How has COVID-19 impacted mental health inequalities for individuals with serious mental illnesses, and how can the NHS respond to work towards equity in mental health?

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INTRODUCTION

Having begun as a cluster of severe pneumonia cases reported in Wuhan, China, the novel coronavirus outbreak was declared a global pandemic on March 11, 2020, by the World Health Organisation (WHO).[1] The rapid upsurge of COVID-19 cases in the United Kingdom (UK) ultimately saw the implementation of a national lockdown in England on March 23, 2020.[2] The COVID-19 pandemic and its associated restrictions have highly affected the general population's mental health. However, there has been a notable difference in the extent of these impacts for specific demographic groups. For instance, being a young female and living with children, particularly in preschool, has been linked with amplified distress during the pandemic.[3] Similar incongruities in COVID-19 effects have been observed in ethnic minority groups, marginalised populations (such as homeless people), and those living in areas of high socioeconomic deprivation.[4]

The mechanisms through which the pandemic has widened pre-existing mental health inequalities include social restrictions that have hindered face-to-face contact and reduced the availability of care services. In addition, aside from increases in general mental distress, there is evidence of specific psychological outcomes post-COVID infection, such as Post Traumatic Stress Disorder (PTSD), anxiety and depression, and other neuropsychiatric symptoms such as sleep impairment.[5]

One group that may be adversely impacted are those with severe mental illness (SMI). SMI often denotes psychotic disorders, bipolar and major depression (which is refractory to treatment or with psychotic symptoms). This definition may also extend to other mental disorders if accompanied by severe functional impairment.[6] Individuals with SMI currently face a mortality gap of 15-20 years compared to those without, primarily attributed to preventable physical health disorders associated with poor health behaviours (including reduced physical activity, poor nutrition and smoking), all of which could be amplified by pandemic conditions. People with SMI are also under-researched in the literature, likely contributing to health inequalities.[7] To mitigate further deprivation to people with SMI, understanding specific challenges faced and considering targeted areas for development is crucial, as many psychiatric interventions focus exclusively on patient symptomology instead of well-being holistically.[7, 8]

Herein, this paper explores how the COVID-19 pandemic has affected the pre-existing mental health inequalities for individuals with SMI and how the NHS could respond to minimise these inequalities and work towards mental health equity.

Social restrictions and isolation

The social restrictions implemented to attenuate the spread of COVID-19 have been known to precipitate a plethora of specific psychological outcomes, namely pervasive loneliness.[9] Although, due to pre-existing differences in social inclusion for people with SMI, they may experience the ramifications of restrictions more acutely. Previous literature suggests that individuals with SMI are more likely to have smaller social networks and less vocational engagement. This, in turn, could reduce opportunities to receive interpersonal support, which in pandemic conditions could precipitate unique challenges.[10] For instance, approximately one-third of people with SMI reported being lonely throughout the pandemic as a significant problem linked to further deterioration in mental health. People with SMI have also reported finding it more challenging to maintain social relationships.[11]

Other psychological reactions that seem to have affected people with SMI disproportionately include anxiety and depression alongside anger, impulsivity, and suicidal ideation.[4, 12] Existing literature indicates that people with SMI experience a more significant anxiety response to the pandemic than the healthy control population; however, no significant difference was noted compared to those with common mental health disorders.[4] Perhaps those with mental illness have more maladaptive coping mechanisms, resulting in more adverse outcomes, such as relapse.

Conversely, evidence suggests that many SMI individuals could cope with restrictions during the early pandemic and were more likely to engage in mindfulness practices; this observation may reflect the role of mental health services in facilitating relaxing behaviours.[4] However, it is worth noting that the SMI participants are more likely to be proficient in literacy to complete the survey, connoting more significant vocational engagement.

Accessibility and acceptability of mental health services

Pandemic conditions have provoked a marked transition in healthcare provisions from traditional face-to-face contact to the promotion of telemedicine and reduced service availability. Telemedicine, used interchangeably with 'telehealth', refers to using technology to communicate and deliver healthcare services remotely.[13] Multiple factors have likely contributed to the reduction in services, such as inadequate healthcare resources, discouragement from visiting hospitals and a reduced priority of immediate care of psychiatric patients. Fears of contracting coronavirus may have also dissuaded patients from utilising services.[12]

In a study by Gillard et al.,[14] people with pre-existing mental illness reported mental health provision as slow to acclimatise to pandemic life, amongst other problems concerning continuity of care, fluctuations in services, and disruption in treatment. They also felt healthcare professionals reacted with a 'Band-Aid' response by opting for prompt but less effective management in place of more long-term solutions. Some participants sought alternative access to mental health support via voluntary and community services.

Telehealth created specific barriers to receiving adequate support for some with SMI. To deliver digital healthcare provisions effectively, it is integral that patients are digitally proficient and have access to the necessary resources. Assuming the latter is valid for all undermines healthcare availability for SMI patients, which fosters further inequity in an already marginalised population. One study that explored internet usage during COVID restrictions in people with SMI found that most participants were either limited or non-users of the internet. This is perhaps due to the privacy concerns and a lack of interest.[15] The minimal engagement with technology could play a role in the heightened loneliness experienced and the reduced perceived social support within this demographic group. Furthermore, the nature of one's mental health disorder could inform their perceived acceptability of telemedicine. For instance, in the study by Gillard et al.,[14] one patient experiencing paranoia found that video calls exacerbated this symptom, resulting in disengagement with this form of communication.

Although, it is worth mentioning that not all people with SMI find telehealth unfavourable. A study by Miu et al.[16] discovered that people with SMI not only had a similar rate of engagement in teletherapy to that of non-SMI individuals, but stayed engaged in therapy despite the transition to online. This demonstrates that people with SMI can find telehealth an acceptable means of support.

The literature also suggests that the COVID-19 pandemic can disrupt the psychiatric ward environment. For example, some SMI patients described the ward setting as a source of anxiety due to fears of contracting coronavirus and the increased use of PPE (Personal Protective Equipment), perhaps creating a more hostile atmosphere.[14]

COVID-19, mental illness and social determinants

Social causation versus social drift

An extensive body of research convincingly exhibits a reciprocal relationship between mental illness and social determinants of health (SDH). SDH refer to the non-medical influences that contribute to health outcomes. Interpersonal conditions, such as areas of upbringing, alongside broader societal mechanisms, including economic policy and social norms, play an integral role in health outcomes.[17] It has long been suggested that adverse socioeconomic factors can increase the likelihood of mental illness. This is known as the social causation hypothesis. Conversely, evidence suggests that those with mental illness 'drift' into poor socio-economic conditions due to stigma, increased health expenditure, and decreased economic output; this is known as the social drift hypothesis.[18]

To illustrate, a study by Pearce et al.[19] identified a positive 'dose-response' relationship between exposure to discrimination and risk of psychosis, alongside identifying urban poverty as a predictor of paranoia, hence social causation. This observation is perhaps due to negative belief schemas in those subject to discrimination. Furthermore, previous literature has found that people with psychiatric illnesses tend not to remain in the labour force to the same degree as non-SMI workers and are less likely to maintain their social class. These findings were particularly pertinent for those diagnosed with schizophrenia, supporting the social drift hypothesis.[20] With some 20% of people with schizophrenia residing in assisted living accommodation, it can be argued that people with schizophrenia are more likely to congregate in shared living areas, which in turn may increase COVID transmission, further reinforcing the social drift hypothesis.[21]

The impacts of mental illness on COVID-19 outcomes

The intricate causal nexus linking social determinants, mental illness and COVID-19 infection, has become increasingly apparent as the pandemic persists. Previous literature suggests a dynamic interplay between these factors, ultimately compromising the health outcomes of those with SMI. For instance, cognition and insight may be diminished in individuals with SMI, reducing their ability to adhere to affective coping mechanisms and healthy behaviours. Resultantly, placing some SMI individuals at greater risk of COVID-19 contamination and more significant COVID symptoms (Figure 1).[22]

Immune dysregulation in people with SMI

Several factors unequivocally experienced in people with SMI have precipitated dysfunctional inflammatory responses, increasing the tendency for more severe COVID-19 outcomes. Through mechanisms such as depletion of pro-inflammatory cytokines, psychotropic medications such as antipsychotics have been known to promote a heightened anti-inflammatory state.[23] This in turn can amplify patients' vulnerability to respiratory infections, including COVID-19. Govind et al. support this idea in a study that suggests individuals on clozapine (an antipsychotic drug) are at a greater risk of COVID-19 and pneumonia.[24, 25] Aside from direct inflammatory effects, psychotropic medication can instigate immune dysfunction via adverse effects such as diabetes and obesity. Extrapyramidal side effects and lethargy are also likely to deter individuals from physical activity, a known protective factor for immune function.[23]

Recent evidence also suggests that cigarette smoking (frequently used as a coping strategy in SMI) is a critical risk factor for severe COVID-19.[4, 23] This is possible through smoking-related conditions, for instance, chronic obstructive pulmonary disease (COPD), which reduces functional baseline, alongside psychotropic medication interactions (such as enhanced clearance of certain antipsychotics). Diet is another factor identified in the literature as a modulator of COVID-19 severity in SMI individuals. For instance, increased saturated fats and poly-unsaturated fatty acids are linked to increased pro-inflammatory cytokine production, causing overcharged immune responses. ACE polymorphisms (alternative phenotypes) have also been recognised as a modulator of COVID-19 severity alongside playing a role in a person's susceptibility to SMIs, via the proinflammatory effects of ACE within the renin-angiotensin system (RAS).[23] Note, ACE refers to 'angiotensin-converting enzyme', which plays a vital role in controlling blood pressure.[26]

These immunity issues are particularly alarming with the knowledge that people with SMI are subject to physical health inequalities and have been found to have more significant morbidity and mortality.[27] Challenges navigating the healthcare system, a lack of routine physical health monitoring in mental health services, alongside stigma from medical staff are possible explanations for this observation.[28]

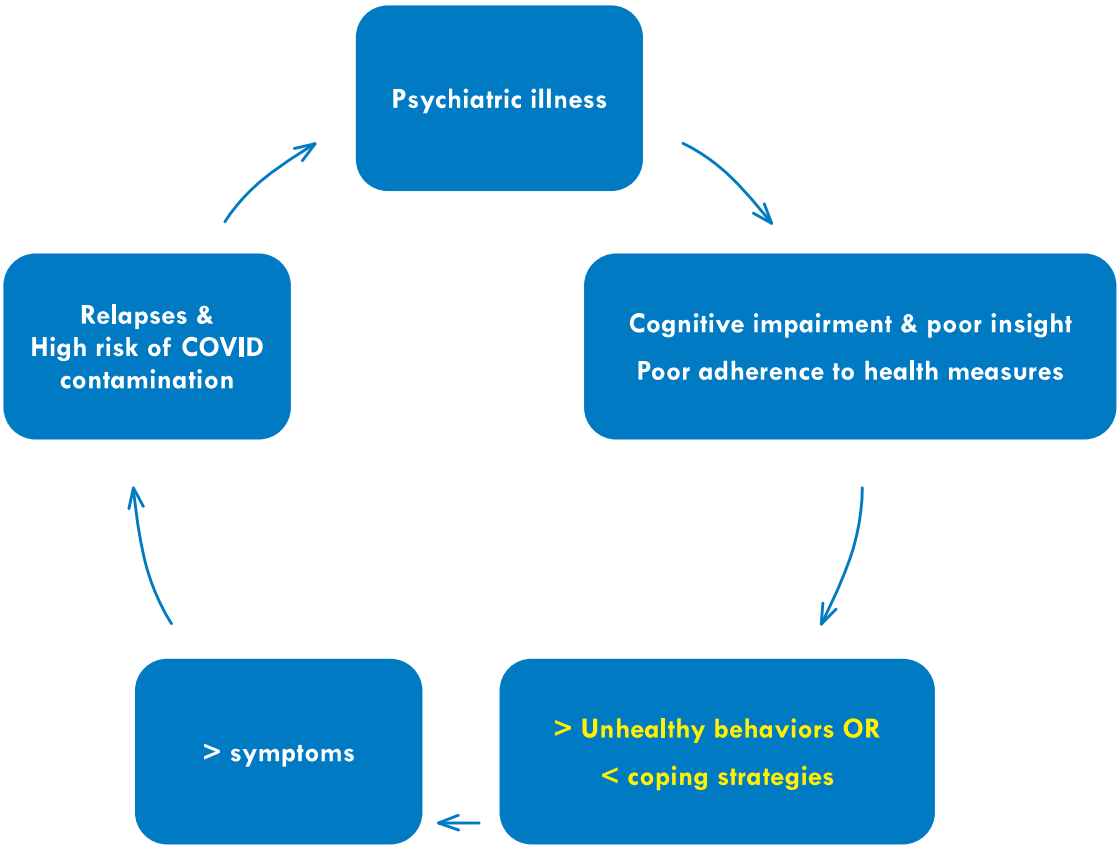

Figure 1: Interrelation between mental illness, poor health behaviours, and COVID-19 contamination risk.[22]

A reflection of the impact of COVID-19 in clinical practice

As a medical student, psychiatric placements have been a vital source of insight into the strain the COVID-19 pandemic has placed on patients with SMI within a clinical setting. To illustrate, Mr X had been detained at a mental health hospital for an acute episode of psychosis. He had a history of long-standing schizophrenia, for which he had been on clozapine. He, alongside seven other patients, was made to self-isolate after contracting COVID-19. During this period of isolation, Mr X's mental well-being seemingly deteriorated as his pre-existing persecutory auditory hallucinations had intensified in the face of social disconnect. This case of relapse is reinforced by numerous other case reports that exist in the literature, which demonstrate deterioration in SMI following pandemic conditions. For instance, one account in the literature describes a 36-year-old patient with schizoaffective disorder who had remained stable in her state from 2012 until March 7, 2020, when she developed symptoms coinciding with COVID-19, which was later confirmed. This, in turn, triggered several neuropsychiatric symptoms, including insomnia, aggressiveness and irritability, which ultimately led to her being admitted to the hospital to keep herself and the community safe after she breached COVID restrictions.[29] The case of Mr X experienced on placement in conjunction with reports of relapse in SMI lends a degree of plausibility to the suggested impacts of COVID-19 restrictions discussed earlier in this article. It also highlights the importance of perceived social support in SMI patients during the COVID-19 pandemic and the need for telemedicine as a source of remote communication when people are required to isolate.

Mr Y, another patient encountered during clinical placement, further reinforces the notion that pandemic conditions can exacerbate SMI symptoms. This patient had a background of emotionally unstable personality disorder (EUPD), bipolar disorder, and persistent substance misuse (namely Ketamine). Amidst several psychiatric presentations he displayed, the patient described a persistent paranoid delusion that seemly nebulous forces subliminally control everyone's thoughts and actions. He then went on to discuss the advent of the COVID-19 vaccine, which had assimilated into his pre-existing delusion as he described this as a further means of control. In this way, it was apparent that pandemic conditions had exerted an additive effect on this patient's symptoms, thus further demonstrating how COVID-19 has wielded an unequal pressure on individuals with SMI.

Striving for mental health equity – what can the NHS do?

As the contributing factors to mental health inequalities are complex and multifaceted, it is not surprising that the solution to this issue follows suit. There is no silver bullet to solving mental health inequity, so in doing so, it is essential to consider how health services can work to mitigate the issues compounded by the COVID-19 pandemic, as discussed throughout this article, as well as ways to alleviate this issue at a population level.

Ensuring effective communication strategies for SMI individuals with healthcare providers and within their social networks will be appropriate for building good mental health

support. Throughout this paper, it has become apparent that poor communication is implicated in COVID-19 concerns such as loneliness and symptom exacerbation. Utilising media such as online forums, blogs, and helplines could help resolve these concerns.[9] This would be particularly useful for patients having to isolate, such as Mr X. To harness the full potential of digital connectivity, further research into the barriers to engaging SMI individuals should be undertaken to ensure inclusivity.[11] In connection with strengthening communication, it would be advisable to enhance communication between scientific communities and people with SMI to provide appropriate health information, particularly regarding COVID-19 infection and psychological risks, to alleviate adverse emotional reactions associated with COVID-19.[9]

Relating to telemedicine, healthcare providers should work to accommodate a broad range of communication media (such as phone calls, text services or video consultations) to ensure SMI patients are not deterred from engaging in services for privacy concerns. For this reason, it is necessary to consider implementing technology to better protect patients' privacy and in cases where such issues are intractable, prioritise in-person support.[14] Furthermore, when exploring reasons for disengagement in telemedicine, it is paramount to investigate further the digital proficiency of SMI individuals to evaluate where the significant disparities lie.[15, 16] To apply this to clinical practice, SMI patients must be provided with the tools to enhance their technical capability and not just physical resources.[15]

It is essential to ensure the standard of care offered is maintained at the very minimum through this shift to telemedicine. This encompasses providing quality provisions that are convenient and cost-effective (particularly for emergency telehealth); can identify the initial signs of psychological distress; monitor for adverse effects of psychotropic medications, and refer patients to additional services (for instance, social interventions).[13, 14] Concerning the healthcare experience, it would be valuable for future research to explore how online doctor-patient relationships are formed and how they can be upheld, especially if the patient switches from face-to-face consultations to teletherapy.[14]

To manage mental health inequalities holistically, the social inequities that inform these must be addressed in any proposed intervention. Therefore, it is essential to build on measures to enhance social inclusion as this is a recognised mental health determinant. Besides tackling this issue actively (for instance, ensuring employment opportunities), it is essential that for interventions to have any longevity beyond pandemic settings, the general population's views towards SMI are addressed, and the role of interpersonal relationships is further explored.[10] Working to increase social and vocational participation and empowering people with SMI is particularly imperative in the context of COVID-19 as the economic consequences of the pandemic have directly reduced employment, which in turn could displace more people with SMI from the workspace and widen the inequalities that persist.[30] In addressing inequalities holistically, interventions that consider the patient's physical health risks are essential. For instance, concerning aberrant inflammatory reactions in SMI and severe COVID-19 infection, genotyping people with severe COVID-19 for specific ACE polymorphisms might have predictive value in screening for those most at risk of mental illness. The utility of ACE inhibitors for mitigating psychotic presentations has also been recognised for its efficacy; hence further research in this area is needed prior to its potential use in practice.[23]

Ultimately, to address the mental health inequalities experienced by people with SMI and the ramifications of COVID-19, the issue must be considered at the level of the population to make systemic and lasting changes. As we advance, efforts to improve mental health inequities should be built on equity and consider areas including data collection, lived experiences of SMI, and policy formation. To achieve this, Kola et al.[31] suggested four fundamental responses: 1. Fiscal investments in settings most at risk of mental illness; 2. Address socio-economic inequities as risks to global mental health; 3. Prioritise people with SMI that are most likely to sustain life-lasting issues; 4. Target low resource areas in intervention planning. Additional responses to minimise mental health inequalities encompass strengthening communities, identifying population health needs, developing practical screening, recognising critical determinants of health, and offering support at every point of contact within NHS services.[32]

Although COVID-associated social restrictions have significantly lessened recently from writing this article (for instance, 'Living with Covid' plans which no longer require people to isolate themselves after testing COVID positive), it is essential to remain vigilant when addressing mental inequities. Healthcare providers must consider the policy implications discussed in this paper with a resolve to prepare for possible future COVID outbreaks and help mitigate the long-term complications of COVID-19 on the mental health of SMI individuals.

CONCLUSION

This pandemic has exacerbated mental health inequalities experienced by SMI individuals via mechanisms including social restrictions and changes in healthcare provisions, resulting in pervasive loneliness and unique psychological outcomes such as PTSD and depression. It has also emphasised an antagonistic synergy between SMI, COVID-19 and social determinants that compromise individual health outcomes, namely by promoting unhealthy risk behaviour and immune dysfunction. These incentives were further echoed through case studies of SMI patients. Solutions to this problem are multifaceted and demand population-level interventions. This broadly includes strengthening communication and social engagement, alongside systemic measures including financial investment and targeting at-risk areas. Future research in telemedicine engagement, online therapeutic relationships, and ACE polymorphism in mental health would also be beneficial. With as much vigour society has committed to resolving COVID-19, the same energy must be afforded to resolving the mental fallout of the pandemic.

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REFERENCES

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