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COVID-19 and the Nordic Paradox: a call to measure the inequality reducing benefits of welfare systems in the wake of the pandemic

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ABSTRACT

The *Nordic Paradox* of inequality describes how the Nordic countries have puzzlingly high levels of relative health inequalities compared to other nations, despite extensive universal welfare systems and progressive tax regimes that redistribute income. However, the veracity and origins of this paradox have been contested across decades of literature, as many scholars argue it relates to measurement issues or historical coincidences. Disentangling between potential explanations is crucial to determine if widespread adoption of the Nordic model could represent a sufficient panacea for lowering health inequalities, or if new approaches must be pioneered. As newfound challenges to welfare systems continue to emerge, evidence describing the benefits of welfare systems is becoming ever more important. Preliminary evidence indicates that the COVID-19 pandemic is drastically exacerbating social inequalities in health across the world, via direct and indirect effects. We argue that the COVID-19 pandemic therefore represents a unique opportunity to measure the value of welfare systems in insulating their populations from rising social inequalities in health. However, COVID-19 has also created new measurement challenges and interrupted data collection mechanisms. Robust academic studies will therefore be needed—drawing on novel data collection methods—to measure increasing social inequalities in health in a timely fashion. In order to assure that policies implemented to reduce inequalities can be guided by accurate and updated information, policymakers, academics, and the international community must work together to ensure streamlined data collection, reporting, analysis, and evidence-based decision-making. In this way, the pandemic may offer the opportunity to finally clarify some of the mechanisms underpinning the Nordic Paradox, and potentially more firmly establish the merits of the Nordic model as a global example for reducing social inequalities in health.

1. The Nordic Paradox

The *Nordic Paradox* of inequality describes how the Nordic countries have puzzlingly high levels of health inequalities compared to other European nations (Mackenbach and Kunst, 1997; Bambra, 2011). This line of reasoning—albeit controversial—argues that relatively large social inequalities in health can be found in the Nordic countries, despite extensive universal welfare systems and progressive tax regimes that redistribute income, which should, in theory, reduce health inequalities (Mackenbach, 2017).

Although this surprising empirical pattern could have serious policy implications in advanced welfare states, many scholars have argued that the pattern stems from either measurement issues (such as using relative vs. absolute inequality metrics (Vågerö and Erikson, 1997; Bambra, 2013; Popham et al., 2013)) or historical coincidences (Mackenbach and Kunst, 1997; Bambra, 2011; Mackenbach, 2017). Alternatively, others argue the paradox is a real and persistent finding indicating that the Nordic model insufficiently reduces health inequalities in its current form. It may be that people with higher socioeconomic status are better at taking advantage of the universally available welfare resources in

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Nordic welfare states, for example, by maneuvering more smoothly in complicated bureaucratic landscapes (Øversveen et al., 2017). Or perhaps we must consider the causality in reverse; healthier people could, in fact, be more likely to improve their socioeconomic status as family background is less relevant where universal access to education and opportunities abound. Alternatively, perhaps the risk factors underpinning health inequalities in Nordic welfare states, such as behavioral and occupational exposures, are simply less amenable to universal services and the redistribution of income (Balaj et al., 2017). Disentangling between these potential explanations is crucial before proceeding to policy implications. Yet at its core, the Nordic Paradox remains a critical issue for those interested in decreasing inequality, as it questions if widespread adoption of the Nordic model is a sufficient panacea for lowering health inequalities, or if new approaches must be pioneered.

It is also important to note that Nordic countries' population health is among the best in the world (Lundberg, 2008), and is expected to only improve (Foreman et al., 2018). Regardless of its effects on health inequalities, the Nordic approach to health policy inarguably has robust benefits for lifting up the average person's wellbeing and health. Nevertheless, it is curious that relative health inequalities are noticeably lower in a number of other European countries, despite lacking the robust social protection mechanisms that the Nordic countries have (Mackenbach et al., 1997, 2018; Rod et al., 2020). The persistence of the Nordic paradox as an unsettled matter across decades of literature points to methodological difficulties of measuring the real benefits of welfare protections in human societies. This presents an issue of increasing importance, as challenges to welfare states grow.

2. The pandemic as a natural experiment to clarify the Nordic Paradox

The COVID-19 pandemic represents a unique opportunity to measure the true value of welfare systems in insulating their populations from rising social inequalities in health. As health inequalities increase sharply in many countries as a result of the disruption caused by the pandemic, there is a rare chance to measure the impact of the degree of social protections enjoyed in each country. If the Nordic countries experience the same increases in health inequalities during the pandemic as other countries with less developed welfare systems, this would be quite a strong reinforcement of the idea that social protection, alone, are insufficient to decrease inequalities. If, on the other hand, inequalities increase in inverse proportion to the degree of welfare protections in place, this would represent evidence supporting the notion that the Nordic Paradox may be driven largely by other contextual factors. In other words, the Nordic model may be quite effective in reducing health inequalities, but this has been somewhat masked by a population that is predisposed to large relative health inequalities, for historical reasons.

The pandemic therefore represents a natural experiment, offering the chance to demonstrate if and why the Nordic Paradox emerged and endures, and potentially more widely re-affirm the importance of robust welfare systems for combating social inequalities in health.

3. Rising global health inequalities

Preliminary evidence indicates that the COVID-19 pandemic is drastically exacerbating social inequalities in health across the world, via direct and indirect effects (Bambra et al., 2020). Immediate and direct effects are visible in many countries as the brunt of COVID-19 infections and mortality has fallen disproportionately on racial/ethnic minorities and people with low socioeconomic status (The Economist, 2020). A social gradient will most likely appear in the medium- and long-term direct effects of COVID-19 infection as well, with people in lower socioeconomic strata being more exposed to the symptoms of 'long covid', such as fatigue, muscle pain and other chronic health conditions post-COVID-19-infection (Whitaker et al., 2021). Perhaps even more troubling, the indirect economic effects of the pandemic threaten to strongly amplify social inequalities for years to come. A huge fraction of the world's labor force has been pushed out of work (Dias, 2021), and even in countries like Norway layoffs are more common among lower socio-economic groups (Carlsen et al., 2020). A record number of children are going hungry, and many are out of school (UNESCO, 2020). The burden of mental illness and 'deaths of despair' have reached an all-time high in many places (Friedman et al., 2020a; Arena et al., 2020). These deleterious consequences together represent a growing, global syndemic of unprecedented proportions (Bambra et al., 2020). Some of these syndemic properties will resolve as the pandemic passes, yet other consequences are likely to persist for at least a generation.

These deleterious social consequences have been experienced more sharply among women, even in the highest-income settings, due to their overrepresentation in certain industries, and because women are more likely to work temporary jobs which have fewer legal protections (ILO Monitor; Bambra et al., 2021). Further, these inequalities must be viewed intersectionally, as woman are often embedded in environments conferring multiple dimensions of disadvantage based on employment, fertility, migrant status, race/ethnicity, and educational background (Crenshaw, 1991; Calderon-Villarreal et al., 2014).

Particularly concerning, the pandemic has caused never-before-seen disruptions to schooling, which is uniquely linked to inequalities and social mobility. At the peak of pandemic-related lockdowns, over 80% of the world's nearly 2 billion learners were out-of-school (UNESCO, 2020). Millions of children around the world continue to learn remotely. Yet, even in high-income countries like the United States, many lack computers, internet access, and other resources required to continue to learn (Friedman et al., 2020b). Millions of children will suffer substantial learning losses. Even more problematically, in the face of increased economic precarity, many children globally are expected to drop out of school altogether in order to help their families survive in the short-term (Policy Brief: Education d, 2020). As education is a key social determinant of health, and driver of economic and social growth, widening educational gaps may ripple out into disparities across numerous sectors of society (Lim et al., 2018; Friedman et al., 2020c).

A related serious issue is children being continuously exposed to a toxic home environment during prolonged periods of lockdown (Chandan et al., 2020; Jeyaraman and Chandan, 2020). Being forced to spending more time at home is synonymous with an increased risk of violence and/or sexual abuse for many children, of which the harmful effects will have a long reach. More household poverty, and associated parental stress, could also lead to a substantial deterioration in living conditions for numerous children, with long-term impact on educational attainment, life chances and health and longevity.

In the midst of the social and economic fallout of the pandemic, strong social welfare systems—such as those enjoyed by the Nordic countries—are likely to be effective in buffering against the worst of these social consequences of the pandemic. Great diversity can be seen in welfare systems and income maintenance schemes between high-income countries, ranging from generous social protections and income redistribution in Nordic countries to the threadbare social safety net of the United States (Bambra, 2021). Each of these systems are in the midst of perhaps their most significant challenge, and COVID-19 therefore offers a unique opportunity to evaluate the effectiveness of each system for protecting against rising social inequalities in health.

4. New research agendas needed to measure the inequality reducing benefits of welfare systems during global crises

As newfound challenges to welfare systems continue to emerge, evidence describing the benefits of welfare systems will become ever more important. Populist Right and Far-Right parties have gained substantial power across Europe and the Americas, representing a threat to the

fundamental premises of universal social protection mechanisms (Golder, 2016; Blee, 2007; Goldstein, 2019). Similarly, powerful interests have continued to promote policies that privatize public resources and slash social safety nets, even in the midst of unprecedented increases in precarity during the pandemic (Horton, 2018). In the post-pandemic recovery period, calls for austerity measures will likely grow louder and challenge social safety nets in many countries across the world. In this context, robust academic studies will be needed to measure trends in health inequalities, to highlight the potential protective effects of the different welfare systems, and to pin down the systems that are most effective in insulating their populations from rising inequalities.

4.1. Rapid and socially detailed data sources

To facilitate this, data collection mechanisms must be prioritized that are rapidly available, cover a range of social and health outcomes, and include social stratifiers, such as educational attainment, wealth, income, occupational class, and race/ethnicity. The COVID-19 pandemic has shown that rapid—even daily—data collection and reporting is possible for outcomes such as mortality, when political and logistical barriers can be overcome. However, for many of the pressing social and economic ramifications of the pandemic—which have enormous potential implications for health and well-being—data collection has been largely disrupted and reporting lags more than ever. Even where outcome measures are available rapidly, trends disaggregated by socioeconomic status are often lacking (Murray, 2020). In a particularly egregious example, the New York Times had to sue the Trump administration in the United States to force it to disclose COVID-19 mortality records stratified by race and ethnicity, even as those data had been internally available for months (Murray, 2020). Once revealed, the data showed enormous disparities in COVID-19 deaths along lines of race and class in the United States. Countless similar inequalities are likely to be present globally, yet they will remain hidden unless both data and analyses are made available stratified by the most important social and socioeconomic dimensions.

In order to facilitate timely surveillance of social inequalities in health during the pandemic and post-pandemic periods, new approaches should be considered. For example, surveys rapidly deployed on social media platforms have already offered invaluable data about social and behavioral responses to COVID-19 (Facebook Data for Good Initiative, 2021). Data collection through mobile and online formats offers important avenues to generate near real-time information about social conditions. Nevertheless, these rapid approaches also pose challenges, including limited representativeness, especially in more resource-poor settings. Centralized coordination will be required to integrate data, standardize definitions and methodologies, and provide rapid and reliable analysis to detect emerging problems.

4.2. Novel health outcomes and methods to measure social inequalities

The pandemic has also created a number of novel health outcomes, which must be assessed with an equity lens. Of particular importance is quantifying the inequality in excess mortality. The true toll of the pandemic is still not fully known (Our World in Data, 2020). Already, numerous efforts are underway to measure the extent of mortality stemming from the pandemic globally. Fully stratifying the direct and indirect mortality toll from COVID-19 by socioeconomic status and ethnicity, race and/or immigrant background will be essential in conveying the magnitude of health inequalities created by the pandemic. Similarly, COVID-19 vaccination status has already been shown to vary strongly by socioeconomic status within (Shete et al., 2021), and between countries (Emanuel et al., 2020; Todd and Bambra, 2021). Careful accounting of these acute disparities, as well as long-term social and economic outcomes, will be necessary to chart the full implications of the pandemic for health and social equity. Novel methods (such as natural policy experiment designs and micro-simulations) are also needed to evaluate the impact of social security policies on health inequalities (Smith et al., 2016).

5. Conclusions

The COVID-19 pandemic has, in many respects, revealed the fault lines of deep structural inequalities within, and between, many of the world's societies (Farmer et al., 2006), by elucidating how one's country and social status are of enormous importance in determining health. By providing these sobering insights, the large scale social and economic upheavals occurring during the COVID-19 pandemic offer the possibility for both dramatic improvements and tremendous setbacks. Social inequalities in health have been thrust into the spotlight in a new way, with social gradients emerging as a defining topic for the decade. However, in order to assure that policies implemented to reduce inequalities can be guided by accurate and updated information, policymakers, academics, and the international community must work together to ensure streamlined data collection that overcomes new disruptions to data streams. Data must be reported with social stratifiers, and analyses must be undertaken quickly and thoroughly to track the evolving importance of social factors in driving health inequalities during and in the wake of the pandemic.

In this way, the pandemic may offer the opportunity to finally clarify some of the mechanisms underpinning the Nordic Paradox, and more firmly establish the merits of the Nordic model as a global example for reducing social inequalities in health.

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