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The Risks and Harms Associated with Modern Slavery during the COVID-19 Pandemic in the United Kingdom: A Multi-Method Study

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ABSTRACT

The COVID-19 pandemic has considerably affected global economies and societies, exacerbating existing social inequalities. This “syndemic” pandemic has placed people and communities affected by modern slavery and human trafficking at elevated risk of multiple harms. This paper uses a mix of methods – an evidence synthesis, a survivor survey, web-monitoring, and dialogue events – to explore how COVID-19 has affected the risks and pathways to harm associated with modern slavery/human trafficking in the UK. We use concepts of hazard, risk, exposure, and harm and the tools of public health risk and resilience assessment to examine how COVID-19 has amplified existing risks of harm and generated new pathways to further harm. We also use a novel complex systems approach to represent risk relationships and demonstrate how the economic shock of COVID-19 and mandated social isolation have led to negative outcomes for affected people. The paper provides policy and practice insight into interventions can be implemented across systems to minimize exploitation and how locally led intervention can offset the damaging effects of the pandemic (SDGs 5 & 16).

KEYWORDS

COVID-19; modern slavery; human trafficking; complex system; risks

Introduction

The SARS-CoV-2 (COVID-19) pandemic changed economies and societies in both the short and the longer term. These changes have been complex, far-reaching and not always predictable. Survivors and victims¹ of modern slavery/human trafficking and populations at elevated risk of exploitation have not escaped the effects of the pandemic. Indeed, as people more vulnerable to the negative effects of economic and social shocks, it is likely this population has experienced additional harms (Todres & Diaz, 2021). Todres and Diaz identify that COVID-19 impacts on many of the known risk factors for human trafficking including homelessness and child maltreatment, making exploitation more likely (Todres & Diaz, 2021). Recent studies conducted through the pandemic have pointed to increased precarity of women working in the garment industry in Bangladesh (Azizul Islam et al., 2022),

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¹We use the term survivors and victims together throughout most of this manuscript. We do this in acknowledgment of the different ways individuals may reference their own experiences. We also acknowledge that people living in situations of modern slavery and human trafficking may not recognize it as such. In legal terms they may be victims but current circumstances mean they are living with or surviving exploitation.

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enhanced indication of forced labor in the medical glove industry in Malaysia (Bhutta et al., 2021), and increased risks and vulnerabilities to human trafficking in Sudan (Lumley-Sapanski et al., 2021). The burden of the risk of trafficking and exploitation in these studies has been borne by already disadvantaged groups.

This notion of an unequal burden of harms brought about by a public health emergency and existing social inequalities has been evidenced throughout other pandemics such as Spanish influenza in 1918 and H1N1 in 2009 (Bambra et al., 2020). Similarly, COVID-19 is a *syndemic pandemic* – a co-occurring, synergistic pandemic that interacts and exacerbates existing health problems and harms caused by unequal social conditions (Bambra et al., 2020). COVID-19 has created further inequalities through a complex causal web of interacting social, structural, community, and individual factors. Our understanding of these factors and the way they interrelate is emergent. Early epidemiological analyses have identified multiple patterns of inequality in outcomes across populations. Black and minority ethnic populations in the UK, for example, have higher rates of morbidity and mortality from COVID-19 than White populations (Aldridge et al., 2020; Katikireddi et al., 2021). Not all of this observed effect can be accounted for by differences in socio-economic position and other confounders (Public Health England, 2020). In their analysis of the unequal effects of COVID-19 on a minority ethnic population, Katikireddi et al. call for more sophisticated ways of establishing the pathways through which inequalities arise (2021), a perspective adopted in the current paper. This is necessary particularly in the field of modern slavery research as patterns of morbidity and mortality from COVID-19 are unclear for victims, survivors, and populations at elevated risk of exploitation such as refugees, undocumented migrants, sex workers and children leaving the care of local authorities. Data are simply not available for these populations. Alternative approaches are required to assess and explain what the causes and consequences of COVID-19 are on modern slavery victims, survivors and those at risk. This paper offers one option by addressing the problem using a range of conceptual tools, methods, primary and secondary data analyses and explanatory constructs drawing from the social, public health and systems/complexity sciences. Our question is: *How has COVID-19 affected the risks and pathways to harm associated with modern slavery in the UK?*

After defining what we mean by modern slavery, we address our research question in four parts. First, we begin by outlining the conceptual approach of the paper. This represents a more clearly articulated contribution to the conceptualization of risk, resilience, and harm in the COVID-19 context than has so far been explored in the modern slavery field. Second, we identify the methods adopted in the study. We then present the findings of the research including risk and resilience assessments and present some of the causal linkages between the hazard of COVID-19 and harms in the form of causal loop diagrams. Finally, we identify some of the implications of the research and how individuals and institutions can intervene in these pathways to prevent and respond to harms.

Defining Modern Slavery

There is a long-standing and contested debate on what modern slavery constitutes. Neither universally adopted nor defined in international law, modern slavery is often referred to as an umbrella term that includes a range of exploitative crimes. In the UK, the Modern Slavery Act 2015 offers a useful reference point. This refers to the activities of a person or persons who obtain or hold others in compelled service through mental or physical threat, violence, abuse, or other means of coercive control. It includes a range of legal concepts including forced labor, forced marriage, debt bondage, human trafficking, and other slavery-like practices such as criminal exploitation and forced begging.

In this paper, whilst recognizing that the concept of modern slavery represents contested terrain (Mende, 2019) we adopt a working definition used by the prominent anti-slavery organization, Anti-Slavery International: “when an individual is exploited by others, for personal or commercial gain. Whether tricked, coerced, or forced, they lose their freedom. This includes but is not limited to human trafficking, forced labor and debt bondage” (Slavery International, n.d.). This places the concept in a human rights frame and recognizes slavery-like practices can take many forms.

Conceptualising Risk, Resilience, Harm and the COVID-19 Hazard

The concepts of risk, resilience and harm are multi-faceted, multi-level concepts (Dahlberg, 2015; Jasanoff, 1987). Risk has been used in many ways across multiple fields of thinking and practice including public health, environmental science, organizational management, child protection, and public policy. Although it evades consensus (Renn & Meares, 1992), risk often refers to actions or exposures that can give rise to negative or adverse outcomes (World Health Organization, n.d.). In the field of modern slavery/human trafficking, factors such as exposure to war, forced migration, poverty and homelessness have all been identified as correlated risks. A retrospective study in the U.S. found associations between racial/ethnic minority background and histories of running away from home and domestic child sex-trafficking (Fedina et al., 2019). A systematic review of the U.S. literature also identified running away from home as a risk factor for commercial sexual exploitation of children alongside others such as abuse and maltreatment, substance use, poverty, witnessing family violence or criminality, difficulty in school and poor mental health (Franchino-Olsen, 2019). Importantly, risks are multi-level and can be cumulative, occurring and building across and within individual, family, community, and social-structural systems.

Resilience is more of an emergent concept when applied to the modern slavery/human trafficking field. Gardner et al. (2020) use Holling’s eco-systems resilience framework and a social determinant of health perspective to identify resilience as “the adaptive capacity of a system” to resist damage or harm; again, it is multi-layered and multi-level. Harm is a fundamentally normative concept that refers to the violation to stakeholders’ legitimate interests (Greenfield et al., 2016). The primary concern of this research is the harm done to the health and wellbeing interests of populations exposed to different forms of modern slavery. These are known to include physical and mental health harms, many of which are severe (Howard et al., 2013; Oram et al., 2012; Stanley et al., 2016). In addition, victims may experience harms to their families and relationships, their material interests and standard of living (Greenfield et al., 2016). Moving beyond the victim, it is arguable that communities and society more broadly experience harm as a result of modern slavery by damaging community relations (trust, cohesion, connectedness) and the social fabric (criminality, exploitation, fear, corruption).

Figure 1 seeks to make sense of the relationship between the risks and harms associated with modern slavery in the context of COVID-19. Drawing from public health approaches to risk assessment, the social determinants of health and systems thinking (Arnold & Wade, 2015; Whitehead &

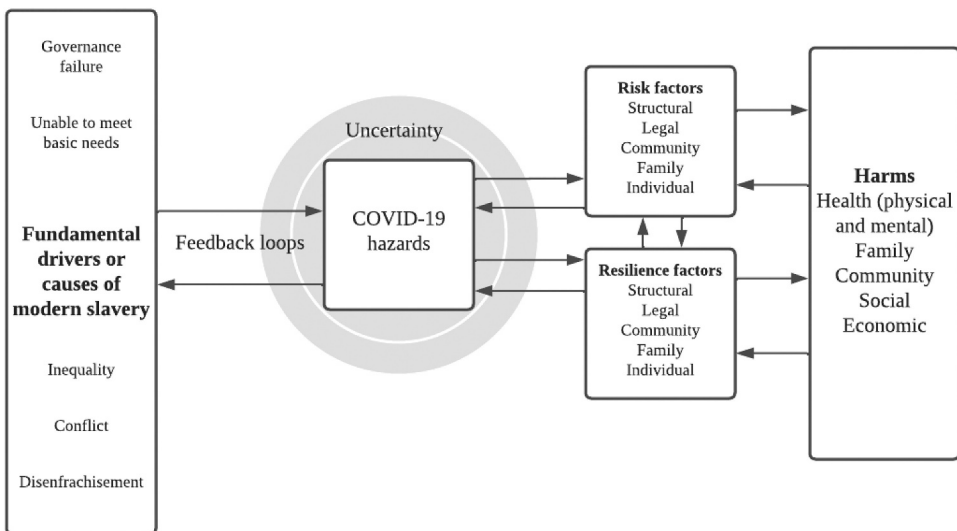


Figure 1. A logic model of the relationship between COVID-19 and modern slavery.

Dahlgren, 2007), **Figure 1** provides a logic model of how we might expect COVID-19 to interact with the drivers, risks and resilience factors of modern slavery that create/reduce harm. In this model, the fundamental drivers of modern slavery interact with the biological, social, economic and political (structural) hazard of the disease. COVID-19 is a hazard because it is a factor that may adversely affect health and has the potential to cause harm (Wilkinson et al., 2016). COVID-19 can be understood as having the qualities of an uncertain hazard at multiple levels. Biologically, the disease is uncertain and unpredictable in terms of its physical and mental health impacts on individuals in the short and long term (Sachs et al., 2020). It also has an uncertain disease trajectory in terms of its genetic adaptation and mutation over time (Callaway, 2020). More broadly, the pandemic has been uncertain at economic, social, and political levels as nation states have addressed it with varying interventions and restrictions (Hale et al., 2021). These measures have been largely reactive and highly variable over time and space. They include restrictions on human movement, social contact and economic activity. These hazards are uncertain not just in terms of their inputs (and their timing, duration, and location) but also their outputs or implications. Moreover, populations have little or no influence over their exposure to the hazard of COVID-19. While people may have been able to insulate themselves from coming into contact with the biological hazard, no one could escape exposure to the restrictions and limits placed on everyday life. These multi-level hazards of COVID-19 interacted with preexisting risk factors associated with living in exploitative conditions or in circumstances where it could flourish.

Risk factors are counter-balanced or moderated by protective factors, here referred to as “resilience factors.” The notion of resilience, particularly community resilience, has contributed much to perspectives in modern slavery. These highlight the collective power of communities and other collectives to resist exploitation. Gardner et al.’s (2020b) model of the social determinants of community resilience is applied here. Reflected in the logic model above, resilience is conceptualized in structural (social, political, and economic), local (community), personal (individual) and legal/regulatory terms. Legal and policy protections around housing during the first wave of the pandemic in 2020 in the UK, for example, included a temporary moratorium on evictions.

One way of demonstrating the utility of this risk and resilience framework for understanding modern slavery dynamics in the uncertain context of COVID-19 is through the application of a public health risk assessment methodology, typically applied to contexts of human, natural or biological emergencies (World Health Organization, 2012). Presented in **Figure 2**, a risk and resilience assessment includes three interlocking components – hazard, exposure, and context assessment. Firstly,

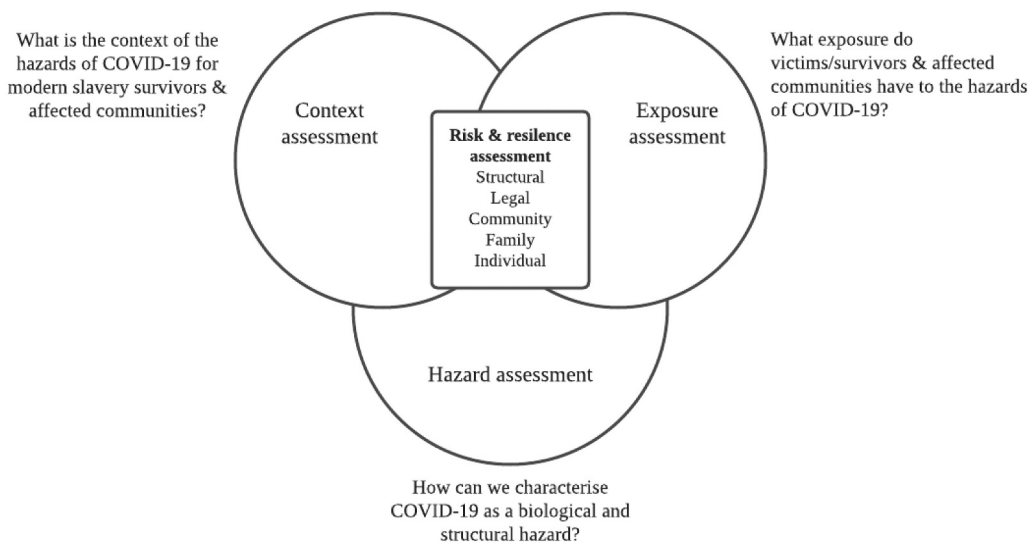


Figure 2. The components of the risk and resilience assessment.

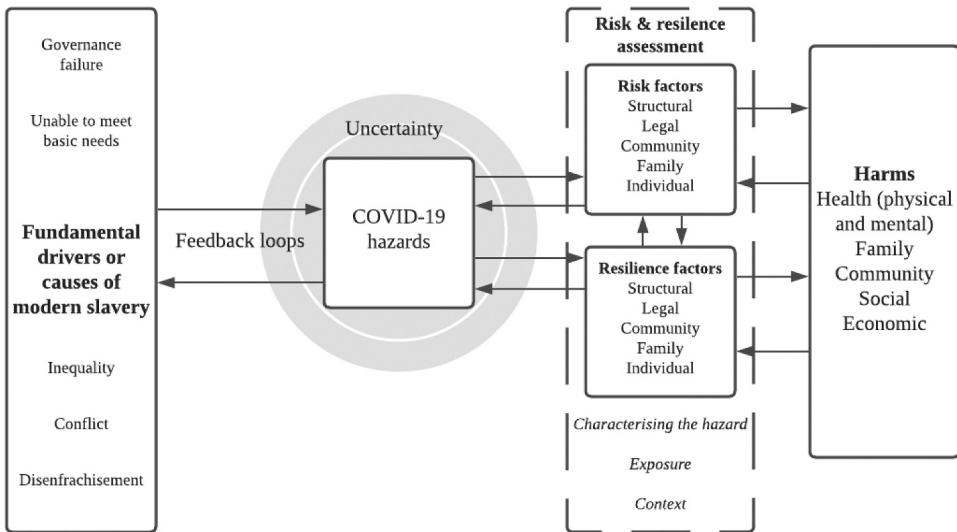


Figure 3. A summary of the analytical framework.

assessing the hazard includes identifying or characterizing the nature of the hazard and the populations affected. Secondly, assessment of people’s exposure to the hazard can be used to estimate the likely magnitude and reach of the effect. Here, as COVID-19 is a structural (social, economic, political) as well as a biological hazard, this requires us to identify as best we can the extent to which people have been exposed to, for example, possible damaging social restrictions. Finally, context assessment includes evaluating the context of the hazard and how it affects risks. Figure 2 outlines how we conceptualized risk and resilience for the purposes of analyzing the data available to us; Figure 3 summarizes the integrated analytical model of the research.

Finally, assessing the connections between variables requires an articulation of pathways to harm. To achieve this aim, we adopted a systems approach. Systems thinking (Arnold & Wade, 2015; Hill, 2011) is a response to the complexity of the phenomena being explored. Modern slavery represents the qualities of a complex system: dynamics are non-linear and operate across multiple levels (global, national, regional, local, community, individual); they also shift, encounter differing degrees of stability and volatility over time and space, can be unpredictable and have emergent properties. A systems lens to modern slavery in the context of the hazard of COVID-19 and its uncertainties offers an opportunity to surface possible causal linkages and reveal opportunities to intervene to disrupt pathways to harm. There are challenges, however, to this approach, in particular the challenge of being able to observe these dynamics across the often-hidden populations of interest. This required us to use a mix of methods and analytical triangulation to establish what were the likely risks and harms for people experiencing/likely to be exposed to, modern slavery.

Methods

Study Design

The paper draws on data collected from a mixed methods study. First, a rapid systematic review drew together the large volume of gray publications emerging from the NGO and (inter)national government/governance sectors during eight months in the first phase of the pandemic (Jimenez et al., 2020). Qualitative data synthesis was used to present findings from 91 sources of literature which were thematized to identify the risks, mitigations and impacts of COVID-19 on survivors of modern slavery. Second, during a similar time period, social media were monitored on the Twitter platform.

We sampled 479 unique tweets and retweets from 64 counter-slavery organizations that related to COVID-19 risks and responses (Bravo-Balsa & Lucas, 2020; Lucas et al., 2020). Third, a convenience sample of 56 UK-based, self-identifying modern slavery survivors was surveyed at one time point in late 2020 to identify concerns and experiences of COVID-19 and its impact on life during the pandemic (Rights Lab, 2021b). Fourth, we conducted an online consultative/dialogue event with 154 stakeholders across the counter-slavery and counter-trafficking sectors in the UK (Rights Lab, 2021c). Finally, data were gathered from three sets of interviews with nine survivors in the UK at three time points during the pandemic.

Table 1 provides more detail of the methods used. A fuller description of the methods employed and the findings of each individual component of the programme are described at length elsewhere (Bravo-Balsa & Lucas, 2020; Bravo-Balsa et al., 2021; Jimenez et al., 2020; Jiménez et al., 2022; Lucas & Landman, 2021; Rights Lab, 2020, 2021a, 2021b, 2021c). The findings here are presented as a synthesis of the findings from the full work programme.

A Research Advisory Group oversaw the project. It was comprised of 10 survivor members. The group was created through an expression of interest process conducted by the project's third sector collaborator, Survivor Alliance. Members met three times over the course of the project and contributed to multiple aspects of it including its design, the content of interview questions, the form and nature of the questionnaire and how best to recruit survivors to the survey. Group members also contributed to the on-line dialogue event.

Approach to Analysis and Synthesis

The analysis presented here is a synthesis of these multiple strands of research. Our approach to synthesis was guided by assessments of both the “strength” of the evidence and through triangulation of sources. Strength was judged on the basis of the frequency of findings within a dataset (the Twitter, survey and literature review datasets). We also accounted for the richness of qualitative data (interviews, dialogue events, literature review), based on adaptation of criteria developed by Ritzer (1991) and Roen et al. (2006) and applied by Pearson et al. (2013) and Such et al. (2020) in evidence syntheses. If data from one of the research components provided clear, unequivocal findings or thick descriptions and/or explanations of phenomena it was graded “strong.” “Moderate” strength evidence was more equivocal, provided some thick descriptions and/or explanations but these were not repeated frequently across the study component. “Weak” evidence was data that was suggestive, superficial or “thin.”

Triangulation was similarly placed into three categories. A “good” standard was applied to findings that were supported by strong evidence across at least three of the study components. The category “adequate” was assigned to findings that were repeated across at least two parts of the research programme. “Low” grades were assigned to evidence that emerged from only one source. Decisions on frequency, richness, and triangulation were discussed with the whole project team in both open forum debate and in person with workstream leads with the principal author. Follow-up, fine-grain discussion and decision-making was achieved with authors ES, AG, and NW in a series of analytical meetings and presented to the full team for confirmation/validation.

The use of multiple sources of evidence and the assignment of multiple investigators across the studies allowed for rigorous analysis that surfaced different interpretations of data and made room for robust team discussions about the confidence of findings. The project was approved by the University of Nottingham's Sociology and Social Policy Research Ethics Committee. All names presented in the text are pseudonyms.

Analysis and Findings

The following analysis and synthesis use data from the five strands of the research and is framed in the theoretical model presented in Figure 3. First, data are drawn together in an overall risk and resilience

Table 1. Methods and Sample Summary.

Study Component	Sample	Data Gathering Period/Timing	Details
Rapid review of the gray literature	91 gray literature items, 40 of which had an exclusively UK focus. Sources included: NGO ($n = 67$); UN ($n = 10$); UK national/local government ($n = 9$); UK law enforcement ($n = 2$); Multi-agency ($n = 3$)	March-October 2020	Grey literature items were drawn from online published documents available in English during the first phase of the pandemic. Many of these items were published quickly and in response to the public health emergency. Items for inclusion in the review were not assessed for quality, rather they were collated to represent the concerns, issues and emerging problems and challenges experienced by organizations active in a broadly defined global anti-slavery network. We sought to capture the emerging risks to survivors and people living in vulnerable circumstances and the response in different settings. This was an explicitly policy- and practice-facing strategy so that the research could inform sector responses in real time. A detailed account of the methods including search strategies, eligibility criteria, data extraction protocols and included literature is available here.
Social media analysis	Initial Twitter dataset of 49,834 tweets and retweets from 99 organizations. Final dataset: 64 organizations, 479 unique Tweets and Retweets – explicitly mentioned risks related to COVID-19	January-September 2020	This was a “social listening” (41) exercise that included the strategic communications of prominent NGO or civil society and statutory counter-slavery organizations (e.g. Anti-slavery International: @Anti_Slavery, Focus on Labour Exploitation (FLEX): @FocusOnLabour, Free the Slaves: @FreetheSlaves, The Gangmasters and Labor Abuse Authority: @UK_Glaa). 64 organizations were active in highlighting the risks, challenges, responses and mitigations of COVID-19 on people affected by modern slavery during the study period. These data were clustered into 11 discrete “risk” categories and 15 distinct affected populations. Data from tweets were analyzed qualitatively. A briefing on the workstrand is available here.
Cross-sectional survey of survivors	Convenience sample $n = 56$	December 2020	This anonymous survey was administered online to survivors of modern slavery through a third-sector survivor organization. 51 participants identified as female, 3 as male and 2 as “other.” All but 7 of the participants named their country of origin as outside of the UK. Thirteen nationalities were represented in the survey. The most common national origin was Nigeria with 22 people; followed by the Philippines (16 people). Details of survey questions are available here. A preliminary briefing is available here.

(Continued)

Table 1. (Continued).

Study Component	Sample	Data Gathering Period/Timing	Details
Consultative dialogue event	An online open discussion event ($n = 154$)	March 2021	This online forum brought together survivors & counter-slavery supporters including NGOs, policy makers and academics. Discussion centered on ongoing and future challenges faced by affected people during COVID-19. After general discussion, three breakout groups were organized to reflect on three separate themes drawn from our preliminary analyses: (1) Adult survivor health, well-being and access to support services, (2) Legal support & immigration-related issues, (3) Risks to children and young people. Each breakout reflected on challenges faced by survivors, shared examples of good practice of how the sector has met these challenges and discussed ways forward to address ongoing and anticipated issues during transition out of the pandemic. A briefing from the dialogue event is available here.
Longitudinal interviews	3 sets of interviews with nine survivors in the UK (i.e. 27 data points in total)	January, April and July 2021	Semi-structured, in-depth interviews were carried out online with nine survivors. To ensure anonymity, participants were free to choose pseudonyms. Two participants chose male and seven participants chose female pseudonyms to reflect their identity. All were resident in the UK at the time of the study. Interviews were conducted in English. Open-ended discussion was based on interview schedules/questions tailored to the circumstances of the pandemic at the time. An example of the interview schedule at the third time point is available in Appendix B. Each interview was fully transcribed. Transcripts were coded and analyzed using the software NVivo. Analysis initially took a grounded theory approach to coding (Charmaz 2014) with initial coding conducted line by line, using gerunds to produce 382 initial codes. These codes were then synthesized with the risk and resilience factors identified in the other study workstreams.

assessment. Second, we explore how risk and resilience variables interconnected in ways that reinforced or offset the likelihood of exploitation and harm. These are then presented in causal loop diagrams (Figures 4 and 5). Causal loop diagrams can be a helpful way of visualizing complex dynamic systems and their properties (Baugh Littlejohns et al., 2018). In the current study, causal loop diagrams were used to visualize systems of risk and resilience caused by economic shock and mandated social isolation in the first wave of the COVID-19 pandemic. While acknowledging that there is some overlap in the hazards of COVID-19, we identified five broad categories of hazard from the data:

- (1) **Economic Shock.** This was the sudden, transformative effect of the pandemic on usual economic activity including economic production, consumption, importing, exporting, and labor market activity. The UK government introduced a series of measures, most dramatically, “lockdowns” to control infection rates. This meant large parts of the economy and society were

- severely constrained. This had multiple and far-reaching implications, for example, on people’s incomes, daily activities, social contact, housing security, finances, and debt.
- (2) **Mandated Social Isolation and Restricted Social Movement.** This related to the lockdowns of the pandemic, most notably, the virtual “zero contact” lockdowns of 2020 that severely restricted social mixing. Populations were ordered to isolate with often severe consequences for people’s freedoms, social connectedness, and rights to association.
 - (3) **Changes in State Support, Including Access to Welfare System Financial Support and to Services.** This included huge, universal state programmes of support such as the furlough programme (government payment of wages) and temporary uplifts in welfare payments, such as the increase in the main working age benefit, Universal Credit, by £20 per month. It also related to the changed, usually more limited, access people had to statutory and non-statutory services including survivor-oriented support services (e.g. case workers, mental health support).
 - (4) **Legal, Regulatory and Justice Interruption.** The pandemic resulted in legal and regulatory system freezes as the court system closed down and regulatory bodies curtailed their activities (e.g. housing and employer inspections). This was identified as a risk to victims’/survivors’ access to justice and rights across the datasets.
 - (5) **The Disease Itself** This related to the risk of infection, the severity of symptoms, risk of death and the virus’ sequelae.

Both space limitations and the differential strength/richness of the data on each theme in each of the datasets means that full analysis of each of these hazards is not possible. A summary of the strength/richness of the evidence in each component of the research programme is presented in Table 2. It shows variation in the strength and richness of the data in each workstrand.

As a consequence of the limitations of the data, we apply the analytical framework to two categories of hazard that were most fully articulated by the study: economic shock and mandated social isolation (see triangulation assessment in Table 3). It is important to note, however, that other hazards, including the hazard of the disease itself, was of considerable concern across the dataset, especially in the early phases of the pandemic when the etiology and epidemiology of the disease was poorly

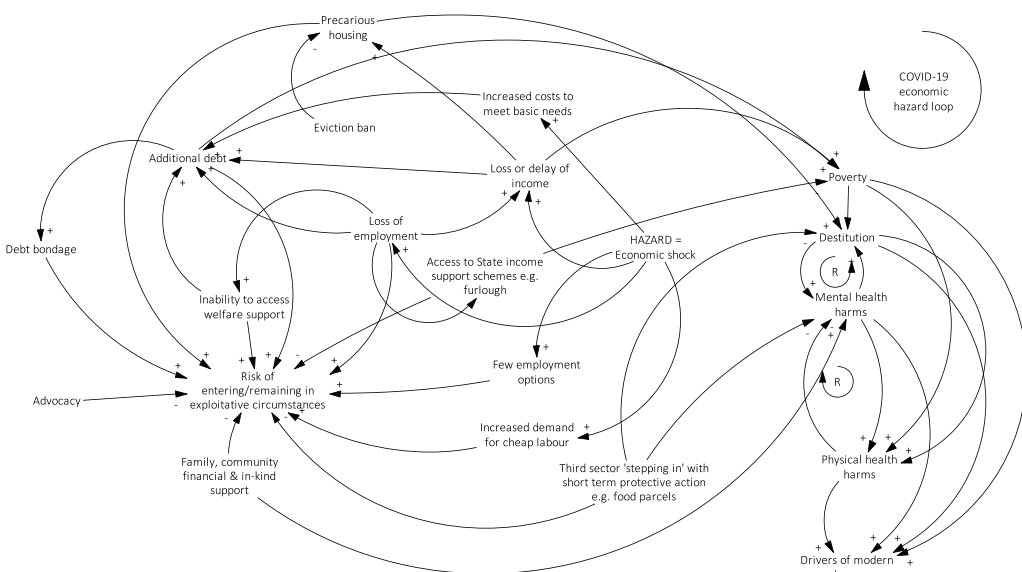


Figure 4. A causal loop diagram of the economic shock effect of COVID-19 on modern slavery in the UK.

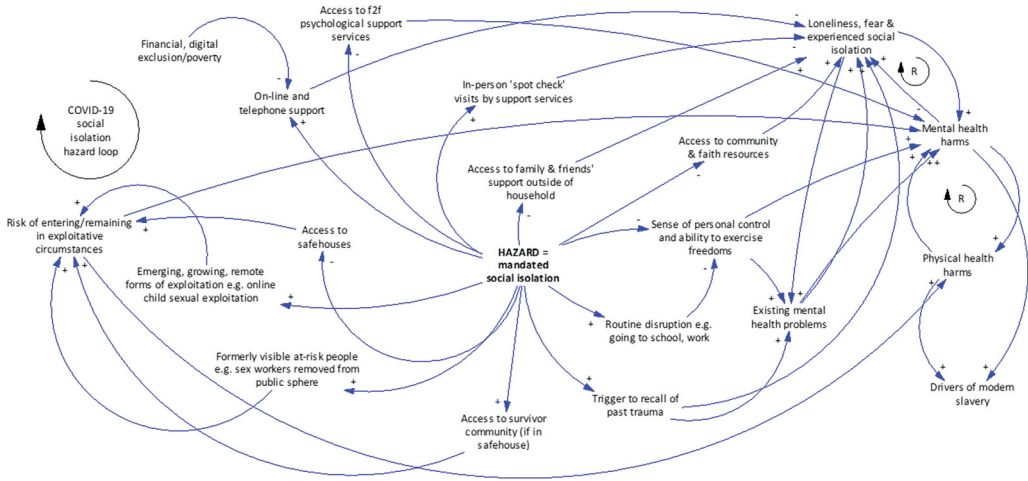


Figure 5. A causal loop diagram of the effects of mandated social isolation among people affected by modern slavery.

Table 2. Strength of the Evidence in Each Study Component.

	Strength of Research Component*		
	Strong	Moderate	Weak
Survey			
• Economic shock	✓		
• Social isolation	✓		
• Changes in state support		✓	
• Legal, regulatory, and justice interruption		✓	✓
• The disease itself			
Evidence review			
• Economic shock	✓		
• Social isolation	✓		
• Changes in state support		✓	
• Legal, regulatory and justice interruption	✓		
• The disease itself	✓		
Web analysis			
• Economic shock	✓		
• Social isolation			✓
• Changes in state support		✓	
• Legal, regulatory, and justice interruption			✓
• The disease itself	✓		
Dialogue events			
• Economic shock		✓	
• Social isolation	✓		
• Changes in state support			✓
• Legal, regulatory, and justice interruption	✓		
• The disease itself		✓	
Longitudinal interviews			
• Economic shock	✓		
• Social isolation	✓		
• Changes in state support			✓
• Legal, regulatory, and justice interruption		✓	
• The disease itself			✓

*Key: **Strong**: data from one of the research components provided repeated and/or thick descriptions and/or explanations of phenomena; **Moderate**: some thick descriptions and/or explanations but not repeated frequently across the study component; **Weak**: data that was descriptive, superficial or “thin...”

Table 3. Triangulation of Study Components.

	Triangulation*		
	Good	Adequate	Low
Economic shock	✓		
Social isolation	✓		
Changes in state support			✓
Legal, regulatory and justice interruption		✓	
The disease itself		✓	

***Key: Good:** Findings supported by strong evidence across at least three of the study components.
Adequate: Strong findings are repeated across at least two parts of the research programme.
Low: One strong source of supporting evidence or only moderate/low supporting evidence across studies.

understood. Evidence across the research components, however, highlighted how COVID-19 transmission and morbidity was a moderate/low concern relative to the structural hazards (social, economic, legal) of the pandemic faced by survivors and people living in vulnerable circumstances.

Hazard 1. Economic Shock

The pandemic resulted in a range of government and market responses that fundamentally shifted patterns of supply and demand for goods and services across economies. In the UK, economic activity that required face-to-face contact was severely curtailed over substantial time periods. This caused considerable change to patterns of production, consumption, imports, exports, and labor market activity that rippled across global formal, informal, and illicit economies. Analysis revealed that victims and survivors of modern slavery as well as people living in circumstances that made them more vulnerable to exploitation faced a range of risks as a consequence. These are outlined in [Table 4](#) and [Table 5](#) and represented diagrammatically with causal linkages in [Figure 4](#). Social media analysis identified that 16% of all Tweets included in the analysis from January to December 2020 primarily focussed on economic risks including risks of loss of income, unemployment, underemployment, heightened informality, lost income when sick, wage theft, cut backs to hours in low-paid sectors, and risks specific to those self-employed or on precarious contracts. Specific concern was raised for certain populations such as migrant workers, particularly those who were undocumented or had poor access (through fear or ineligibility) to state aid. The literature review also revealed elevated concern for seasonal workers, guestworkers and domestic workers. It also identified that workers in industrial sectors such as agriculture, garment manufacturing and healthcare were likely to be exposed to disproportionate risk of exploitation and harm, especially in places where conditions of work and regulatory practices were poor and likely to deteriorate further during the pandemic.

Overall assessment of the risk and resilience factors indicate that the likelihood of multiple harms were high for survivor populations and those living in vulnerable circumstances. This is identified in the causal loop diagram ([Figure 4](#)) which shows the multiple routes through which these populations could become at risk of entering exploitation. The diagram shows variables (phenomena of interest derived from the data) linked by arrows. These arrows indicate a causal relationship. Links connected with a + (plus polarity symbol) show that variables move in the same direction, for example, the loss of employment leads to additional debt. Links with a - (minus polarity symbol) indicate the opposite, for example family or community financial or in-kind support leads to a lower risk of entering or remaining in exploitative circumstances. Loops indicated with an R are reinforcing loops. An example in this causal loop diagram is the relationship between mental and physical health harms: one reinforces the other.

[Figure 4](#), with the hazard of economic shock at its center, shows how rapid change in the economy led to a range of macro risk factors: loss or delay of income, sudden unemployment, increased costs of goods/services, reduced employment options and increased demand for cheap labor. These factors were all evident in the gray literature, with organizations highlighting how people could be exposed to multiple

Table 4. Risk and Resilience Assessment of the Impact of Economic Shock.

Hazards	Risk Assessment	Resilience Assessment	Harms	Overall Risk and Resilience Assessment
<p>Economic shock UNCERTAINTIES: duration of economic system change; duration of mitigating support systems from government (e.g. furlough scheme); chain of effect across global, national and local economic systems (e.g. changes in supply & demand; supply chain disruption); depth of economic damage globally, nationally and locally; impact of global shock on gray and black economies</p>	<p>Characterizing the hazard Collapse of labor market(s); Loss of employment; Loss or delay of income Inability to access welfare support; Higher costs for basic food/hygiene; Additional debt; debt bondage; Lack of employment choice; Increasing demand for cheap labor</p> <p>Exposure to the hazard High risk of immediate exposure to hazard with high risk that exposure would be damaging and lead to harms</p> <p>Context of the hazard Preexisting socio-economic challenges and vulnerable circumstances e.g. undocumented migrants, No Recourse to Public Funds (UK); likely low skill & low education levels within the population; sub-standard or precarious housing; school closures meant families were home-schooling; existing reliance on daily wages, irregular status; exclusion from State economic and social support services; debt and a lack of savings</p>	<p>Characterizing resilience or protective factors Third sector “stepping up” to fill the gaps in provision; Advocacy movement; Community and family support (in-kind & financial); Eviction moratorium; State aid support system e.g. UK furlough scheme & temporary increase in state benefits;</p> <p>Exposure to resilience or protective factors Med/Low ability for third sector to fill the gaps (resource constrained); High advocacy response; Low likelihood of family/community in-kind support or financial transfers; Low exposure to homelessness if already housed (eviction ban)</p>	<p>DIRECT Financial insecurity DIRECT Poverty, Destitution IN/DIRECT Mental health problems IN/DIRECT Physical health problems ADDITIONAL IN/DIRECT re-trafficking harms</p>	<p>HIGH RISK of harms that directly feedback into DRIVERS; Risks UNLIKELY to be offset by RESILIENCE factors UNCERTAINTIES relating to the hazard do not impact significantly on high risk of harm</p>

factors that increased the risk of entering or remaining in exploitative circumstances and following a pathway to harm. At a personal level, this could mean an increase in debt, a distinct risk for people living in difficult circumstances and one that could increase the possibility of debt bondage. Few protective factors were in place to prevent or intervene in this pathway. The introduction of wage-replacement schemes in the UK (furlough), for example, were limited to those people with regularized immigration and employment status. Indeed, none of our interview respondents was employed prior to the pandemic due to asylum status, disability, other preexisting health-related issues, or the requirements of the National Referral Mechanism (the main State-funded route through which modern slavery victims can access support).

Protections offered by families, friends, and the third sector (e.g. food parcels) were also limited. Participants highlighted a lack of alternative sources of financial security and the fact that NGO support programmes had been curtailed by the pandemic (interview participants Ginger-May, Kenneth and Samantha). Movements to on-line provision of NGO support services introduced the problem of affording mobile phone data. COVID-19 subsequently increased preexisting economic precarity for our respondents due to the inability of minimal state benefits to keep pace with rising prices:

Table 5. Risk and Resilience Assessment of the Impact of Mandated Social Isolation and Restricted Social Movement.

Hazard	Risk Assessment	Resilience Assessment	Harms	Overall Risk and Resilience Assessment
<p>Mandated social isolation and restricted social movement UNCERTAINTIES: Duration of social restrictions; Changing rules around social contact and movement; The legal/enforcement status of rules; Legal consequences of rule breaking; Unclear when contact with face-to-face support services would resume; Uncertainty about how different waves of the disease would affect services; Uncertainty about if/how services would be continued during social contact restrictions</p>	<p>Characterizing the hazard Loss of contact with family and friends; Loss of face-to-face support services; No access to support services located at the community level e.g. safehouses, community centers, faith organizations; Dependence on telephone or on-line replacement services; Reduced participation in “normal life routines” e.g. school, volunteering, work; Past trauma of survivors being triggered by isolation and loneliness; Shut down of legal processes e.g. immigration and asylum applications; Growth of on-line forms of abuse and exploitation; Living in close proximity to other survivors in safehouses may exacerbate distress</p>	<p>Characterizing resilience or protective factors Switch to on-line and telephone support to “plug the gaps” in service provision; “Spot check” face-to-face contact with survivors among NGO support workers; Advocacy from NGOs raising the profile of the difficulties experienced by those living in difficult circumstances; Peer support and inter-reliance among survivors living in safehouses; Personal coping strategies; Reflected on as an opportunity to grow confidence & independence</p>	<p>DIRECT social isolation and loneliness DIRECT Mental health problems INDIRECT Physical health problems</p>	<p>HIGH overall RISK of physical and mental health harm; these directly feedback into DRIVERS to reproduce modern slavery contexts and incidence; MODERATE likelihood that risks could be partly offset by RESILIENCE factors UNCERTAINTIES relating to the hazard do not impact significantly on overall high risk of harm</p>
<p>Exposure to the hazard</p>	<p>As social distancing and stay at home orders were mandatory, there was universal and immediate exposure to hazards with high risk that exposure would be damaging and lead to harms</p>	<p>Exposure to resilience or protective factors Med/Low ability for on-line support to replace face-to-face especially in context of restricted access to digitally enabled devices and data; High advocacy response</p>		
<p>Context of the hazard</p>	<p>Preexisting social disconnection, especially if undocumented migrants or people living in exploitative circumstances; sub-standard or precarious housing; school closures meant families were home-schooling; vulnerable population living with current and/or past traumas</p>			

I did experience a lot of financial difficulties in the beginning, 'cause all of a sudden things that started going up. And being a [nationality] who eats [nationality] food, a lot of those corner shops that sell- or a lot of those stores that sell [nationality] food and things, they- their prices literally went from zero to 100, with the excuse of, um; "there's a pandemic, it's not easy to get food in and things," um, so that really put a lot of challenge on me, and I'm very sure a lot of people felt it also. (Rose)

In this context, there was little opportunity to mitigate rising costs in the early part of the pandemic via employment, and volunteering jobs were inaccessible due to pandemic restrictions. Survivors (Blerina, Busara, Ginger-May) spoke about going without important items including food, travel, and education, with corresponding impacts to on their physical and mental health. Some survivors recounted being dependent on charitable provision or the kindness of neighbors, and one (Ginger-May) commented that they believed one resident of their shared accommodation was stealing to support personal needs. Among some (Alek, Blerina, Busara, Rose, Samantha, Sanu) there was a common sense of being held in "limbo," not just by the pandemic, but by immigration-related work restrictions, without agency to achieve change. Overall, as shown in [Table 4](#) and [Figure 4](#), the overall pattern of events caused by the economic shock of COVID-19 resulted in a system containing a high risk of harm for people living with, or in close proximity to, modern slavery.

Hazard 2. Mandated Social Isolation and Restricted Social Movement

The exponential spread of COVID-19 led many governments to impose severe restrictions on social movement and contact. These restrictions saw schools, businesses providing non-essential goods and services, childcare providers, universities, colleges, individual and family support services, courts, non-emergency healthcare and many other face-to-face services close for protracted time periods. In addition, households were prevented from mixing and some were "shielded" or encouraged to stay at home with no outside social contact. While this was seen as necessary to limit the spread of the disease, it had recognized damaging effects, most notably on the mental health of populations (Fancourt et al., 2021).

The survey of survivors identified a perceived deterioration of psychological health among survivors as a result of the pandemic. After a concern about personal finances and an (in)ability to return to countries of origin, survivors in the UK identified psychological health and relationships with wider family and friends as the domains of life that had been most negatively affected by COVID-19. Seventy-three percent of survey participants indicated that their psychological health had become either somewhat or significantly worse because of the pandemic. The gray literature review also highlighted multiple risks to mental health. Reduced access to mental health services, the move to remote support services for survivors, the triggering effect of enforced isolation on survivors' trauma and the worsening of existing mental health problems were raised across the literature.

Overall assessment of the evidence identifies that the hazard of COVID-19 social isolation measures increased the risk of harms including loneliness and mental health problems. The causal loop diagram in [Figure 5](#) shows how these harms had potential to interconnect with, and feedback to, physical health harms. These harms also fed back into the drivers or causes of modern slavery in a pattern similar to those associated with economic shock, presenting a reinforcing process of harm and further risks of exploitation at a population level.

[Figure 5](#) highlights how social isolation measures adopted by governments reduced affected populations' access to important support services and how these connected to direct harms to mental health. These harms operated through increased loneliness, experienced social isolation, fear, past trauma and existing mental health problems. Multiple factors influenced loneliness and mental health outcomes including reduced access to family and other social connections, reduced access to psychological support services and disruption to normal daily routines such as going to school or work. Survey responses, the dialogue event and interviews highlighted how enforced social isolation measures could trigger recall of experiences of exploitation, exacerbating mental health problems:

I feel like I was in prison. Yeah, cause I couldn't get to go meet with people or do much, so I became, like, more isolated . . . this restriction has reminded me of when I was isolated by my trafficker, so it's- uh, just makes me apart from the people. (Samantha)

Distrust of official information concerning vaccination programmes and COVID 19, was also widespread amongst our interviewees, and several (Alek, Ginger-May, Kenneth) recounted how vaccine status or nonobservance of restrictions (sometimes due to human forgetfulness, shared accommodation, or needing extra support due to disability) had brought them into conflict with others, further increasing anxiety and their sense of isolation. Anxiety had also delayed some of our respondent's decisions to accept the vaccine, further endangering their health, including Kenneth and Samantha.

On-line or telephone support was a common response of services but the dialogue events, survey responses, the gray literature review and survivor interviews noted that this was often an inadequate replacement for in-person support. In addition, as noted above, financial constraint and digital exclusion meant that some people were unable to access the support they needed, leading to loneliness, fear and harm. Parents (Rose and Summer for example) in particular talked about the impact of childcare support closing and the pressure of supporting young children during lockdown. Rose recognized that although such experiences were common across the population, they were frequently exacerbated for survivors:

Everyone was experiencing mental health during the pandemic, but when you're a victim, and when you're a survivor already, that is an additional mental health, so that makes it harder and that increases the chances of like, you know, suicidal rates and things and just breakdowns. (Rose)

However, interestingly, the interviews also drew attention to mitigating factors that survivors identified as reducing isolation and increasing their resilience in the context of the pandemic. On an individual level, survivors, including GM, K, R and S, identified a range of positive coping strategies that they regularly applied to manage tight finances, cope with fear-filled news stories or protect their physical and mental health. Some of these were practical skills and techniques such as "grounding" to calm anxiety, or budget management, but participants such as B and K, also spoke about gaining perspective and personal growth. Toward the end of the study several participants reflected about an increased sense of individual confidence and independence:

Looking back I am actually really proud of myself and I have surprised myself at how emotionally strong and mentally strong I have been throughout the pandemic, and being able to find a balance of not actually allowing it to- to really overwhelm me to the point of a mental breakdown, which I have experienced before. So this has been a very good, um. . . lesson. And I'd say I've also learnt some skills in this area, in ways of trying to manage- being able to self-manage my mental health and my emotional health also. That's something that has really surprised me. (Rose)

I've learned to be confident about myself and I've learned to be independent. You know, sometimes when- when COVID was not there we relied on a lot of people, but now I've learned that I have to be independent and face everything, which- if no one is there, at least if I'm there, I can do it and I can manage it by myself. So I've learned to be more independent and have more confidence in myself. (Summer)

All of our participants also spoke about finding strength and motivation from relational opportunities, including appreciating time spent focussing on children, helping and supporting others, joining in anti-trafficking work, building and participating in survivor communities and engaging with the research project itself, through interviews and group reflections. Blerina commented that just hearing and understanding others' experiences could be reassuring "my problems feel huge to me and yours feel to you, but when we know that 'oh, it's not just me that has problems and is struggling' so, you know, it's different". Meanwhile, helping others was seen to offer healing benefits:

If you help someone it will be felt- you will feel pleasure- pleasure on yourself, that; 'oh I did something,' which is- might be a cure for lots of mental problems, lots of your stress, lots of your things, honestly. That's why I help the people - for myself, not for them. (Sanu)

Despite the problems with digital means of engagement, some respondents (A, GM, S) had also found new possibilities for education, work or social contact. Some had also benefitted from meeting with others in shared accommodation, or wider community support such as Alek, Samantha and Summer.

Notably, and as shown in [Figure 5](#), the relationship between mandated social isolation and the health of survivors of modern slavery often operated through intermediate experiences of loneliness, reduced social connectedness and fear. These intermediate points in pathways to potential harm could be disrupted by some of the resilience factors including those outlined above and other faith-based, community-based and support-service-based practical and relational resources.

Discussion and Conclusion

COVID-19 is a syndemic pandemic that will continue to exacerbate inequalities unless widespread action is taken to intervene in pathways to harm (Bambra et al., 2020; Dorn et al., 2020). This novel study has shown that, due to multiple elements of disadvantage and social exclusion, modern slavery survivors inhabit a distinctive context that increases their exposure to the structural and biological hazards of COVID-19. Using a multi-method approach, we explicitly sought to surface the challenges faced by the counter-slavery and counter-trafficking sectors by assessing the risks and the pathways to harm for people in the UK at risk of, experiencing, or recovering from exploitation. This has been achieved through a rapid yet rigorous collation of multiple evidence streams and analyzed and synthesized using distinctive public health risk and resilience assessment methods and a complex systems approach. Uniquely, this has enabled the identification of *what* risks have been experienced by populations living in vulnerable circumstances, *how* these risks interconnect and are offset by resilience or protective factors and *how* these relate to harms. This analysis, therefore, goes beyond existing research by conceptualizing and representing the relationships between COVID-19 and modern slavery as a system of risk, resilience and harm. An advantage of such articulation is that it becomes visible where opportunities for intervention exist across different levels (national, local, individual) and across a range of sectors (public, community and voluntary, advocacy and campaign, commercial).

The impact of economic shock and mandated social isolation and restricted social movement demonstrate how COVID-19 was not solely a biological hazard. The risk and resilience assessments and demonstration of causal pathways to harm show that threats to income, to daily patterns of life and reductions in face-to-face interactions have exacerbated risks for already at-risk populations. This assessment is not unique to victims and survivors of modern slavery and human trafficking with others evidencing increased risks and harms experienced by other marginalized people including refugees, migrants, and minority ethnic populations (Aldridge et al., 2020; Katikireddi et al., 2021; World Health Organization, 2020) and growing social inequalities (Bajos et al., 2021; Fisher & Ryan, 2021). Opportunities for meaningful and impactful intervention are greatest at the national policy level with targeted support offered to prevent increasing risks to exploitation and harm to offset the effects of economic shock and to prevent long-term mental health harm caused by reduced social connection. National policy can explicitly protect this population by, for example, shoring up income support measures, opening up welfare support to victims and survivors and providing secure and safe accommodation for at-risk populations. This opportunity has not been fully realized in some recent national policy interventions, for example, the UK governments' temporary housing of asylum seekers in unfit military barracks during lockdowns. It is important that national policy interventions avoid further exposing populations living in difficult circumstances to further risks, many of which have been identified here, and also provide greater opportunity for empowerment and independence, for instance through improving access to education and employment.

Analysis of our data also revealed that in the face of extraordinary restrictions on social and economic life, there was still an important offsetting role played by on-line and in-kind support mobilized by the community sector and survivor alliances. People also relied more heavily and seemed to place greater value on close relational ties. This reinforces the observation by others during

lockdowns that locally- and community-based support were vital to reduce risks of harm and maintain some continuity of service. In the UK, local services and community-level partnerships sit at the core of much counter-slavery and counter-trafficking action and advocacy. This research reinforces the need to ensure that this support remains in place and is well resourced. Much promising practice was revealed during the dialogue and interview sessions of this research. For example, local NGOs provided SIM cards, mobile phones and data to survivors to reduce the risk of digital exclusion and allow families to engage in school, work and receive support during periods of reduced social contact. In particular, local organizations and online communities have the potential to relieve some of the risks of loneliness, fear and experienced social isolation: a clear mechanism through which people experience mental health harm. This was constrained, however, during severe social lockdowns, and is a risk that should be more fully assessed in any future social restriction policies. Maintaining contact and developing means of retaining access to community, faith, friendship groups and wider family connections appeared important throughout the pandemic. However, it was also clear that the pandemic presented multiple challenges to community organizations and NGOs in fulfilling this role, including reductions in income and delayed financial assistance for the charitable sector. The localized and patchwork nature of such interventions also suggests there would be value in reviewing promising practice in these responses and scaling-up the most effective interventions in a more coordinated way.

While such national and local interventions are, on their own, valuable in disrupting pathways to harm, there is also an opportunity for systems leaders across sectors to use the pandemic and these methods of assessing risk, resilience, and causality to design a coordinated, holistic, whole systems response to modern slavery and human trafficking (Gardner et al., 2020; Such et al., 2021). It requires systems leaders to embrace the complexity of modern slavery and human trafficking and how a whole systems response can prevent it. The approach adopted here of collating and synthesizing multiple forms of data offers a useful starting point from which to form such a response.

Limitations

There were multiple limitations to the study design and methods employed for data gathering. First, the systematic review of gray literature relied on emergent evidence from largely anti-slavery organizations. Aside from the bias this introduced, the literature was often documented observations from the field or anticipated, future-focussed challenges rather than evaluations or primary research on the effect of COVID-19 on modern slavery. Given the context of an evolving situation, the quality of the literature base was low; it was not peer reviewed, mostly published in-house (and so not subject to external scrutiny) and was mostly not based on robust research or evaluation design.

Second, the analysis of Twitter data from 64 organizations does not represent the full extent of social media commentary on the topic of COVID-19 and the risks/responses in the modern slavery field. We were also limited by the combination of search terms used; “risk” in combination with “COVID” or “coronavirus” were used as the primary basis for selecting and then filtering Tweets (Bravo-Balsa & Lucas, 2020). This pragmatic decision was necessary to ensure datasets were manageable with the resource available but it also limited the representativeness and comprehensiveness of the analysis. The monitoring of tweets also included overlap with the rapid literature review; organizations were both producing documents on COVID risks and responses and promoting them on their social media feeds. There is, therefore, some double counting of the sorts of risks emerging and the solutions being suggested from these datasets.

Third, the survey of survivors used a convenience approach and did not include people who had not been exploited or trafficked but who were living in vulnerable circumstances. This is a clear limitation of the survey. Fourth, the dialogue event was limited in its scope and means of delivery (online). It was also not recorded (owing to confidentiality concerns and to ensure the confidence of survivors) and so analysis is drawn from manual notes taken on the day. To minimize the risk of data

loss, the event included five breakout rooms, five note-takers and five group facilitators. Queries about accuracy and sense-checking were sent by e-mail to all groups after the event for clarity.

Finally, the interviews with survivors, although helpful in their longitudinal nature, represent a small group of people connected to a survivor-focussed third sector organization. While these limitations should encourage caution, the study was strong in its focus on people who had experience of exploitation and in its mixed method design.

Conclusion

Despite these limitations, this paper has used a rigorous and novel approach to understanding and explaining the impact of COVID-19 on people exposed to modern slavery risk. By applying a public health and systems thinking lens, the analysis reveals the complex and multiple pathways through which the wider social and economic hazard of the disease affected health and wellbeing. Importantly, the analysis identified both risk and protective or resilience factors that could mediate harmful outcomes. Adaptations to services and finding peer support within survivor communities were, for example, important means of offsetting the risk of harms associated with social isolation and loneliness. Nevertheless, this analysis supports the notion that COVID-19 had an overall harmful effect on people living in difficult circumstances in the UK, reflecting international evidence (United Nations Office on Drugs and Crime, 2021) and the observation that it was a syndemic pandemic.

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