



Centre for
**Society and
Mental Health**

Crisis and mental life: Implications for Covid-19

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**Economic
and Social
Research Council**

CSMH Report R001

This report was first published in June 2021 by the Centre for Society and Mental Health.

ESRC Centre for Society and Mental Health

The Centre for Society and Mental Health is an Economic and Social Research Council (ESRC) Centre based at King's College London [ES/S01256/1]. The views expressed are those of the author(s) and not necessarily those of the Economic and Social Research Council or King's College London.

How to cite this paper:

Lees-Manning, E., Kienzler, H., Manning, N., Rose, N., Royle, C., Újhadbör, R. (2021) Crisis and mental life: implications for COVID-19. CSMH Report R001. London: ESRC Centre for Society and Mental Health.

Executive Summary

There has been widespread discussion of the possible impact of Covid-19 on mental health, but little comparison with previous crises. This report sets Covid-19 in the context of other crises, and their mental health consequences. Lessons are drawn for Covid-19.

The report reviews the effects on mental health and well-being of crises caused by disasters, war/conflict, economic collapse, and pandemics.

There are eight case studies:

Disasters 9 - 15

- Chernobyl nuclear explosion
- World Trade center attack

War 16 - 24

- Civil wars in Syria and Nepal

Recession 25 - 33

- Economic Collapse in the USSR
- UK banking crisis

Previous Pandemics 34 - 42

- Spanish flu
 - Ebola
-

Executive Summary

Key Mental Health Consequences

Disasters

- no particularly adverse mental health consequences for the general population, including children, while older people had the highest resilience.
- for those closely exposed to these critical events, either geographically, personally, or as key responders, there are elevated rates of PTSD and depression.
- pre-existing patterns of inequality and difference are repeated and amplified.

Wars

- a global impact on mental health, with almost the entire population affected directly by pervasive and extreme trauma.
- effect of 'secondary' socio-economic hardship is felt more acutely by women and people with disabilities.
- importance of traditional healers, religious leaders, and cultural sensitivity.

Recessions

- impacts vary with existing social and political contexts, such as cheap alcohol in Russia, and cuts to welfare in the UK.
- cuts to welfare affect people's mental health for material reasons, but also through the stigma of claiming benefits.
- coping strategies, such as volunteering, sports clubs or religious organisations, varied significantly between their availability in UK, but not in Russia.
- elevated anxieties or emergence of PTSD were below clinical significance for the majority.
- social and economic deprivation was the main catalyst for poor mental health.
- positive coping strategies came from local community involvement and ingenuity, good communication and the dissemination of knowledge.

Executive Summary

Key Mental Health Consequences

There are parallels with Covid-19

- mental health research for Covid-19 is mixed, but more extensive than previous crises.
- there has not been a 'Tsunami' of widespread mental health impact.
- anxiety, fear, and major stress peaked at the beginning but quickly subsided.
- loneliness, sadness, and thoughts of self-harm and suicidal ideation have not increased.
- elevated rates of poor mental health are related to proximity to front line covid-19 work.
- existing poor mental health continues to be related to underlying socioeconomic risk.
- lack of research on specific groups such as refugees minority ethnic groups, homeless, long-term mental health problems, women in abusive relationships, the LGBTQ+ community.

Recommendations informed by these comparisons are:

- the need for integrated policies, linking physical and mental health provision, the socio-economic contexts of health, and macro-political and economic policies.
- psychological interventions should be matched with financial and material support to tackle underlying causes of distress.
- interventions should be situated in the local sociopolitical context and provide resources to existing support networks and community coping strategies.
- in-depth research projects to better understand of the complex pathways through which mental health is affected by epidemics.
- qualitative research to gain insights into people's experiences and interpretations of how crises have affected them, as well as protective factors and coping strategies.

Executive Summary

Introduction

Disasters such as pandemics, earthquakes and war/conflict are complex problems that happen regularly all around the globe and appear to be an inevitable part of the Anthropocene, and which disrupt mental health and well-being. The United Nations defines a disaster as “a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources” (UNDRR, 2015).

Covid-19 falls under this definition, and there has been widespread commentary about the possible mental health consequences of both the virus, and of the unprecedented global response to it via widespread economic and social interventions. There has also been speculation about the simultaneous observation of both positive effects (solidarity, altruism etc.) and negative effects (anxiety, trauma) as well as predictions of medium term and long-term effects (PTSD). A growing number of surveys have been quickly set up to look at these effects for Covid-19, but these surveys are of varying quality in relation to samples and methods, and by definition cannot identify either the medium to long term effects, or the interventions that could be appropriate.

The UK government’s very brief 2012 Foresight review of the mental health consequences of five disasters - the Gulf of Mexico oil spill, hurricane Katrina, Indian Ocean tsunami, Enschede fireworks explosion, and the Chernobyl accident - concludes that “The excess morbidity rate of psychiatric disorders in the first year after a disaster is in the order of 20%” (Jenkins & Melzer, 2012: p.10). However, the review, tellingly, says nothing about positive community resilience and response, and nothing about non-diagnosed distress which is managed in the family or community, choosing to focus on the availability of conventional mental health services for populations.

Executive Summary

There are of course different kinds of disaster, which have occurred in different parts of the globe, and at different times. We do not know how far these basic variations in type, space and time might be relevant. Is anxiety and traumatic stress a normal response to abnormal circumstances, which will naturally fade over time, without further help? Or should widespread counselling, for example, be provided alongside economic and other interventions? Would rapid response counselling reduce negative consequences for mental health, or, as appears to be the case in relation to immediate counselling of those involved in accidents, fires or conflicts, actually increase the likelihood of negative mental health consequences (Wessely & Deahl, 2003; Pupavac, 2004)? What might we learn from WWI shell-shock, or WWII community solidarity? Do standard psychological surveys capture the lived realities recorded in diaries or ethnography? Why have some government interventions come to be seen as failures, but others as successes? What has been the role of community mobilisation, social movements, or international solidarity? These are the questions that provoked this project, although not all have been answered.

Methodology

All researchers used a common approach to identify literature useful for exploring four crisis mental health topics; disasters, economic recessions, war, and pandemics. In line with the exploratory nature of this study, researchers used a combination of search engine and database searching using relevant keywords, and snowball sourcing from bibliographies.

Across a range of digital journals, and a number of academic databases, over 400 articles were found, including literature reviews which themselves added many more. From these, less relevant or robust papers were filtered out to allow our researchers to focus on publications that provided the most reliable data for drawing conclusions about crises mental health.

Executive Summary

For each of our four crisis topics, we select two case studies to explore in detail, making eight case studies in all: the Chernobyl nuclear explosion, the World Trade center attack, civil wars in Syria and Nepal, economic collapse in the USSR, the global banking crisis, and the previous pandemics of Spanish flu, and Ebola. For all cases we attempted to source literature to explore the mental health outcomes of these crises, the predictors for these outcomes, and what mental health service response there was, if any. Then using the findings from these case studies, we drew potential lessons for the Covid-19 pandemic.

There was no strict protocol for choosing case studies. Each pair of case studies was chosen by the respective researchers based on the potential to compare with and evaluate the Covid-19 pandemic, as well as quality and extent of the literature available.

For investigating our case studies, a qualitative approach from Merriam (1998) was used; “an intensive, holistic description and analysis of a bounded phenomenon such as a program, an institution, a person, a process, or a social unit” (p. xiii).

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Disasters

Disasters

Introduction

In this section we have selected two disasters, the 1986 radioactive contamination at the nuclear power station at Chernobyl, Ukraine, and the 2011 attack on the World Trade Centre, New York ("9/11"). They reflect different geographical regions, different physical events, with different social, political, and psychological contexts.

The disaster in Chernobyl was, and still remains, the worst catastrophic nuclear accident that has ever happened. On 26 April 1986 at the Chernobyl Nuclear Power Plant in Ukraine, during a planned shutdown, an explosion and fire in unit 4 occurred when a set of safety procedures that were designed to ensure the continuous supply of necessary electrical power were wrongly applied, and resulted in a sudden power surge, which could not be contained.

The resulting explosion released 5% of the radioactive reactor core into the environment, with the deposition of radioactive materials in many parts of Belarus, Ukraine, Russia, and beyond. Two Chernobyl plant workers died immediately due to the explosion, and 28 people died within a few weeks because of acute radiation exposure, with a further 6,500 thyroid cancers caused by radiation exposure 20 years after the accident. In response, the authorities evacuated and relocated 115,000 people from areas surrounding the reactor and a further 220,000 people from Belarus, the Russian Federation, and Ukraine (UNSCEAR, 2011).

Although our second case, 9/11, is perhaps the best-known disaster of the contemporary age, the details also need to be re-stated. This disaster occurred suddenly in the morning of September 11th, 2001 when a regular passenger airliner with a full fuel load crashed directly into the 80th floor of the 110-story North Tower of the World Trade Centre in New York, followed quickly by a second airliner which hit the 60th floor of the South Tower.

This spectacular visual event for the many people who worked or lived nearby generated immediate panic and anxiety, as steel, glass, ash, and bodies fell below. Of the 50,000 people who typically worked in the towers each day, more than 2,700 died, including around 400 firefighters

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and police. News coverage was widespread, and by the evening it was established that this was a terrorist attack (Commission, 2004).

The literature

The highest proportion of studies dedicated to a single, or group of, specific mental health condition(s) or outcome(s) included the incidence of post-traumatic stress disorder (PTSD). Following this, the condition occurring second-most often with the literature was depression, followed by anxiety and stress. Less prevalent outcomes occurring in the literature include the positive outcomes of mental health following disasters (McMillen, Smith, & Fisher, 1997), secondary traumatic stress for healthcare workers (Creamer & Liddle, 2005), and smoking (van der Velden et al., 2007).

The demographics that were highlighted most often with our literature search were children, disaster responders, and healthcare workers. Other demographics that we found at least one study dedicated specifically to included older people (Sakauye et al., 2009), and older women specifically (Melick & Logue, 1986), drug-users (Cepeda, Saint Onge, Kaplan, & Valdez, 2010), rural communities (Madakasira & O'Brien, 1987), and single mothers (Zahran et al., 2011). Notably there was no research done into the LGBTQ+ community.

The most common disasters explored in the literature appear to be hurricanes and terrorist attacks, with earthquakes, floods, industrial accidents, nuclear power incidences, and tornados all featuring somewhat often, and a wide range of less common natural disasters present across the rest of the studies.

While the emergence of new mental health symptoms among populations exposed to disaster appears to be the predominant way to measure the impact of disasters, lesser-used measures occurring in the literature include suicide rates, drug use, and exacerbation of existing mental health conditions; concluded in some cases from an increase in consumption of prescription mental health medications (Druss & Marcus, 2004). The dominant measure of mental distress population was the GHQ-12, a widely used (and abused) measure for such population studies, while also using the DSM-III to check for clinical cases.

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Of the 16 papers we found on Chernobyl and mental health, only 12 were usable, of which 7 came from the same research group, here designated as the “main” group. There were 5 other studies, two of which focused on “clean-up workers”, who at the time included people from a number of East European countries, with the other three using different population samples. All the population studies used control groups in one way or another. The findings from the main group, which included regular follow-ups at 1986 +6, 20, 25 and 30 years, were on the whole repeated in the three other population samples.

Of the 31 papers we found on 9/11, 25 were usable, most of which came from different surveys, and there was one systematic review, covering 24 papers (Bills et al., 2008). Most papers reported on population surveys, either nationally, or concentrated in or around New York. A few were concentrated on first responders and clean-up workers. The use of control groups was widespread, although not universal, including some opportunities for before and after comparisons from pre-existing research. Measures of mental distress were more varied than for the Chernobyl case, but on the whole were recognised and validated measures. Most of the studies were opportunistic surveys very soon after the event, with far fewer regular follow-up research studies, and of those that did happen later, most did not make any use of the earlier data.

General population outcomes

Even in vulnerable groups, negative changes in general health and morbidity tend to be short-lived following a disaster (Deeg et al., 2005). However, for some these consequences persist indefinitely. Of these persistent mental health consequences of disaster exposure, the most common is post-traumatic stress disorder (PTSD) (Makwana, 2019), which is also the most common outcome overall with a prevalence of 4-60% (Math et al., 2015). In addition to PTSD, other long-term outcomes include major depressive disorder with a 5-10% prevalence and substance use disorder ranging in prevalence from 3%-25% (Goldmann & Galea, 2014).

Outcomes rarely occur in isolation and do present in combination with each other and other related comorbidities, including traumatic grief, panic disorder, generalised anxiety disorder, and somatic symptoms

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(Foa, Stein, & McFarlane, 2006). This implies that while many are unaffected, those that are experience a 'cascade' of morbidity, possibly due to an existing vulnerability to mental health issues.

For Chernobyl, at 6 years follow-up the main pattern was of some increase in distress in the general population, but not elevated to conventional clinical levels (Havenaar et al., 1997). Likewise, despite Shalev (2006: pp.607-8) portraying 9/11 as a psychological threat hanging "like the cloud of smoke over Ground Zero", the literature suggests a similar situation to Chernobyl. Across the general population, or samples well away from New York, there was no evidence of elevated rates of disorder or service use, including measured rates of psychotropic medication (Druss & Marcus, 2004).

Demographic-specific outcomes and predictors

After 9/11, rates of PTSD, anxiety, and depression did vary noticeably with the extent of exposure to the disaster event, either physically, organisationally, or through personal contact with those deceased. For those living or working in New York there were elevated rates of PTSD (the commonest condition researched), anxiety, or depression, typically by a factor of between one or two times, but only a modest increase in rates of psychotropic medication. (Boscarino, Adams, & Figley, 2004; Boscarino et al., 2003; Gershoff et al., 2010; Ghuman et al., 2014; Trout et al., 2002).

In line with a link between proximity and negative outcomes, several studies showed that responders or those who lived or worked nearby had a clear PTSD profile, but which had declined by around 50% after 5 years, although at 10 years follow-up there were still clear unmet mental health needs (but with no data to show how these had changed) – reportedly on a par with the pattern for war veterans (Bills et al., 2008; Bowler et al., 2012; Calderoni et al., 2006; DePierro, Lowe, & Katz, 2020; Neria et al., 2008; Stellman et al., 2008; Trout et al., 2002).

Regarding predictors for less severe outcomes, at the population level lower incidence as measured was associated with being African-American, active religious practice, less TV news watching, and

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distance from New York (Adams & Boscarino, 2005; Boscarino et al., 2005; McIntosh et al., 2011; Trout et al., 2002) (Marshall & Galea, 2004). For responders and survivors, lower incidence as measured was associated with support from close personal networks, absence of poverty or neighbourhood violence, more professional experience, older age and lighter workloads (Boscarino, Adams, & Figley, 2004; Boscarino et al., 2005; Creamer & Liddle, 2005; McIntosh et al., 2011; Trout et al., 2002; Wolinsky et al., 2003).

The picture for mothers and children is summarised neatly by Gershoff et al. (2010) "Our main conclusion from this study is thus a surprising one; namely that variations in exposure to the events of 9/11 had very modest associations with the longer-term mental health of New York youth and their mothers. We also found that variation in exposure to the events of 9/11 was associated to [only] a small degree with both mothers' coping assistance and youth's and mothers' socio-political attitudes." (Gershoff et al., 2010: p.1156).

Turning to demographics relating to Chernobyl, within the 6-year main study group, there were two vulnerable groups identified: those living closest to the site of the explosion, including of course the clean-up workers; and mothers of young children. The former group were significantly more likely to suffer PTSD, and latter to suffer depression and anxiety (Havenaar et al., 1997; Bolt, Helming, & Tintle, 2018; Viinamäki et al., 1995). A very significant finding was that at 20, 25, and 30 years (Bromet & Havenaar, 2007; Bromet, Havenaar, & Guey, 2011; Danzer & Danzer, 2016; Havenaar, Bromet, & Gluzman, 2016), this pattern was broadly repeated, expressed typically by the clean-up workers in elevated rates of alcoholism. Incidentally the evidence in these studies is that in fact the children themselves did not suffer elevated rates of distress on any of the measures used (Bromet, 2012).

Service provision and lessons for Covid-19

The surprising finding is that there are no particularly adverse mental health consequences for the general population, including children, and that older people in particular might have higher resilience.

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Fears in the face of Covid-19 that there might be a “tsunami” of mental health problems (Moreno, 2020), especially amongst younger and older people, are not suggested by the evidence from these previous disasters.

However, this is not true for those closely exposed to these critical events, either geographically, personally, or as key responders. For these groups there are elevated rates of PTSD and depression, however these are managed (mostly not through services, but through self-medication, or social support – as was the case before the events). For Covid-19 this will of course include health and social care workers.

A third observation is that pre-existing patterns of inequality and difference are repeated and amplified; older, more experienced, less busy responders do better in terms of mental health, as interestingly do African-Americans – while poorer people do worse. Children do not suffer in the way that has been widely expected. There are also continuities for those already accessing services for mental health; they get worse.

In the context of providing relief and support for the mental health outcomes affecting disaster victims, additional clinical care and mental health promotion capacity is recommended. Mental health support programmes should be part of humanitarian assistance efforts (Herman, 2012). The marginal uplift in post-disaster mental health service usage illustrates the need for specialised, long-term approaches to mental health service access following disasters (Rodriguez & Kohn, 2008). That being said, mental health relief following crises need not be universal. A triaging method which accounts for exposure to crises and takes into account protective factors should be used to help target those most at risk while avoiding unnecessary intervention.

02 War

War

Introduction

In exploring war and mental health, we first chose to look at the Syrian conflict and associated movement of refugees as an example of a rapid social change that has had a significant effect on the mental life of those affected. It is a recent and ongoing conflict, so research uses current understandings of common mental health disorders such as PTSD, anxiety, depression, resilience and coping. There is ample literature and it is an area where we have some prior knowledge and interest.

At the time of writing, fighting in Syria has been ongoing for nearly 10 years. The civil war has exposed combatants, civilians, medical personnel and other first responders to massacres, torture, hostage taking and sexual violence as well as indiscriminate bombing. Sieges of neighbourhoods and villages have left civilians trapped inside without access to supplies. (Hassan et al., 2015: p12).

Although estimates vary, the death toll from the conflict is likely to be around half a million. There are 5.5 million registered refugees and about 6.6 million internally displaced people, with children making up at least half of those displaced (Zbidat et al., 2020; Hassan et al., 2015: p12). Most refugees from Syria have remained in the region; there are around 3.6 million Syrian refugees now in Turkey, 880,000 in Lebanon, 655,000 in Jordan and 246,000 in Iraq (UNHCR, 2018).

Our second case, Nepal, has witnessed several periods of organised violence since its beginnings as a sovereign nation. The most recent decade-long Maoist Conflict (1996–2006) has resulted in between 13,000 to 16,500 deaths, with thousands more missing. More than 150,000 people were internally displaced, and more than 100,000 incidents of torture have been reported.

Nepal is considered to be one of the poorest countries of the world plagued not only by conflict, but also myriad natural disasters such as seasonal floods, landslides and earthquakes. Moreover, there is widespread gender-, ethnic- and caste-based discrimination, and grossly unequal distribution of wealth in the country.

The literature

Most studies into the Nepal conflict were original research studies (15) while the remaining 3 consisted of review studies. Among the quantitative studies, the most common study design was cross-sectional (15) followed by experimental (2) and longitudinal (1). Qualitative studies were based on semi-structured interviews with few studies incorporating participant observation. All studies were conducted in Nepal, and included a range of sample sizes, ages, ethnicity, and gender.

The variation between prevalence rates of mental disorders in our literature can be partly explained by the use of a wide variety of tools and the lack of social and cultural adaptation of some of them. For example, PTSD, depression and anxiety were all measured through standard western checklists and scales.

On conflict in Syria, the 26 articles we used included one commentary and three review papers; the rest (22) were based on primary research. Of the original research articles, 9 assessed levels of mental distress using qualitative interviews carried out by a trained interviewer, 10 used questionnaires that participants filled in themselves, either on paper or online, two used some combination of these methods and one seems to have been based only on medical records.

Some researchers attempted to diagnose common mental health disorders using screening tools, while others like Hassan et al. (2016) were more wary of labelling people's distress by diagnosing a specific disorder. All the research was cross-sectional rather than longitudinal or experimental and many of the authors noted this as a limitation of their studies. Six studies used some form of random sampling to identify participants while the others used convenience-based sampling, often including anyone who agreed to take part. Several studies, while not attempting to find a robust statistical relationship between the effects of war and people's mental ill health, did describe the types of experience and infer such a relationship with some obvious justification. Several of the articles also attempted to quantify the level of war-related trauma experienced and find whether it correlated with mental ill health.

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We found original research conducted in a wide range of geographical locations: Syria itself (3), Turkey (5), Lebanon (3), Jordan (2), Egypt (1), Germany (3), Sweden (2), Greece (1) and the United States (1). Overall, most of the literature focuses on refugees. However, Quosh et al (2013) provides an important systematic review that includes some research within Syria including among Iraqi refugees within Syria.

General population outcomes

Most quantitative and qualitative studies into conflict in Nepal reported a positive association between experiences of war-related violence with worse mental health outcomes (78%). A minority of studies did not indicate clearly whether or not there was a positive association (22%), and no studies reported a negative association or, indeed, improved mental health outcomes (traumatic growth). The most common mental health problems were depression, anxiety and PTSD. Prevalence rates varied between studies with depression ranging between 24% to 85%, anxiety between 46% to 81% and PTSD from 14% to 60%. Besides traumatic experiences, 13 studies (72%) referred to ongoing stressors affecting people's lives.

Concurrently, with regards to Syria, rates of PTSD among Syrian refugees are typically around 30%-45% (Alpak et al., 2015; Chung et al., 2018; Rizkalla et al., 2018). Farhat et al. (2018) found very high levels of anxiety among Syrian refugees living in temporary accommodation in Greece: some 92% of participants living on Samos, 80% of those from Ritsona camp near Athens. Kira et al.'s (2017) study of refugees in Cairo found that 14% reported either plans to commit suicide or a history of attempts at suicide.

Stressors affecting refugees include socio-economic hardships and violence and danger experienced while on route and when attempting to cross borders – violence could come from the authorities but also from other refugees (Farhat et al., 2018). When they arrive in a new country, refugees can also face socio-economic problems (Rizkalla & Segal, 2018), hard working conditions, disruptive changes in family life and gender-based violence (Kira et al., 2017), loss of opportunities for employment or education (Kira et al., 2017), lack of access to healthcare

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(Jesuthasan et al, 2018) and poor and overcrowded accommodation (Jesuthasan et al., 2018; Dietrich et al., 2019).

Those who stay in Syria also face their own ongoing economic hardships related to loss of employment and education opportunities and sanctions as well as the ongoing threat of the conflict itself (*Perkins et al., 2018*). Indeed, refugees who left were sometimes troubled by reports of family members still in Syria (Arienlu et al., 2020; Farhat et al., 2018).

Feeling sad about not being united with their family members is one of the most commonly reported ongoing stressors among refugees (Tinghög et al., 2017). Peconga & Thøgersen (2019) reported that refugees who fled alone were more likely to have PTSD symptoms than those who were with family members.

Demographic-specific outcomes and predictors

In the literature on Nepal, a wide variety of circumstantial social stressors are identified, including poverty; discrimination of women and girls; unmet needs; cast-based discrimination; low social support; low autonomy; community exclusion of child soldiers; illiteracy and lack of education; physical abuse; family conflict; unemployment; weakening faith and religious belief; lack of landownership; lack of safety; lack of access to health care; weakened social networks; and discrimination based on physical disability (Basnet et al., 2018; Ghimire et al., 2014; Jordans et al., 2012; Kienzler et al., 2010; Kienzler et al., 2019; Kim et al., 2017; Kohrt et al., 2008; Kohrt et al., 2010a; Kohrt et al., 2010b; Kohrt et al., 2015; Luitel et al., 2013; Tol et al., 2010, Thapa et al., 2012).

Coping strategies were explored by 5 studies of Nepalese conflict. Quantitative studies reported a positive association between poor mental health and the extent of their use of resources and support among torture survivors (Emmelkamp et al., 2002; Luitel et al., 2013; Mills et al., 2008). Negative coping strategies were, in turn, predictors for long-term depression, anxiety and somatization. Interestingly, it was also found that positive coping strategies and perceived support were not protective against symptoms and, thus, not considered effective

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by the authors. Only two studies of conflict in Nepal that we reviewed reported on protective factors. Basnet and colleagues (2018) noted that social support was crucial for war widows. Among child soldiers, in turn, Kohrt and his team (2010) highlighted the importance of reintegration support.

From the Syrian conflict, Alpak et al. (2015), Chung et al. (2018), Dietrich et al. (2019) and Arnetz et al. (2020) found a significant correlation between the number of traumatic events experienced and a probable PTSD diagnosis. Likewise, Tinghög et al. (2017) linked this to anxiety, depression, PTSD and low subjective wellbeing, finding a correlation between trauma and all four of these; mostly strongly with PTSD.

Gormez et al (2018) found that witnessing violence, seeing wounded or dead people or the death of someone close to them was positively associated with PTSD in 9 to 15-year-old Syrian refugee children. These factors were also significantly associated with anxiety disorders, although, strangely, personal experience of cruelty or torture was associated with anxiety but not PTSD. These also vary as the effects of the civil war and the ISIS occupation vary by geographic region.

In a study of 18 to 25-year old Syrian refugees in Germany, Dietrich et al. (2019) found a correlation between having relatives in Germany and severity of mental distress. They suggest that older relatives may act as a source of social control and therefore increase young people's distress. These authors also report relatively low levels of mental disorders (PTSD prevalence of 18% and 19% prevalence of all disorders measured) compared to other studies. This suggests that the young age of this sample or perhaps the relatively optimistic prospects associated with life in Germany are protective.

Peconga's and Thøgersen's (2019) review of the literature confirms that most studies found no relationship between gender and mental health symptoms. Regarding those who stayed in Syria, Falb et al. (2019) found that food insecurity and intimate partner violence were correlated with depressive symptoms among women in Raqqa. Early marriage may be a strategy of coping with the effects of conflict that also acts as

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a further source of distress, particularly for young mothers (Hassan et al., 2015: p133). The same two studies also mentioned that changing family relations could be positive for women as their refugee status meant that they had greater responsibility and felt the need to “be strong for their children”, which they used as a coping strategy (Zbidiat, 2020: p11). However, the mental health issues of refugee parents can have a negative effect on their children (Erucar et al., 2018).

Regarding coping strategies for Syrians, Arienlu et al. (2020) listed 16 coping mechanisms for refugees in Turkey, including support from spouses and other family members, maintaining contact with family in Syria, looking to religion to make sense of the situation and generally trying to make the best of things. Several studies referred to the “collectivist” culture and strong emphasis on family life in Syria.

According to Chung et al. (2016: p63), this plays a protective role in Syrians’ mental health, and is much more predictive of mental health outcome than place of settlement. Being adequately supported by family members and service providers seems to greatly reduce refugee children’s distress (Hassan et al., 2016: p132). Overall, moving to a safer country seems to be beneficial to mental health, resulting in slightly lower rates of PTSD in accompanied children (Soykoek et al., 2014).

Service provision and lessons for Covid-19

Research on Nepal highlights that poor mental health cannot be simply traced back to traumatic war experiences, but is interlinked with ongoing stressors (Jordans et al., 2012). All studies reviewed advocate for holistic, multi-sectoral and multidisciplinary approaches to intervention and treatment for survivors of conflict, as well as inter-sectoral humanitarian action targeting perceived unmet needs. Additionally, it is recommended to involve traditional healers and religious leaders while ensuring overall cultural appropriateness of the intervention.

For instance, war widows are expected to benefit, besides from mental health support, also from informal and formal education and activities to enable social support (Basenet et al., 2018) as well as more upstream from government policies that provide protection, foster societal

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norms that uphold widows' social standing, and allow for economic empowerment (Kim et al., 2017). Similarly, researchers promoting health and wellbeing among child soldiers emphasize the importance of community integration and following an ecosocial approach which involves individuals, families, schools and the wider community (Kohrt et al., 2015). With regards to girl soldiers, it is recommended to pay special attention to the mental health consequences of sexual violence and reintegration difficulties (Kohrt et al., 2008).

Most articles on Syria considered psychosocial approaches most appropriate arguing for focusing on "distress" rather than mental disorders so as to provide person-centered approaches that are both culturally competent and respectful of diversity (Arienlu et al., 2020; Hasan et al., 2016; Kazour et al., 2017; Murray, 2018; Peconga et al., 2019; Tinghög et al., 2017; Zbidat et al., 2020). Psychosocial approaches include women's groups, child friendly spaces and appropriate activities for men (Hasan et al., 2018) as well as education opportunities for children and adolescents (Arienlu et al., 2020; Dietrich et al., 2019; Karadag et al., 2018; Kazour et al., 2017; Rizkalla et al., 2018) and workforce integration for adults (Dietrich et al., 2019).

In terms of treatment strategies, the emphasis was put on prevention to address maladaptive coping (Al Saadi et al., 2017; Chung et al., 2018; Woltin et al., 2018), while specialised support is to be reserved for those with severe mental health issues as well as women suffering from gender-based violence and, related to this, poverty (Hasan et al., 2016; Falb et al., 2019). Other proposed interventions argue for the implementation of ecological approaches (Eruiyar et al., 2018; Karam et al., 2019; Kazour et al., 2017; Murray, 2018). Such approaches should take multiple simultaneously existing stressors into account when addressing mental health and psychosocial concerns among individuals, families and communities.

Overall, while this review shows that war does have a more global impact on mental health compared to disasters, this is likely because of how pervasive and extreme the trauma is, and how almost the entire population is affected directly. This is not comparable to the Covid-19

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pandemic where, although disruption of everyday life is universal, exposure to trauma and significantly lower standards of living are not. However, lessons that we can extend to the current pandemic include the effect of those most directly exposed to crisis trauma, and the effect of 'secondary' socio-economic hardship; felt more acutely in some cases by some women and the disabled. Thus, mental health intervention for the Covid-19 pandemic should include social policy to alleviate these hardships and specific mental health support to those engaging in negative coping strategies, and those lacking access to positive ones.

03

Recession

Recession

Introduction

Here our chosen case studies are the fall of the Soviet Union after 1991 and its impacts on Russia, and the financial crisis of 2007-8 and its impact in the UK. In both cases, a sudden crisis was experienced by significant impact on many aspects of people's lives, including mental life.

The global financial crisis began in 2007 with a massive collapse in financial markets triggered by the bankruptcy of several US firms offering subprime mortgages. This led to a recession in all major economies, including the UK which officially went into recession in 2008 (ONS, 2018). Many countries pursued policies of austerity to varying degrees in order to try to reduce their budget deficit. In terms of reductions in real spending, the UK's austerity policy was the third most extensive in Europe, behind Greece and Luxembourg (Reeves et al., 2013).

Some states opted to increase public spending in order to try to drive growth, but as Reeves et al. (2013: p435) state, "the UK government has chosen to cut social protection while others have not". In late 2011, the number of people unemployed and looking for work peaked at 2.7 million (8.4% of the population aged 16 or over – ONS, 2018). At around this time, some 13.5 million people (26% of the adult population) classed as income poor, in other words, with income below 60% of the median income after housing costs are paid (Knapp, 2012; Coope et al., 2014).

The fall of the Soviet Union was a period of social upheaval that directly affected some 287 million people across 15 states. These events were preceded by the period of economic liberalisation in Russia known as perestroika (from 1985) and in many countries the end of the Soviet Union was followed by a rapid period of privatisation of industry, rising levels of unemployment and dramatic increases in mortality (Stuckler et al., 2009). Russian life expectancy at birth peaked during the late 1980s at 64.9 for males and 74.5 for females. By 1994 it had declined dramatically to 57.5 for males and 71.1 for females before starting to rise again (Cockerham, 2000). Although this is not just an issue of mental health, it also relates to factors such as diet and lack of exercise, increased stress, alcohol consumption, and rising rates of suicide; all of which are thought to have played a role.

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The literature

The articles we found and were able to analyse represented a small snapshot of a much wider literature. In our sample of 22 articles on the 2007 recession in the UK, five used data from the Stockton-on-Tees cohort study, which was longitudinal and involved collecting both quantitative and qualitative data; five used data from large scale surveys such as the Health Survey for England; two used cross-sectional surveys carried out by the authors; one used UK wide demographic data. The other articles we analysed were policy documents and commentaries rather than original analysis.

In the Russian case, the number of studies available was more limited. Four of the Russian studies used cross sectional surveys or interviews, four used data from large scale longitudinal health surveys (mostly the Russia Longitudinal Monitoring Survey which has been running since 1994), and 14 studies used demographic data; for example, comparisons of countrywide mortality rates with levels of unemployment. The other two articles were opinion/commentary pieces with no original data analysis.

In both the UK and Russia there is a gap in the literature on ethnicity and mental health in the context of a recession. The Stockton-on-Tees cohort study was not able to come to any conclusions as their sample was mostly of white people (Mattheys et al., 2016).

General population outcomes

In the case of the 2007-8 recession, a study of 63 countries estimated that there were 4,983 excess deaths by suicide in 2009 compared to 2007 and attributed this to the recession (Nordt et al., 2015). This study also found, counter-intuitively, that the rise in suicide rates preceded the rise in unemployment by around 6 months.

In the case of the UK, a study using data from the Quarterly Labour Force Survey found that there was a significant increase in self-reported mental health problems between 2009 and 2013. The prevalence of mental health problems increased by 0.08 percentage points each quarter over and above the previous upwards trend. This started in the

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first quarter of 2009 (Barr, Kinderman, & Whitehead, 2015). A study using data from 106,985 participants the Health Survey for England found that mental health caseness increased from 13.7% in 2008 to 16.4% in 2009. This represented an increase from 11.3% to 16.6% in men and from 16.0 to 16.2% in women (Katikireddi, Niedzwiedz, & Popham, 2012).

One proximate cause of the increased mortality in Russia was ischemic heart disease (IHD). Rates of heart disease increased between 1990 and 1994 by 38.4% in males and 25.9% in females. The most likely cause of the rise in IHD was argued to be psychological distress caused by the “conditions of anomie, loss of control over life, economic deprivation and social isolation” following the end of the Soviet Union (Razvodovsky, 2013: p69).

A study of depression, anxiety and sleeping disorders that took place in Arkhangelsk between 1999 and 2000 found high rates of these disorders, with 68.7% of women and 32.3% of men reporting symptoms of one or more of these (Averina et al., 2005). The number of people in Russia registered as disabled due to psychiatric illness increased from 600,000 in the early 1990s to 930,000 a decade later (Parfitt, 2004).

The suicide rate in Russia increased by 62.2% in males and 24.5% in females between 1991 and 1994 having previously decreased by 40.5% and 23.5% respectively between 1984 and 1986 (Razvodovsky, 2009). The change in suicide mortality correlated with the overall change in life expectancy and the effect on suicide differed across Eastern European and for Soviet states suggesting that the influence of social factors is mediated by cultural context (Mäkinen, 2000).

After 1992, there was a rise in vodka sales per capita (Razvodovsky, 2009) as well as recorded deaths caused by alcoholism, alcohol poisoning, accidents and homicide (Leon et al., 1997). But the levels and pattern of mortality did not represent simply a return to the patterns of alcohol associated mortality of the early 1980s (Shkolnikov et al., 1998: p2000). Therefore, Shkolnikov et al. (1998: p2008) conclude that the post-Soviet transition and its related stress and loss of self-identity played a major role in contributing to harmful drinking.

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Both these cases suggest that the stress induced by any disruption to the established social order (Stuckler et al., 2009: p404), including the feelings of insecurity and fear of potentially losing one's job, can also be a source of mental ill health.

Demographic-specific outcomes and predictors

In the UK, the prevalence of reported mental health caseness increased in people in work from 9.9% to 12.9% and from about 25% to 30% in the unemployed. (Katikireddi et al., 2012). Concurrently, Barr, Kinderman, and Whitehead (2015) find that, although the increase in mental health caseness was observed in people in and out of work, it was greatest among the unemployed and particularly those "facing multiple disadvantages of being out of work, having a low level of education and reporting a mental health problem" (Barr et al., 2015: p329). Additionally, (Barr et al., 2015) found that people with a lower education level were twice as likely to report a mental health issue as those with higher levels of education and that the gap widened from 2009 (Katikireddi et al., 2012: p5).

Stuckler et al. (2017), and Reeves et al. (2013: p435) found that unemployment associated with austerity had an effect on mental health, pointing to a correlation between public sector job losses between 2010 and 2012 and suicide. There was a 20% rise in suicide parts of the North of England which was also the region most affected by these job losses in this period. These studies suggest that we can make a distinction between the initial effect of the financial crash in 2007-8 and the subsequent austerity policies of 2010 onwards. However, (Coope et al., 2014) found that the rate of suicides in the most deprived areas of England and Wales compared to the least deprived did not widen after the recession. They suggest that those in deprived areas may already have experienced insecure work and living conditions.

Recession and austerity in the UK had a disproportionate effect on disabled people, including those who were already experiencing mental distress. Changes to the benefits system included harsher sanctions and a new work capability assessment (WCA) which was seen as punitive (Cummins, 2018) and was experienced by many as

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a source of stress and uncertainty, with a constant cycle of failure in the assessment, success in the appeal process and reassessment (Mattheys, Warren, & Bambra, 2018). The WCA has been associated with 590 additional suicides and 279,000 additional self-reported mental health problems (Barr et al., 2015).

Working age men were also some of the most affected by recession in the UK. (Thomson & Katikireddi, 2018) found that mental health caseness increased in working age men (16-64) after the recession, before returning to pre-recession trends. Coope et al. (2014) also found an increased risk of suicide among working age men.

In women, there was a more gradual increase in mental distress which continued during the austerity period (2010 onwards) and was greater in younger working age women (16-30) than in 31 to 64-year-olds (Thomson & Katikireddi, 2018). Austerity policies have a more pronounced effect on women, especially younger women who may be supporting families (Thomson & Katikireddi, 2018). Women and young people are also more likely to be doing more precarious work on a part time or zero-hours basis (Barr et al., 2015).

In the UK after the recession, methods of coping were similar for men and women. Emotional support from friends and family and having an alternative role in society such as volunteering or looking after children helped moderate the impact of unemployment on people's wellbeing. (Giuntoli et al., 2011).

Turning to Russia, Perlman and Bobak (2009) also link the rise in mortality during the recession period to unemployment. Whereas employment had been guaranteed by the state during Soviet times, after 1992 it increased rapidly, peaking at 10.8% in 1998, although this figure undoubtedly masks high levels of precarity including wage arrears, workers being asked to take unpaid leave and being paid in consumer goods in lieu of wages.

The Russian mortality crisis was particularly evident among men of working age, with the greatest fluctuations in life expectancy in the 20-

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45-year age range and especially in the 40-44 age year range. Relative decreases and increases in mortality were similar between men and women, but absolute mortality rates were much higher in men (Leon et al., 1997). Working age men's vulnerability to unemployment and the cultural expectations around heavy drinking among men (women drink less often and are less likely to drink vodka) seem to be two of the most likely factors (Razvodovsky, 2013). Also, the mortality crisis among men of working age was not seen to the same extent in older people or women, despite their lower levels of material wealth, suggesting that the stress of losing one's job and the social isolation and loss of status related to unemployment plays a role as well as absolute poverty (Meltzer et al., 2010).

While mental distress was associated with being female, Averina et al. (2005) and Razvodovsky (2013) suggested that women's social networks and their role as caregivers played a protective role. Perlman and Bobak (2009) point out that men in Russia do not play the same role in the family as women so may be more affected by the psychosocial effects of unemployment. Shkolnikov et al. (1998) also found that being married reduced the likelihood of death by accidents or violence in men. Thus, they argue that the Russian mortality crisis was more influenced by changes in relative social status than absolute poverty. If the crisis had come about due to absolute poverty, we might have expected elderly people and those in rural areas to be the most affected.

In terms of indicators of less negative outcomes, Stuckler et al. (2009) found that membership of at least one social organisation such as a trade union, religious organisation or sports club played a protective role. In countries with high membership of such organisations the effect of privatisation on mortality rates was weakened. In Russia social organisation membership was relatively low at less than 10%.

Service provision and lessons for Covid-19

In both the UK (Knapp, 2012; Stuckler et al., 2017) and Russia (Cockerham et al., 2002: p47), economic crisis was combined with reductions in social welfare support including in services that might have helped people to cope with the mental health consequences of social change.

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Becoming unemployed, being in debt or experiencing a reduction in welfare benefits can lead to worsening mental health and can reduce people's access to coping strategies (Stuckler et al., 2009). In the UK case, cuts to welfare payments affected people's mental health for material reasons but also by way of the psychological effect of the increased stigma associated with claiming welfare benefits (Barr et al., 2015).

In terms of interventions that may be more helpful, the Faculty of Public Health (a UK based membership organisation of health professionals) has five recommendations. They are active labour market programmes; family support programmes; controls on the availability and price of alcohol; targeted and preventative mental health care for those most at risk; and debt relief (Faculty of Public Health, 2014).

In the Russian case, it is argued that the Soviet emphasis on the state taking responsibility for the welfare of its citizens had left people ill prepared for a society in which they were expected to make their own choices about their health and adopt healthier lifestyles (Cockerham et al., 2002). In the UK following the 2008 recession, there is less evidence of such a behavioural dynamic.

Covid-19 and the necessity of widespread social restrictions – “lockdown” measures – have had an immediate impact on economies as they impact on both production and demand for goods and services. In the UK, the GDP in April 2020 was 25% lower than it had been just two months before. Although there was some recovery it was 8% lower than pre-pandemic levels in October (Harari, Keep, & Brien, 2020). This represents a greater economic shock than the 2007-8 crash.

The government spent £280 billion on measures to support businesses and individuals in 2020 and they expect the budget deficit to reach levels not seen before in peacetime. The specific long-term consequences of this are unclear although we can expect that the crisis will “result in lasting damage to, and/or structural shifts in, the economy” long after the pandemic itself is over (Harari, Keep, & Brien, 2020).

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The Coronavirus Job Retention Scheme (or furlough scheme) paid 80% of the wages of people who could not work due to the pandemic. The number of jobs furloughed peaked at 8.9 million in May 2020 (HMRC, 2020). Unlike in the previous recession, the furlough scheme and other measures will have mitigated some of the immediate effects of the crisis on employment. Nevertheless, people still lost their jobs.

The unemployment rate rose to 4.9% by the end of 2020, 1.2 percentage points higher than a year earlier (ONS, 2020). When the furlough scheme is discontinued employers may make workers redundant rather than bring them back into employment. There have also been reports of employers rehiring workers on worse terms and conditions than prior to the pandemic. There were gaps in the coverage of the furlough scheme, for example that it did not protect self-employed people.

This study also shows that the impacts of crises are dependent on the existing social and political context. For example, in Russia, where cheap alcohol was widely available, heavy drinking was much more apparent as an outcome of the crisis than in other parts of the world where alcohol was relatively expensive. Taking part in social activities such as volunteering or being part of a sports club or religious organisation can be a coping strategy. Societies with few opportunities to engage in such activities such as Russia in the early 1990s can face particular problems with mental ill health. This is something to consider during the Covid-19 pandemic which has made it more difficult for such groups to meet up in person.

04

Previous Pandemics

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Introduction

The influenza pandemic of 1918, also known as the Spanish flu, was the most devastating pandemic of the 20th century. It was caused by an extremely virulent H1N1 influenza A virus with genes of avian origin. The Spanish flu emerged during the last year of the First World War, quickly spreading across the world (Kent, 2008). Estimates as to how many infected people died vary greatly, putting morbidity between 17 million and 100 million and a mortality rate of 3%-20% (Johnson & Mueller, 2002; Jester et al., 2018a; Jester et al., 2018b; Taubenberger, 2006), concentrated in the age group 20-40 years.

The social and political context of the outbreak of Spanish Flu is thought to have exacerbated the impact of the disease. Wartime and post-war living conditions, matched with poor sanitation and limited access to healthcare services, contributed to increased disease transmission. Overcrowded barracks and the large-scale movement of troops put thousands of immunologically naïve soldiers in close contact (Saunders-Hastings & Krewski, 2016). Wearing of masks, good personal hygiene, and limited use of public transport were encouraged worldwide, while some countries enforced isolation of infected individuals, imposed quarantines, and implemented limits or bans to public gatherings (Phillips & Killingray, 2003).

Similarly, the 2013-2016 West African Ebola virus disease (EVD) epidemic was a devastating, large-scale public health emergency with a case fatality rate ranging from 25 to 90% (CDCP 2019; WHO, 2016). It claimed 11,310 lives with 28,616 cases reported across Liberia, Sierra Leone, and Guinea (WHO 2016). There are over 10,000 survivors of the epidemic, many of whom experienced long lasting effects of EVD, such as physical impairment and anxiety, grief, flashbacks or sleep disturbances (Vetter et al., 2016; Wilson et al., 2018).

Adequate supportive care by informed medical staff, alongside well-resourced facilities, could have helped to avoid many unnecessary deaths. However, there were no adequate basic health care resources such as protective equipment, intravenous fluids, tests or sterile

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injection equipment, let alone a vaccine (Del Rio et al., 2014; Kentikelenis et al., 2015; McPake et al. 2019; O'Hare, 2015).

Since the early 1990s, the International Monetary Fund (IMF) provided conditional loans to EVD-affected countries, forcing governments to prioritise short-term economic growth over social spending that could potentially have led to more sustainable economic growth and social well-being (Ferguson, 2006; Boozary et al., 2014). Dominant discourse places blame for mistrust of government initiatives to combat EVD on non-compliant and uneducated populations, rather than understanding these reactions as a reasonable response to centuries-long exploitation as well as structural and direct violence (Richardson et al., 2019).

The literature

Historical research into the Spanish flu had been scarce. It was not until 1998, a year after the global avian flu (H5N1) threat, when the first international conference was convened in Cape Town (Phillips & Killingray, 2003). Of the 36 papers presented, none of these addressed in detail the consequences the disease had on the population's mental life (Beiner, 2006). The paucity of scientific research, academic discussions and even art exploring the Spanish flu's impact on mental life is striking (Crosby, 1976; Beiner, 2006; Phillips, 2014). We found that the majority of selected papers relied on records of psychiatric institutions, while a small number of them draw on oral histories and literary records or builds on tenuous links of associations.

Numerous papers have shown association between EVD infections and psychological or emotional distress. However, the quality of these studies is mixed. Few provide empirical data or describe how data was collected. Many of the quantitative studies reviewed rely on a small sample size with only one providing a control group. To support their findings, they often cite other studies that suggested associations between improved mental health and stressors/coping strategies with no empirical data to back their claims up. The majority of these studies have used quantitative methods relying on psychiatric diagnostic categories to measure distress. In other studies, mental health symptoms (e.g., Sleep disorder, Anxiety) are measured alongside other sequelae of

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EVD infections as part of neurological problems (*Wilson et al. 2018*). Qualitative studies are scarce and to our knowledge there are no ethnographic studies examining EVD's long term impact on survivors. While many papers mention EVD's negative impact on social ties, the extent of this diminished social support and the consequences for mental life are not explored in depth.

General population outcomes

Investigating the 1918 pandemic's impact on suicide behaviour within the population of the United States, Wasserman argued that between 1918-1920 excess influenza related deaths were significantly and positively associated with the rates of suicide in the US independent from variables associated with the First World War and the prohibition on alcohol consumption.

Some research suggested that there were excess compulsory hospitalisations to psychiatric institutions from those not infected (Mamelund, 2003; Hide & Coutinho, 2006; Delic and Plaviscic, 2020). Drawing on data from the Norwegian Asylum Hospitals between 1918-1923, Mamelund (2003) demonstrated a trend in increasing first time hospital admissions with influenza and pneumonia related mental health issues. However, Heide and Coutinho (2006) found that the spreading of Spanish flu had no effect on the number of acute compulsory psychiatric admissions in Amsterdam. Similarly, Delic and Plaviscic's (2020) paper examines the correlation between diagnosis of Spanish flu and mental illness in the Provincial Hospital of Pula, Croatia. The results indicated no such correlation between 1918-1920.

Depression was the most common psychiatric category researched and reported amongst EVD-affected populations. Studies suggested its prevalence could be between 1% and 75% (Quereshi, 2015; Etard et al., 2017; Wilson et al., 2018). A survey assessing the prevalence of PTSD and anxiety-depression in the general population of Sierra Leone found that over a year from the start of the epidemic 76% of the population experienced some kind of symptom of PTSD but only 16% manifested clinically significant post-traumatic reactions (Jalloh et al., 2015).

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Demographic specific outcomes

Fatigue and delirium were often reported during the Spanish Flu's course, on occasion followed by other forms of distress or extreme emotional states described as depression, hysterical convulsions, emotional instability, neuritis hystero-epileptic attack, post-influenzal psychoses and neurasthenia (Abrahams, 1919; Menninger, 1919). While some research suggested depression to be the most common post-influenza diagnosis (Osler, 1915), the frequency of "dementia praecox" was the most notable of all other diagnoses (Menninger, 1919). Encephalitis lethargica or sleeping sickness is estimated to have affected over 1 million of the world's population during the period of the epidemic and caused half a million deaths globally (Ravenholt & Foege, 1982).

During the First World War, for those living in psychiatric institutions the already overcrowded conditions were exacerbated by the military's requisitioning of beds and other resources for war casualties. In 1918 annual death rates ran at 20% in the UK asylums compared to the pre-war death rate of 10% (Crammer, 1992).

Kapinska (2020) and Yudofsky (2009) argue for positive association between in utero exposure to influenza and the increased risk of being diagnosed with schizophrenia or other psychotic disorders later in life, while an alternative explanation for the differences in extreme distress in later life could be that hardship in infancy and childhood, such as hunger or exposure to war-related events, negatively impacts survivors' mental health, educational outcomes, cognitive ability and subjective well-being (Havari & Peracchi, 2016: pp. 9).

Published data reflected a high level of anxiety amongst EVD-affected populations, its prevalence ranging from 27.5% to 83.3% (Howlett et al., 2017; Jagadesh et al., 2018; Wilson et al., 2018). Both knowing someone quarantined, as well as perceiving EVD as a threat, increased the likelihood of reporting symptoms associated with PTSD and anxiety-depression. Furthermore knowing someone who died from EVD was positively associated with PTSD symptoms, but not of anxiety-depression. A number of studies also suggest increased emotional

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distress amongst those who came into direct contact with EVD such as healthcare workers or family members of survivors (Mohammed et al., 2015; Jalloh et al., 2015; Wilson et al., 2018).

After leaving the ETU many survivors struggled to reintegrate into their communities, felt isolated, depressed and some even started to doubt if they wanted to stay alive (Rabelo et al., 2016). Many reported stigma or even ostracism by family and their community (Nanyonga et al., 2016; Hugo et al., 2015). This fear of infection had dramatically transformed social practices such as shared childcare responsibilities between families, placing even more burden on the already weakened support network of survivors (Bell et al., 2017). Insomnia or other forms of sleep disturbances was one of the most common mental health consequences of EVD infection with prevalence estimated as high as 75% among survivors (Keita et al., 2017; Etard et al., 2017; Vetter et al., 2016).

Unstable and insecure living situations, diminished social support, loss of income, and isolation have undermined healing processes and increased the amount of stress survivors had to cope with (Rabelo et al., 2016). Stigmatisation, social isolation and loss of social support were associated with increased risk of psychological and emotional distress (Kamara et al., 2017; Ji et al., 2017; Van Bortel et al., 2016; Waterman et al., 2018).

Health-care workers, burial teams and relatives of EVD patients were also likely to present symptoms of depression (Bakare et al., 2016; Keita et al., 2017; Nuriddin et al., 2018). Waterman et al. (2018) argued that healthcare workers were as likely to experience high levels of anxiety as survivors. While Ji et al. (2017) present findings that 83.3% of medical staff who were in contact with patients in Sierra Leone during the outbreak had anxiety, and 94.4% had phobic anxiety. Their paper also suggests that behaviours related to precautions taken to avoid contracting the disease (e.g. hand washing) could amount to what is diagnosed as obsessive-compulsive disorder. They indicate that the prevalence of this disorder could be as high as 83.3% amongst survivors, healthcare workers and sanitation staff. Local Liberian ETU staff tasked

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with cleaning and disinfection were assessed to display significantly higher levels of obsessive-compulsive symptoms, anxiety, and phobic anxiety than treatment or observational ward staff (Li et al., 2015).

The most common coping strategies reported by survivors were religious practices, knowledge around EVD and its potential effect on their mental health, peer support groups, counselling as well as supportive attitude from caregivers, religious leaders, family, community and medical staff (Rabelo et al., 2016). Some survivors found the presence of religious leaders and praying together with others highly supportive (Rabelo et al., 2016).

A mixed-method study by Colorado et al. (2018) used Brief Symptom Inventory (BSI) to assess psychological distress. Major protective factors included HCWs' region of residence, religion and educational level. This resonates with the findings of Ji et al. (2017) and Bell et al., (2017) showing positive association between self-perceived lack of knowledge around supporting Ebola patients and emotional distress.

HCWs felt they managed to maintain a hopeful attitude among themselves by encouraging each other and sharing knowledge around proper sanitation and hygiene to prevent infection. Finally, stories of courage, heroism and adaptability were a helpful way to deal with daily stresses during the epidemic (Colorado et al., 2018). Using the Coping Strategies Inventory, the authors found that the most common coping strategy among the 403 respondents was wishful thinking, followed by social support, problem solving, cognitive restructuring, and problem avoidance while social withdrawal and self-criticism received the lowest score.

Service provision and lessons for Covid-19

Other pandemics in the 20th century, such as Spanish Flu and Ebola, have very different profiles from the current epidemic of Covid-19, including the effects of the viruses, the geographical spread, and extent of studies on mental health.

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Per the Spanish Flu, the absence of other literature on 'mental health' is itself a notable finding – that is to say that its absence indicates the low salience of mental health concerns in that period, or perhaps it results from deliberate attempts to downplay and under-report the extent of the viral infection and its consequences.

In the case of Ebola, the high rate of case fatality in West Africa was not inevitable. It was primarily due to staff shortages, poor health emergency response coordination, and a lack of basic infrastructure, equipment and facilities. Unclear and inaccurate communication as well as international intervention designs did not pay sufficient attention to the historical and cultural context of the epidemic (Sáez, Kelly, & Brown, 2014), for example blaming an 'uneducated public' for a reasonable skepticism towards an exploitative government (Richardson et al., 2019).

The implementation of a strategy that was not informed by local realities led to ineffective and inaccurate communication from both governments and many international agencies, missing the opportunity for a close cooperation with local communities at the early stages of the outbreak (Abramowitz et al., 2015; Suez, Kelly, & Brown, 2014). However, where services were made available, CBT-based intervention, counselling, knowledge of EVD and its possible impact on mental life were all associated with better mental health outcomes (Englert et al., 2019; Kamara et al., 2017; Waterman, 2018).

While our review of previous pandemics shows some conflicting reports of negative mental health outcomes in the general population, elevated anxieties or emergence of PTSD symptomatology was still below clinical significance for the majority. Yet again, the literature points to social and economic deprivation as a main catalyst for poor mental health outcomes, with positive coping strategies involving community involvement and good communication and dissemination of knowledge. Perhaps most interestingly is the finding from the Ebola case that lack of clear government communication of pandemic guidelines was compounded by skepticism from a populace that doesn't trust their government to uphold their best interest. It appears

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that properly resourced social policy, community outreach and ingenuity, and targeted interventions represent the most efficient way to manage the mental health consequences of pandemic crises.

In contrast to these cases, the current intense concern on mental health consequences of Covid-19 may arise more from the prominence of mental health in popular discourse today, the moral entrepreneurship of mental health professionals seeing in this pandemic an opportunity for grants, papers, ongoing investment and an improvement of their public profile, and the attraction of stories about mental health to the mass media.

05

The Covid-19 Pandemic

The Covid-19 Pandemic

The general population

A comparison of the mental health documentation of Covid-19 compared to other recent pandemics, including H1N1 and Ebola, shows a far greater number of publications; 3070 to 327 and 127 respectively (Maalouf et al., 2021). This is not surprising, both because of the upward trend in academic exploration of mental health, and because numerous aspects of the pandemic have been expected to have had an effect on mental life. These include the isolation caused by the lockdown and social distancing measures, fears about catching or spreading the virus, grief for lost loved ones, burnout among healthcare workers, the effects of disruption to education, the stress of having to care for young children while schools are closed, or the effect on mental life of domestic violence, which saw an increase during the first lockdown. Indeed, there has been an increased rate of neurological or psychiatric disorder diagnoses, including first time diagnoses. This is more so than other similar respiratory infections (Taquet et al., 2021).

Still, the findings from our case studies suggest that the impacts of Covid-19 on mental health will not have been evenly distributed across society. This assumption is indeed supported by existing literature on the Covid-19 pandemic. Across a number of studies, anxiety, fear, and major stress were found to peak at the beginning of the pandemic but quickly plateaued. While there was a large dip in reported happiness, this has since returned to pre-pandemic levels. Still, there is some evidence that depression is more acute now than available pre-pandemic insights show and there is also some evidence for overall life satisfaction decreasing during lockdown. Contrastingly, loneliness, sadness, and thoughts of self-harm and suicidal ideation have not increased (PHE, 2021).

A survey comparing pre-pandemic rates of depression to the first few months shows a spike in depression from **9.7%** to **19.2%** of the whole population, which **84.9%** of participants linked to increased stress and anxiety. Notably, these rates were higher in female participants, those unable to afford an unexpected expense, and those with disabilities (Vizard et al., 2020). Contrastingly, a longitudinal study of UK populations before, during, and after the start of the Covid-19 pandemic (Kwong

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et al., 2021) showed a reduction in depression but increase in anxiety and lower wellbeing. Another study comparing pre-pandemic mental health and rates in April 2020 showed an increase in mental distress exceeding the pre-existing upwards trend, but again this trend was most pronounced in key workers, the young, women, those living with children, and those who had pre-existing mental health conditions, along with other demographics experiencing health inequalities before the pandemic. Rates were higher in those who were unemployed before the pandemic, but most pronounced in those who became unemployed shortly after (Pierce et al. 2020).

Data from mental health charities also show mental distress has not been consistent across the whole population. Anxiety UK experienced a heavier call volume at the start of the pandemic which has fallen off since the easing of the first lockdown. Mind conversely experienced a dip at the start of the pandemic and a steady rise since. Other services have seen similar patterns, with peaks at the first and second lockdowns and dips between lockdowns 1 and 2, and at Christmas (PHE, 2021). Fancourt, Steptoe, and Bu (2020) also found that increased anxiety and depression peaked at the start of the pandemic and subsequently declined across 20 weeks, dropping most quickly between 2 to 5 weeks and plateauing between weeks 16 to 20. Varga et al. (2021) produced very similar findings on a study of Europeans from 4 different countries.

Shevlin et al (2021) identify overall stable rates of depression and anxiety, and a decrease of Covid-19-related PTSD over time, with outcomes highly correlated to more and less resilient groups within the UK population. Moreover, Williams et al. (2021), who measured positive changes using an expanded version of the positive events subscale of the Epidemic-Pandemic Impacts Inventory (EPII), found varying degrees of unintended positive change during the lockdown. However, there was 24.5-29.4% lower positive change for those who rated their health as 'very poor' and those at higher risk of infection. There was no observed difference based on ethnicity or Covid-19 diagnosis, but there was greater positive change for the younger population and those in relationships.

The Covid-19 Pandemic

Studying existing research on Covid-19 mental health, we can see a clear indication that those negative outcomes affecting the general population are relatively short-lived and possibly offset by positive factors and/or innate resilience. Conversely, as already seen above, and discussed in more detail throughout the sections below, poor mental health outcomes have been more pronounced and persistent for certain demographics and populations.

Specific demographics

Even from merely assessing existing studies of Covid-19 we see a lack of focus on certain groups. Gayer-Anderson et al. (2020) found no studies on the effects of pandemic social isolation on refugees, minority groups the homeless, those with serious, long-term mental health problems, or women in abusive relationships, despite evidence of other disadvantaged groups experiencing high levels of emotional distress during isolation, particularly in children with existing mental health issues. Concordantly, throughout our case studies we see a lack of research on the LGBTQ+ community, despite generally increased rates of mental health conditions in this population.

Although inequalities of outcomes reduced across the course of the first 20 weeks of the pandemic period, vulnerable groups still had higher levels of anxiety and depression by the 20 week mark; these included women, the younger population, those with lower incomes and education levels, those with preexisting mental health conditions, and those living alone or with children (Gayer-Anderson et al., 2020). Kwong et al. (2021) showed being female and having financial problems prior to the pandemic were associated with higher rates of depression. Those self-isolating and living alone had higher risks of anxiety and depression, and depression only respectively. Parents of young children had greater levels of anxiety, and financial problems and deprivation were associated with greater depression and anxiety.

Worse outcomes for women have been found to be related to being separated from close friends during lockdown, while making larger adjustments to housework and childcare compared to men reduced stress. While lone mothers were particularly vulnerable, all

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adults living with children were likely to report worse mental health (PHE, 2021). Minority ethnic men and women reported more mental health deterioration than white British population men and women. Interestingly, the white British gender gap in outcomes was not seen in the minority ethnic population. However, in ethnically diverse areas of high deprivation, symptoms of depression and anxiety were more common for white British mothers, and symptoms were more common overall for mother's experiencing economic insecurity (PHE, 2021).

Poorer outcomes for the younger generations have been shown by Henderson et al. (2020), affecting women more than men and notably, predating the pandemic. Highest levels of loneliness reported for under 30s and those with previous mental illness diagnoses (Varga et al., 2021). Young adults between 18 and 34, and women were more likely to report worse mental health during the first lockdown, similar to pre-lockdown but increased, but these groups also recovered faster.

Older adults recommended to shield, particularly those who complied most strictly to guidance and those with multiple morbidities, reported higher levels of depression, anxiety, and loneliness, and lower levels of happiness, satisfaction, and purpose in summer 2020. Protective factors included a slower pace of life, routine, socialising, and having used coping skills previously (PHE, 2021). There is evidence that older people have a significantly lower risk of social isolation, loneliness, and poorer mental health compared to other groups during the pandemic. Risk factors for loneliness in this population are consistent with the pre-pandemic picture. Policy recommendation would be expected to mirror those prior to March 2020 (Bemme et al., 2020).

Children overall appear to have coped well, but effects have been worse for children who are female, economically disadvantaged, or who had pre-existing mental health conditions. In addition, those who needed them found access to mental health services was disrupted in summer 2020 and other evidence suggested a lack of access to support during the first lockdown. Those with other disabilities and BAME children have also experienced higher risk of anxiety and overall mental health concerns respectively. Data tracking anxiety and stress in children show

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the same spike and quick falling off after the first lockdown that was seen in the adult population (PHE, 2021).

There is mixed evidence as to whether the pandemic has been positive or negative for child mental health. But, there is consistent evidence that there have been negative effects for children with special needs, those in low income areas or family, and those in unstable home environments. To offset these, recommendations include provision of free meals, digital breakfast clubs, free internet access, and extra digital education resources (Bemme et al., 2020).

Turning to existing health problems, there are consistent associations between histories of depression and anxiety, and symptoms of poorer mental health. Whereas, the impacts of previous personality disorder traits, history of alcohol misuse and smoking, and asthma and obesity were more varied. Adults with pre-existing health conditions reported higher levels of anxiety, depression, and loneliness, but this may predate the lockdown. Those with psychiatric disorders have also been more likely to be diagnosed with, hospitalised for, and die from Covid-19. Concurrently, those with existing physical conditions, like asthma and certain cancers, also reported more depressive symptoms. Also, those with depressive symptoms were more likely to change their eating behaviours, more so those with less education, or those experiencing loneliness or other stress life events (PHE, 2021).

However, there is some evidence that those with severe conditions have reported no change in mental health during the pandemic. Coping strategies and protective factors for this group include prior experience of adversity, feeling less accountable to others, hobbies, staying connected, and perceiving social support. Likewise, there is conflicting evidence that adults who had Covid-19 symptoms were also more likely to report higher levels of distress and loneliness, however this effect is clearer in people who actually reported their symptoms (PHE, 2021).

Notably for the BAME population, increased rates of pre-pandemic mental distress have persisted or worsened, possibly partially accounted for by this group being more economically vulnerable.

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Ethnicity in combination with gender differences show higher self-harm and suicidal ideation under the first lockdown and ethnic minority health workers have exhibited higher anxiety and PTSD related to PPE. BAME mental health services users have also had a higher risk of infection, hospitalisation, and death (Bemme et al., 2020).

In accordance with our case studies, mental health outcomes of crises such as Covid-19 pandemic are stratified, indicating clear at risk-populations predicted either by existing poor physical or mental health, or any demographic found to be a precursor to socioeconomic disadvantage.

Economic disadvantage

Throughout the above studies of mental health outcomes for different demographics, a clear pattern seems to emerge whereby, across factors like age, gender, and ethnicity, poor mental health is consistently linked to social and economic disadvantage. Interestingly, this dynamic seems to offset the increased health risk of Covid-19 infections in the older population, since poor mental health is still felt more acutely for younger adults who are less at risk of poor physical health outcomes from Covid-19. However, this effect does not extend to children, possibly due to their not being subject to personal economic hardship, a concept reinforced by the fact that their outcomes are linked to their parents' socio-economic status.

Precarity, hardship, insecure employment, and discrimination can worsen mental health and entrench individuals in a cycle that prevents recovery, particularly for children. Concurrently, since mental health resilience is shown to be directly related to the strength of a person's social support, social disadvantage can also be a factor contributing to poor outcomes. Those with lower socio-economic status experience stressors disproportionately acutely, including financial, job, and food insecurities, leading to increased self-reported anxiety and depression. This is coupled with wide employment, particularly for those in certain industries, and difficulty for younger populations looking for available work (Bemme et al., 2020).

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Indeed, during this pandemic, more adults with lower income reported symptoms of anxiety and depression than those with higher incomes and lower income has also been associated with increased loneliness, as is unemployment. This is also true for those who lost sources of income early on in the pandemic, this is pronounced for the immigrant population and freelance workers who are less likely to have secure income. 63% of benefits claimants reported poor mental health compared to non-claimants during summer 2020. Many claimants were rejected for having a partner in work or due to having savings and nearly half of these reported financial strain, i.e. missed payments and malnourishment (PHE, 2021).

Furthermore, across a number of cohorts, there is some inconsistent evidence for factors like status, education levels, income before the pandemic, and neighbourhood deprivation impacting mental health outcomes. However, no access to a garden was clearly associated with higher depression across all cohorts and there is also some evidence showing worse outcomes for urbanites, with loneliness being reported as worse, but no evidence of a difference in depression or anxiety (PHE, 2021).

This relationship between deprivation is not surprising considering there is evidence for it across all of our case studies, most relevantly the 2008 recession in the UK and the ineffective austerity measures used to tackle it. When looking for a starting place for addressing demographic-based mental health outcomes of crises like the current pandemic, rather than exploring outcomes by demographic, it appears to make more sense to begin by exploring deprivation and then tailor findings and further research to instances of deprivation stemming from specific populations.

Healthcare workers, key workers and carers

The Ebola pandemic resonates with the events witnessed in the UK during the spring of 2020. After a lockdown introduced weeks too late, an underfunded NHS was soon overwhelmed, with medical staff working extremely long hours in a high-stress situation, caring for infectious patients without sufficient equipment or PPE. Similarly to

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EVD, the main form of treatment for Covid-19 was supportive care relying on basic equipment and medical staffing. The lack of these resources meant a higher case fatality than most Western European states with avoidable suffering and death (Mahase, 2020). In both cases the infectious diseases did not create a crisis within the healthcare system per se, but made the crisis of that system more visible.

Higher levels of mental health symptoms, including PTSD and reduced wellbeing, have been observed in health care workers in the UK, particularly for female and frontline workers, and those who experienced trauma or those with pre-existing mental health conditions. Other factors increasing risk include restricted PPE availability, heavy workload, lack of preparation or training for managing Covid-19, and poor communication over clinical procedure. Conversely, resilience, sharing stress, and ethical support for treatment decisions reduced risk of worse outcomes (Gilleen et al., 2020).

Greenberg et al. (2021) found substantial rates of probable mental health disorders, and thoughts of self-harm, amongst UK ICU staff; especially prevalent in nurses. Likewise, those with informal caring responsibilities were more likely to experience depressive symptoms, but also had a higher sense of life being worthwhile (Mak, Bu, & Fancourt, 2012). Key workers experienced worse mental health outcomes and lower wellbeing and caregivers were more likely to report depression, particularly if they experienced loneliness. ICU staff reported elevated mental health problems, PTSD in particular (PHE, 2021).

As with deprivation, a second universal finding from our case studies is the effect of 'proximity' to crises, both literal and figurative, which also clearly correlates with worse mental health outcomes. Perhaps the only examples where this does not affect a subset of a national population are our war case studies where the gradient of proximity is shifted far enough to include whole populations as directly affected by crises. However, as highlighted by our research and Muller et al. (2020), occupational and social support is as important, if not preferred, for those closest to crises.

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Conclusions

The 'Tsunami' narrative of the mental health impact of Covid-19 is not only inaccurate, being based on the initial spike without accounting for the subsequent drop-off, but it also becomes a self-fulfilling prophecy if it is overplayed (Bentall, 2021). Moreover, the implication that a wave of mental health will hit the whole population indiscriminately is, whether intentional or not, dismissive of the underlying socioeconomic risk factors for poor mental health outcomes both during and predating this crisis, which would be best treated through tackling inequality and targeted interventions, occupational and psychological, aimed at those closest to the crises, such as healthcare workers and the bereaved, and those already experiencing or at risk of mental health conditions; not funding universal mental health initiatives.

The findings from our research on other crises imply the need for an integrative approach, linking physical and mental health provision, the socio-economic contexts of health, and macro-political and economic policies and systems. Psychological interventions addressing the impact of Covid-19 should be matched with financial and material support to tackle the underlying causes of distress, promoting long-term wellbeing of the population. These interventions should be informed by the sociopolitical context they are situated in and should provide resources to the already existing support networks and coping strategies present within communities.

Scambler (2020) suggests that this pandemic has functioned as a 'breaching experiment', highlighting the shortfalls of recent years of neoliberal governance in the UK. As only 9% of the UK wish a return to life before the pandemic, the paradigm shift that follows will have strong implications for what, if any, lessons from this pandemic can be implemented for post-Covid-19 mental health in the UK. To be able to find an effective and timely response to our current situation and to be more prepared for the next pandemic, we need long-term and in-depth research projects into Covid-19's impact on mental life, so we can have a better understand of the complex pathways through which our mental health is affected by infectious disease epidemics.

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Limitations and further research

Being purely exploratory in nature, this collection of case studies does not include strict systematic collection or statistical analysis of crisis mental health literature. As such, while we can aggregate and discuss existing literature on crisis mental health and critique past discourse, as well as the current framing of the Covid-19 pandemic, we cannot draw any causal relationships or explicit conclusions. Still we expect this study to contribute to an already developing shift from a paradigm of the current pandemic as a universal mental health crisis, to one where existing mental health inequalities are highlighted and exacerbated.

There are inconsistencies in the quality of the literature sourced for this study. For example, it is likely easier to find participants when the population of interest is the general population rather than, say, Syrian refugees or people who were affected by a specific natural disaster. As a result, there is more robust statistical data used in the literature for some of our cases and not others. In both the UK and Russia there are efforts by statistical agencies to collect data on people's wellbeing such as the Russia Longitudinal Monitoring Survey and the Health Survey for England. Both countries also collect information on mortality rates by cause including suicide using International Classification of Diseases (ICD) codes (Nordt et al., 2015). As well as secondary data it has also been possible for researchers in both cases to carry out cross sectional surveys with large sample sizes.

Conversely, what seems to be missing across much of the literature for all studies is qualitative research such as in-depth interviews to gain insights into people's experiences and interpretations of how crises have affected them as well as protective factors and coping strategies. Regarding war and mental health, limited research is available that goes beyond establishing mental health prevalence rates as most studies fail to investigate the political, economic and social determinants of mental health.

While the literature points towards an association between distress and surviving EVD or coming in contact with those who have been infected with EVD, it tells us little about what aspect of the Ebola crisis

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affected the mental life of these people. Neither does it allow insight into the causal pathways between distress and distinct 'stressors' such as socioeconomic circumstances. Several factors were suggested to contribute to a general worsening of the population's mental health in the context of this Ebola crisis. However, there was little empirical data to demonstrate these predicted associations.

Mental health outcomes following disasters can be difficult to measure as well, due to the unpredictability of disaster events and the resultant lack of a 'before' picture. Most often, studies appear to survey existing statistical data, or collect new data following a disaster, typically by questionnaire. Conclusions about the mental health outcomes of disasters are subsequently drawn from the observed uptick in self-reported symptoms, clinical diagnoses, or service use.

There are also challenges in linking broad economic and social trends with mental health. For example, where there is a countrywide correlation between unemployment and suicide rates during times of economic hardship, it may be that other extraneous factors are at work. Some authors (Meltzer, Bebbington et al., 2010) have mentioned reverse causation when drawing links between unemployment, precarity and mental health problems. People with existing mental health problems may be the most at risk of unemployment or may have found themselves in relatively precarious jobs prior to the crisis. Existing mental distress could make someone feel pessimistic and therefore overestimate their level of job insecurity.

As mentioned above, this study further sets the stage for reconsidering the mental health impact of Covid-19, not as a uniform, stand-alone phenomenon, but as one in a series of global crises that show extensive variation in outcomes stratified by existing inequalities and crises exposure across a range of demographics. As such, we would recommend all future studies take this theoretical standpoint when engaging in additional research of any kind into the mental health consequences of current and future crises. We also suggest that future mental health policy or intervention recommendations take account of the patterns explored in this study.

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