.

For one thing, the social sciences can improve our ability to monitor pandemics. They can help us to understand in which social settings people are (more) likely to get infected with a highly transmissible virus, for instance by systematically backtracking sub-samples – people with certain occupations or socio-economic backgrounds – of infected people. Ongoing issues in the coordination and comparison of data and testing strategies can also benefit from social scientific expertise, for example by critically reflecting on issues of selection bias and underrepresentation that can affect digital data from smartphone apps and wearable devices.

The social sciences can also be essential in predicting the impact that pandemics and public health measures have on different parts of society. Social scientists have produced a rich body of knowledge on social problems, such as gender inequalities and structural racism, that are likely to interact with restrictive public health policies. The unintended side effects of COVID-related lockdown measures on vulnerable groups could likely have been predicted (and possibly mitigated) if there had been more extensive social science input into policymaking.

The social sciences can also help to improve epidemiological predictions on a methodological level. One of the thorniest problems in predictive modelling of human affairs is that model projections can have a causal effect on their target population. This can lead to behavioural change and in turn to "self-denying prophecies", as we have seen as a consequence of model projections in 2020. Here, epidemiological modelling could benefit here from existing work in economics on incorporating these social feedback effects into economic forecasting in order to fine-tune their projections.

Another way in which the social sciences can be key in improving pandemic management and public health is by increasing the effectiveness of policy measures. Evidence on designing choice architectures and improving public compliance is an important and widely recognised asset for public health policymaking, of course, but the social sciences can also be important in assessing how effective specific public health interventions would be. In many cases, policymakers need detailed knowledge of the societal environment of policy measures to allow for meaningful assessments. Under what circumstances do curfews work? To what extent are people in the UK or France less likely to adhere to travel restrictions? In finding answers to questions like these, social context is king.

Date originally posted: 2021-10-25

Permalink: https://blogs.lse.ac.uk/covid19/2021/10/25/the-problem-of-underestimating-the-importance-of-social-sciences-for-pandemic-policy/

Blog homepage: https://blogs.lse.ac.uk/covid19/

Police patrol during a lockdown in Lyon, May 2020. Photo: Calystee via a CC-BY-NC-SA 2.0 licence

Why, then, have the social sciences not been more involved in COVID crisis management? More importantly, to what extent can more pluralism and integration better prepare us for the next public health crisis? A partial answer to these questions lies in sociological obstacles to interdisciplinary knowledge integration, such as differences in public prestige between biomedicine and the social sciences. There are, however, conceptual and epistemological challenges that need to be addressed too.

As several philosophers and sociologists have noted, there is a widespread tendency to conceptualise 'public health' by focusing on biological aspects and downplaying socioeconomic aspects as genuine factors influencing the health of a population. This has immediate consequences for factors that are deemed (ir)relevant for the representation and prediction of pandemics and their societal consequences. We should not, therefore, be surprised that policymakers have not drawn heavily on social scientific expertise in the pandemic – rather we should ask how we can redesign our concept of public health to make it less biomedicine-centric.

On an epistemological level, we need to think about new ways to integrate and weight interdisciplinary evidence. Biomedical and social sciences produce very different types of knowledge: while there is quantitative research in the social sciences that aims at generalisability, a substantial part of social scientific knowledge is decidedly non-quantitative. This does not only concern social scientific theory – much empirical research in the social sciences is qualitative too, as it is aimed at developing a rich description of particular social situations, groups or episodes. So how should we weigh and amalgamate quantitative and qualitative types of evidence to inform public health policy? To what extent do we need to reconceptualise data curation and integration? Do we need to rethink established evidence hierarchies in evidence-based policy that prioritise quantitative knowledge?

Approaching these challenges will demand close collaboration between scientists, policymakers, meta-science scholars and others, and it will not be easy. However, without a more pluralistic evidence base, social aspects will remain underrepresented in public health crises. Eventually this leads to myopic goal-setting and imbalanced decision-making. Against this backdrop, and considering that the likelihood of new pandemics might be higher than ever, we have an obligation to think about ways to improve future public health policy – and this includes giving more seats to social scientists at the policy table.

This post represents the views of the authors and not those of the COVID-19 blog, nor LSE. It is based on an article by the authors, Follow *the* science? On the marginal role of the social sciences in the COVID-19 pandemic *in the European Journal for Philosophy of Science.*

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