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Integrating mental health and socioeconomic strategies during the post-COVID-19 era: Lessons for future pandemics

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Abstract

The COVID-19 pandemic had profound and unprecedented effects on global health, with an intricate interplay between socioeconomic factors and mental health outcomes. The pandemic exacerbated existing mental health conditions and introduced new stressors, including economic instability, job loss, and social isolation, disproportionately affecting vulnerable populations. Effective interventions that integrate mental health considerations into socioeconomic policies are crucial for coping with future pandemics. This paper employs a dual approach, combining a literature review and a case study, to apply Tayyib's five strategic points for community mental health action and delineate strategies for mitigating these impacts. A conceptual model frames socioeconomic disparities as critical leverage points for improving mental health outcomes. Key findings emphasise the importance of integrated strategies that address economic and psychological well-being, particularly for vulnerable populations. Recommendations include expanding social support networks, enhancing community engagement, and integrating economic support with mental health services to foster inclusive and resilient communities in the post-pandemic era.

INTRODUCTION

The COVID-19 pandemic exerted a profound and unprecedented impact on global health, economies, and societies, highlighting and exacerbating the intricate links between socioeconomic factors and mental health outcomes. Its effects have been devastating infection and mortality rates, and the mitigation measures implemented have long-term consequences on the global population [1]. The pandemic also exemplified the intertwined nature of socioeconomic factors and mental health outcomes. The WHO reported a significant rise in anxiety and depression, with mental health challenges affecting 40% of adults in the

United States [2]. Over 1.6 billion students faced school closures, heightening stress and learning disparities [3]. Socioeconomic effects included a surge of 33 million unemployed globally, with 22 million jobs lost in the U.S. and unemployment peaking at 14.8% [4]. These interconnected crises underscore the urgent need for integrated strategies addressing mental health and socioeconomic challenges.

The health impacts of COVID-19 included millions of confirmed cases and deaths worldwide, exerting immense pressure on healthcare systems and exposing vulnerabilities and deficiencies in public health infrastructures [5]. In addition, the pandemic indirectly affected health outcomes through delayed or inaccessible healthcare services for non-COVID-19 conditions, leading to worse outcomes for

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chronic diseases, mental health issues, and emergency conditions [6,7].

The global economy experienced a significant recession due to lockdowns, travel restrictions, and decreased consumer spending [8–10]. Industries such as tourism, hospitality, and retail were particularly repressed, leading to massive job losses/unemployment and financial instability [11–13]. The economic downturn disproportionately affected lower-income groups and exacerbated pre-existing income inequalities [14]. Job losses and reduced work hours were more common among low-wage, less secure jobs, often engaged by marginalised communities [15]. Educational systems worldwide also faced closures and a sudden shift to online learning, highlighting and widening the digital divide. This disruption significantly impacted students' learning outcomes, particularly among those from lower socioeconomic backgrounds [16].

Furthermore, the pandemic also exacerbated social inequalities, as marginalised groups experienced higher susceptibility to COVID-19 infection, increased mortality rates, job losses, and barriers to accessing healthcare and essential support services [17] and aid [7]. Among the pandemic's effects were increased rates of anxiety, depression, stress, and substance use disorders, mainly driven by feelings of isolation, uncertainty, fear of infection, and economic instability [18-22]. A clear relationship was observed between socioeconomic factors and mental health outcomes [23]. Access to mental healthcare services was limited for lower-income populations due to systemic barriers, further worsening disparities. Economic hardship, job loss, and financial stress contributed to increased mental ill-health [24].

This study sought to espouse effective and sustainable pathways for addressing the broader impacts of the pandemic by strategically targeting the socioeconomic determinants of mental health. We posit that the intertwined nature of socioeconomic factors and mental health outcomes necessitate a holistic approach to pandemic response strategies.
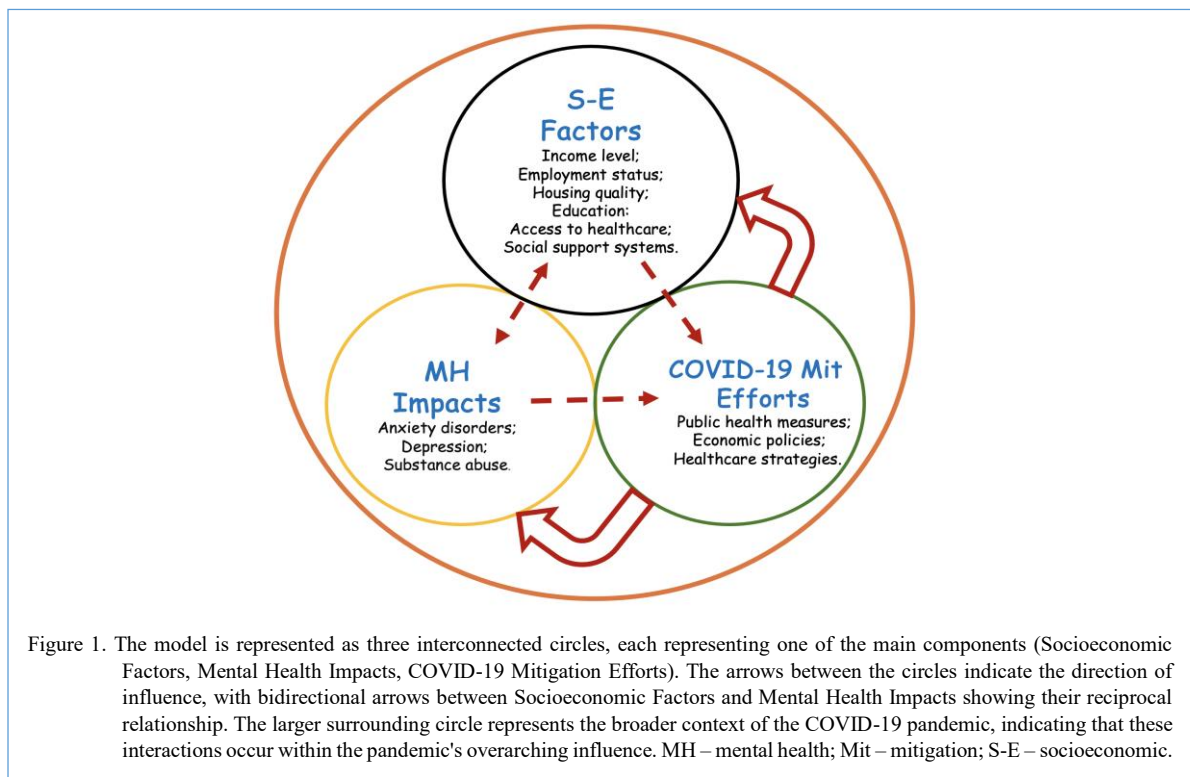
Conceptual Framework

The conceptual model that linked socioeconomic factors, mental health impacts, and COVID-19 mitigation efforts involved interrelationships and feedback loops between these elements (Figure 1). This model underscores how socioeconomic disparities exacerbate mental health challenges and posits that addressing these disparities can be a strategic lever for broader public health mitigation.

Theoretical basis of framework

This study's conceptual framework is founded on theories that portray the complex interrelationships between socioeconomic factors, mental health impacts, and COVID-19 mitigation efforts as follows:

Social determinants of health

This framework postulates that health is profoundly affected by multiple social factors, including economic stability, education, social context, and access to healthcare

Figure 1. The model is represented as three interconnected circles, each representing one of the main components (Socioeconomic Factors, Mental Health Impacts, COVID-19 Mitigation Efforts). The arrows between the circles indicate the direction of influence, with bidirectional arrows between Socioeconomic Factors and Mental Health Impacts showing their reciprocal relationship. The larger surrounding circle represents the broader context of the COVID-19 pandemic, indicating that these interactions occur within the pandemic's overarching influence. MH – mental health; Mit – mitigation; S-E – socioeconomic.

[29]. It supports our argument that socioeconomic disparities directly impacted mental health outcomes during the COVID-19 pandemic.

Bronfenbrenner's ecological systems theory

This theory provides a layered perspective on how individual experiences are influenced by interactions within various environmental systems, from immediate settings like family and school to broader societal and cultural contexts. It underscores the importance of considering multiple levels of influence when designing pandemic mitigation strategies [30].

Maslow's hierarchy of needs

Maslow's theory illustrates why addressing socioeconomic factors is essential for mental health. The pandemic's impact on economic and social security had direct consequences on individuals' ability to meet these needs, thereby affecting mental well-being [31]. Our conceptual framework integrates these theories to explain how improved socioeconomic conditions can lead to better mental health outcomes, which in turn enhance the efficacy of public health mitigation strategies.

Underlying assumptions of the framework

The strategic focus on mental health-related socioeconomic impacts for effective pandemic mitigation was predicated on several key assumptions:

a. Socioeconomic factors are major determinants of mental health. The model assumes that socioeconomic status significantly influences individuals' mental health and suggests that interventions aiming to improve socioeconomic conditions can directly enhance mental health outcomes.

b. Mental health impacts influence pandemic outcomes. It is assumed that mental health challenges can affect an individual's behaviour and capacity to adhere to pandemic mitigation measures. Poor mental health may lead to reduced compliance with public health guidelines, thereby influencing the overall effectiveness of pandemic response efforts.

c. Integrated approaches enhance mitigation efficacy. This assumption posits that pandemic mitigation strategies integrating mental health support with socioeconomic interventions were more effective than isolated approaches.

d. Disparities exacerbate pandemic impact. This model assumes that socioeconomic and health disparities — particularly those affecting marginalised and vulnerable populations intensify the pandemic's impact.

Building on these theoretical insights, this study employs a dual approach of literature review and case study to explore practical strategies for integrating mental health considerations into socioeconomic policies.

MATERIALS AND METHODS

Approach

We employed an approach that integrated a literature review with a case study, directly applying Tayyib's five key strategies for developing community mental health action plans. This provided a guide for the practical implementation of our theoretical framework. Tayyib's strategies were selected due to their strong alignment with the ecological models and theories of social support that underpin our study. The strategies have been substantiated by empirical research findings that demonstrate success in enhancing mental health outcomes across diverse settings.

Case study application

Individual interviews and group discussions were conducted, allowing participants and stakeholders involved in the case study to gather insights into the effectiveness and impact of the strategies. Feedback from these sessions was used to assess satisfaction, perceived benefits, and potential areas for improvement. Findings from the case study were synthesised with results from the literature review to provide an understanding of the effectiveness of the strategies. Practical recommendations for policymakers were formulated based on insights gained from both the case study and the literature review.

Description of case study

The case study examined the psychological support provided to Ghanaian students stranded in China during the early stages of the COVID-19 pandemic. On February 7, 2020, Ghana's Ministry of Foreign Affairs requested assistance for students experiencing severe distress in Wuhan, Enshi, and Shiyan. Challenges included isolation, lack of access to mental health services, and trauma from witnessing the pandemic's impact, particularly in Wuhan, the outbreak's epicentre. The intervention focused on tele-therapy and community support. Online group discussions were also held with various groups. These included psychological first aid, coping strategies, and the establishment of support networks. A WeChat counselling group provided ongoing assistance, fostering resilience and empowerment.

Group and individual teletherapy sessions

There were five interactive online group sessions, each lasting between two and three hours, that helped to establish community support networks in addition to training and discussions on mental health, psychological first aid, and signs and symptoms of mental health distress. These online sessions served as community outreach programs on effective, supportive, and coping skills, as well as accessing mental health resources and teletherapy. Over 70 hours of individual teletherapy sessions were done. The individual teletherapy sessions involved 34 participants, comprising Ghanaian students located in Wuhan, Enshi, and Shiyan. The participants were a diverse group of undergraduate and graduate students with a mix of genders and academic backgrounds, reflecting the varied demographics of the Ghanaian student community in China.

These cities were selected due to their differing levels of exposure to the COVID-19 outbreak, with Wuhan being the epicentre. Participants were recruited through outreach efforts coordinated by Ghana's Mission in China and the Ghanaian student leadership in these cities. Selection criteria focused on identifying students facing significant psychosocial distress. The discussions revealed recurring themes, including feelings of isolation, fear of infection, and anxiety about evacuation delays. Participants highlighted the emotional strain of witnessing the pandemic's toll in their immediate environment, particularly medical students housed near hospitals. Feedback underscored the importance of the interventions, which included group therapy, coping strategies, and the establishment of support networks, in alleviating distress and fostering resilience.

Literature search strategy

The goal of the search was to identify evidence supporting the integration of mental health considerations into socioeconomic policies for effective pandemic mitigation. We searched several electronic databases, including PubMed, Web of Science, and Google Scholar. Additionally, reports from the Africa Centres for Disease Control and Prevention (Africa CDC), World Health Organisation (WHO), and the Centres for Disease Control (CDC) were reviewed. Searches were conducted using a combination of keywords and phrases related to three main themes: "COVID-19," "socioeconomic factors," and "mental health impacts." Specific search strings included combinations like "COVID-19 and mental health," "socioeconomic impacts of pandemics," and "public health interventions for COVID-19". The included materials comprised peer-reviewed articles, official reports, and relevant book chapters published between December 2019 and the present, focusing on studies that addressed both socioeconomic and mental health aspects of COVID-19. The literature review was limited to available and accessible English-language publications.

Synthesis of findings

Our findings were organised using a thematic analysis approach. Themes were derived from the study's objective, literature review, and case study. The findings were mapped against our conceptual framework to highlight how socioeconomic factors and mental health interventions interact and impact pandemic mitigation efforts.

RESULTS

Socioeconomic impact of the pandemic on mental health

The significant pre-pandemic decline in mental health has been worsened by the COVID-19 pandemic and its containment measures. According to Prescott et al., "The unprecedented global rise in mental anguish is closely linked with the erosion of our social fabric, economic and political systems, and our natural environments. We are facing multiple new large-scale threats to health, safety, and security, with a growing lack of trust in others and in authorities. Pervasive stress, anxiety, depression, and uncertainty are of a nature and scale we have never seen before—manifesting in surging violence, community breakdown, domestic abuse, opioid and other drug overdoses, social isolation, and suicides—with alarming new mental health trends in children and young people. This has been made worse by the COVID-19 pandemic and amplified by an exponential increase in the amount and immediacy of information propagated through electronic media, often negative, with manipulative intent aimed at dividing opinions through anger and fear. At the same time, there has been a progressive erosion of kindness, civility, compassion, and social supports" [27].

Infectious disease outbreaks disrupt every aspect of human life and have serious implications for the psychological well-being of affected individuals, families, and communities. Infectious disease outbreaks are often accompanied by increases in anxiety, depression, acute stress, posttraumatic stress disorder (PTSD), substance use disorders, domestic violence, and child abuse[32,33]. In addition, studies of the psychological impact of infection containment measures such as lockdowns, social distancing, and quarantine show that people experience anger, confusion, and posttraumatic stress symptoms, which worsen as the length of time practising such measures increases [28]. COVID-19, its containment measures and post-COVID impact caused a huge disruption in lives and livelihoods, with dire consequences for well-being and mental health, especially for the vulnerable. In response to this, the United Nations has called for the protection of mental health as a policy priority [34].

Pandemic-related stressors

Four key pandemic-related stressors led to deterioration in mental health: economic shock because of income or job loss and employment insecurity; isolation and loss of social support where individuals are alone and without access to their usual social support or network; restriction of movement and inability to access essential services like education and healthcare; and fear of getting infected with COVID-19 with the possibility of severe or critical disease and death [24]. Lockdown measures also had a direct impact on mental health deterioration because of the economic shock associated with physical distancing and restriction of movements. However, in communities and countries where there were good social protection measures which moderated the economic shock, there was less deterioration in mental health. Social protection measures serve as a safety net against adverse life events and foster health and social equity [24].

Social protection measures

To reduce the socioeconomic and mental health impact of the COVID-19 containment measures, the government of Ghana put in place various social protection measures: GHS 1 billion to support small and medium-scale enterprises and a GHS 3 billion facility to support industry [35]. Additional social protection measures focused on

direct relief to households were mentioned in Update No. 6 of the President's address to the nation on April 9, 2020: "As part of measures to mitigate the effects of the pandemic on the social and economic life of the country … government will absorb water bills for all Ghanaians for the next three months, i.e. April, May and June. The government will fully absorb electricity bills for the poorest of the poor: for all lifeline consumers, that is, providing free electricity to individuals who consume 0-50 kilowatt-hours per month during this period. Additionally, for all other consumers, including residential and commercial, the government will again absorb fifty percent (50%) of your electricity bill for this period, using your March 2020 bill as the benchmark. This was being done to support industry, enterprises and the service sector in these difficult times and to provide some relief to households for lost income" [36].

The Midyear Budget Review on July 23, 2020, extended the 100% water subsidies for another three months (July to September 2020), while the 100% electricity subsidy for lifeline users was extended until the end of 2020 [37]. Despite the good intentions of these social protection measures, those without access to piped water and electricity (typically those in urban slums and rural areas) did not benefit from most of these measures [38]. It is unfortunate that those who needed the benefits of the subsidies the most could not access them, even though the UN recommends that vulnerable populations receive the necessary attention for social protection and mitigation measures [39]. In addition to COVID-19, other factors such as physical distancing and restriction of movement policies led to deterioration in mental health, especially when these occurred together with economic difficulties [24]. Unfortunately, there is evidence that many governments responded inadequately to the huge burden of COVID-19-associated mental health distress [40]. Although many COVID-19 treatment centres in Ghana and the general public received professional support from members of the Ghana Psychological Association (GPA) and the Psychiatric Association of Ghana (PAG), this still fell short of meeting the mental health needs of the populace.

Despite the challenges, a study by Mendez-Lopez et al. showed that the adverse effects of closures, restrictions and physical distancing could be averted. Effective social protection measures can mitigate the possibility of mental health deterioration [24]. For instance, a United States study found that those living in states with supportive social policies experienced less negative mental health impacts when they experienced COVID-19-related economic shocks [41].

DISCUSSION

Mitigating the socioeconomic impact of the pandemic on mental health

Mental health is commonly neglected by governments and society in general. The WHO outlines the mental health effects action area for mitigation, which straddles all five UN response pillars of Health First, Protecting People, Social Cohesion and Community Resilience, Economic Response and Recovery, and Macroeconomic Response and Multilateral Collaboration [17]. One way to address the mental health impact in the post-COVID-19 era is to conceptualise it as a collective trauma, which is trauma that involves groups of people, communities, or societies [28]. This results in a widespread effect that goes beyond health; it affects economics, policies, relationships, and social order. The collective trauma of COVID-19 resulted in collective experiences of hopelessness, anguish, and distress [42]. This is illustrated by the case study involving Ghanaian students stranded in China at the beginning of the pandemic. Their collective experience of hopelessness, helplessness, haplessness, and anguish was palpable.

On the morning of February 7 2020, one of us (AKE) received a call from the Ministry of Foreign Affairs and Regional Integration. It concerned a request for psychological support for some of the Ghanaian students studying in China. These were students agitating to be airlifted back home because of the epidemic of SARS-CoV-2 in Wuhan and other cities in Hubei Province, China. Shortly afterwards, AKE was briefed on the plight of the students who had initiated the request for psychological support while waiting to be airlifted back home by Ghana's Ambassador to China. Two Zoom meetings took place that day regarding the psychological support to be provided. Three interactive online group sessions helped to establish community support networks, including self-help groups. Several online training and discussion sessions were held that provided education on mental health, psychological first aid, and signs and symptoms of mental health distress. These online sessions served as community outreach programs on effective, supportive, and coping skills, as well as accessing mental health resources and teletherapy. The leadership set up a WeChat counselling group to enable us to address some of the students' concerns. The discussion and training sessions helped with community capacity-building and community empowerment.

In all, a total of 70 teletherapy hour sessions with 34 students from 3 cities, Wuhan, Enshi, and Shiyan, were carried out. The medical students in Wuhan were at the epicentre of the outbreak, and to a lesser extent, Enshi and Shiyan were deeply affected. This was because they were housed on the hospital premises and thus witnessed the admission of patients while also observing the dead being taken out of the hospital, a situation that only aggravated their psychological and emotional trauma. According to the students, the therapy and counselling sessions were helpful, but they believed the fundamental solution to their problems was evacuation to Ghana.

The outcome of the interventions with the students and Ghanaians in China who were part of the online mental

health and psychosocial support (MHPSS) supports the evidence that healthcare strategies (as illustrated in Figure 1) such as psychoeducational interventions, Psychological First Aid (PFA), and mental health promotion are effective in improving mental health and empowering people[43] and form important components of COVID-19 and pandemic mitigation efforts. In addition, it has been shown that training lay community members to provide psychoeducation and PFA intervention in their communities is effective in addressing common mental health disorders [44].

Recommendations and key lessons for future pandemics
a. Strategic Interventions

Tayyib recommends five strategies for developing an action plan that helps communities improve their mental health and recover from the collective trauma associated with infectious disease epidemics (Figure 2). They also improve the efficacy of building and increasing community resilience [28]. Tayyib's five strategic points can be effectively adapted to Ghana's unique cultural norms and leadership structures. Engaging community leaders and organisations is crucial, as chiefs, queen mothers, assemblymen, and faith leaders hold significant influence. Collaborating with traditional councils and faith-based groups can ensure culturally sensitive mental health interventions. Establishing community support networks can leverage Ghana's strong family and clan systems to create self-help groups and peer support initiatives. Community "warmlines," staffed by trained laypersons, can offer early intervention and emotional support, addressing stigma and building resilience.
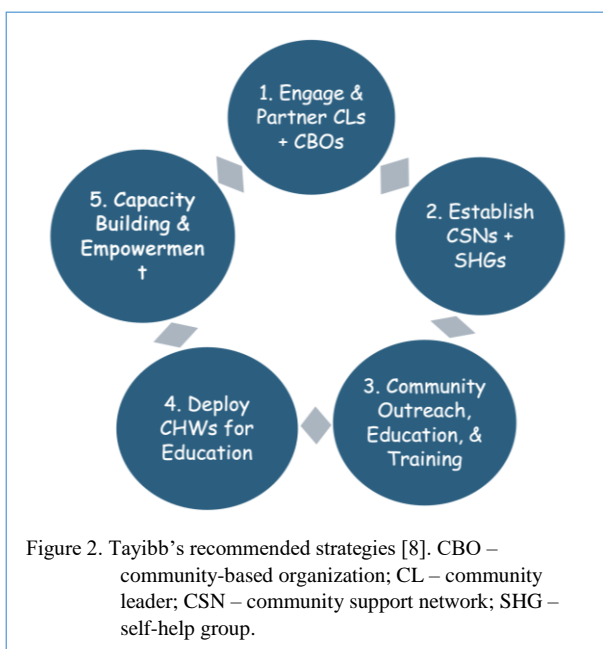
For community mental health outreach and training, multilingual workshops and Psychological First Aid (PFA) training for community health nurses can be combined with

radio and social media campaigns to extend mental health education, particularly in rural areas. Ghana's established CHPS program provides a platform to deploy community health workers (CHWs) for mental health education and referrals. CHWs, trusted figures in rural areas, can use culturally adapted materials to address beliefs about spiritual causes of mental illness. Finally, building community capacity and empowerment by training traditional healers and local leaders can integrate modern and traditional mental health approaches. Promoting accountability in mental health programs will build trust and ensure sustainability. Adapting these strategies within Ghana's cultural context can create a resilient and inclusive mental health system, addressing both societal needs and local norms. The account of the interventions to support the Ghanaian students in Hubei province during the pandemic provides a real-life illustration of Tayyib's five strategic points:

Strategy 1: Engage and Partner with Community Leaders and Community-Based Organisations. Every community has its gatekeepers. To engage with the community, targeting community leaders is key. It is essential for planners of community mental health intervention programs to take time to build trust with identified leaders; their involvement in any community-based mental health intervention is crucial if the interventions are to be effective and sustainable [28]. Religious leaders are a group whose influence must be harnessed to improve community mental health. Their support for health interventions can be a catalyst for community acceptance. They can support and encourage their communities during difficult times. Among the Ghanaians in China, there were a few religious leaders who provided substantial encouragement to their colleagues during this difficult period.

Strategy 2: Establish (and Re-Establish) Community Support Networks Including Self-Help Groups. The most consistent sign of resilience after disaster or trauma is social support [45]. Considering that loneliness and isolation are linked to poorer physical and mental health, creative ways of social support must be implemented as soon as possible [46]. In addition, community warmlines can also provide social connection for those without social support and help for those who are not sure they need mental health support [47]. Warmlines are managed by those who have experienced mental health difficulties and can be effective in preventing those going through mental health distress from getting into a mental health crisis.

Strategy 3: Provide Community Mental Health Outreach, Education, and Training. It is important to be able to identify, evaluate, and connect community members experiencing emotional distress or mental health challenges to where they can get the needed mental health services. PFA is an effective program that can train community members in dealing with highly stressful situations, the basic features of mental illness, and how to cope better [28]. Based on three action principles — look, listen, and link —

Figure 2. Tayibb's recommended strategies [8]. CBO – community-based organization; CL – community leader; CSN – community support network; SHG – self-help group.

PFA supports both calm and distressed persons, also offering coping mechanisms to address mental challenges. To provide PFA, one must care about the person in distress, show empathy, listen actively, pay attention to the response, and provide practical assistance [48]. PFA is effective in helping communities deal with trauma [45]. In Sierra Leone and Liberia, PFA was used to address the psychological impact of Ebola Virus Disease (EVD) [49].

Strategy 4: Deploy Community Health Workers to Engage and Educate the Community. Community Health Workers (CHWs) are often individuals from the community who share experiences and hold significant influence within their communities [28]. There is evidence to support the invaluable role they have played in previous infectious diseases. For instance, during the EVD outbreak in Nigeria in 2014, CHWs educated communities on culturally appropriate behaviours that could prevent the transmission of EVD, provided health education, collected data, and facilitated contact tracing. These measures helped reduce the spread of EVD [50]. The Friendship Bench programme that started in Zimbabwe provides evidence of the effectiveness of a brief psychological intervention for common mental disorders delivered by lay health workers, as shown in a cluster randomised controlled trial [44]. Involving CHWs in promoting community resilience through mental health-related efforts during the COVID-19 pandemic is recommended [28].

Strategy 5: Focus on Community Capacity Building and Community Empowerment. The final strategy for developing an action plan that helps communities improve their mental health and recover from collective trauma is building the capacity of the community and empowering them. Community engagement and empowerment are effective long-term strategies for recovery and building resilience [28]. Communities have inherent strength and can advocate for themselves when they are empowered. Communities can be empowered through community-led training and skill-building, as they are best positioned to identify their own needs. To have an empowered community, partners must ensure that there is transparency and accountability [51]. Empowered communities are more likely to exhibit collective efficacy, which has been associated with improved health outcomes and stronger community cohesion.

b. Strategic Recommendations for Policymakers.
We recommend that policymakers establish a comprehensive framework for integrating mental health considerations into socioeconomic policies, thereby effectively mitigating the impacts of the COVID-19 pandemic in the post-pandemic era and laying a resilient foundation for future public health challenges. Our recommendations include the following: Integrate economic support with mental health services. Implement economic support measures, such as direct financial assistance and subsidies for essential services, alongside accessible mental health services. Expand social protection measures. Broaden the scope and reach of social protection measures to include not only financial support but also access to mental health resources, ensuring that these measures are accessible to all, particularly targeting those in urban slums and rural areas who are less likely to benefit from programs such as water and electricity bill subsidies in Ghana.

Leverage community networks for support and outreach. Engage with community leaders and organisations to establish trust and deliver mental health education and services. Utilise community networks for disseminating information about mental health resources, creating self-help groups, and conducting outreach programs that provide PFA and coping strategies, as demonstrated by the Ghanaian students in China. Invest in training for community health workers. Train community health workers in PFA, mental health awareness, and referral processes to strengthen community-based mental health support. Their roles should include providing psychoeducation, offering early intervention, and connecting community members to professional mental health services.

Develop and support online mental health resources. Given the effectiveness of teletherapy and online support groups observed among Ghanaian students in China and those who seek mental health services in Ghana, invest in expanding online mental health resources and training. This includes developing platforms for teletherapy, online counselling, and mental health education, which would be provided by licensed mental health professionals and paraprofessionals to ensure widespread access, particularly in areas where in-person services are limited.

Beyond telepsychiatry, several digital mental health resources can be leveraged to enhance mental health care in Ghana. Locally developed applications such as MINDIT (https://minditgh.com) and mHealer (https://pure.ug.edu.gh/en/publications/a-digital-toolkit-m-healer-to-improve-care-and-reduce-human-right) are particularly promising. MINDIT provides psychoeducation, stress management tools, and referrals to local mental health services through a culturally tailored mobile interface. Similarly, mHealer focuses on reducing stigma by offering symptom checkers, self-guided cognitive behavioural therapy modules, and peer support networks designed for Ghanaian users. Global platforms, such as the World Health Organisation's iSupport programme (https://www.who.int/teams/mental-health-and-substance-use/treatment-care/isupport), also hold potential for adaptation in Ghana. iSupport delivers evidence-based training and emotional support for caregivers, equipping families to better manage mental health challenges. Inspired by Zimbabwe's Friendship Bench initiative, digital adaptations of its brief problem-solving therapy modules could also be deployed in Ghana to address depression and anxiety, particularly in rural areas.

For urban populations with reliable internet access, platforms such as BetterHelp (https://www.betterhelp.com/) offer online therapy via video, messaging, and calls, enabling access to licensed therapists across various specialties. Meanwhile, AI-powered tools such as Koko (https://koko-ai.com), which provide real-time peer support through structured conversations, can offer scalable and low-cost mental health interventions for diverse populations. In areas with limited internet connectivity, SMS-based mental health tools are a practical alternative. These text-message services provide tips for stress management, self-care reminders, and crisis support information, capitalising on the widespread availability of mobile phones in Ghana.

Promote Policies for Job Creation and Retention. Address economic insecurity and its mental health implications by promoting policies that support job creation, retention, and re-skilling. Encourage partnerships between the private and public sectors to create sustainable employment opportunities and support businesses in retaining employees during economic downturns.Ensure inclusivity and equity in the implementation of policies. Policies must be designed and implemented with a focus on inclusivity and equity, ensuring that the most vulnerable populations receive the support they need. This requires continuous monitoring and adaptation of policies to address emerging needs and disparities.

Foster multi-sectoral collaboration
Encourage collaboration across sectors, including health, finance, education, and social services, to ensure a coordinated approach to addressing the socioeconomic and mental health impacts of the pandemic. This includes sharing data and resources, aligning strategies, and jointly developing comprehensive support programs.

Future research
Future research should focus on the long-term impacts of integrating mental health and socioeconomic strategies, the scalability of digital tools in underserved areas, and the role of community leadership in mental health interventions. These areas hold significant potential to improve mental health outcomes in resource-constrained settings. Research into the long-term impacts of integrated strategies should evaluate the effectiveness and sustainability of combining mental health support with socioeconomic initiatives, such as cash transfers or employment programs. Studies should also explore how these strategies impact vulnerable groups, including women, youth, and those in extreme poverty, to ensure tailored and inclusive solutions.

The scalability of digital mental health tools in rural areas requires investigation into accessibility, user-friendliness, and cultural adaptability. Barriers such as low digital literacy and limited connectivity must be addressed. Cost-effectiveness studies are essential to determine how these tools can reduce mental health service disparities while being sustainable. The Mental Health Authority is uniquely placed to lead such interventions.

Understanding the role of community leadership is critical. Research should examine how traditional leaders, faith organisations, members of parliament, assemblymen, women and community influencers can promote mental health awareness and reduce stigma. Collaborative models that integrate formal health systems with community leadership structures should also be evaluated for their effectiveness in improving service delivery and outcomes. Finally, the integration of traditional and modern mental health practices warrants exploration. Studies should evaluate how traditional healers can complement formal systems and address culturally rooted beliefs about mental health. Research on community-led initiatives and the training needs of local leaders can further enhance grassroots mental health programs.

Conclusion
The mental health-related socioeconomic impacts of COVID-19 in the post-COVID-19 era is crucial for individual and public health and a strategic lever for effective pandemic mitigation. The pandemic highlighted the deep interconnection between socioeconomic factors, such as employment status, income level, and access to healthcare, and their impact on mental health outcomes. Economic uncertainty, job loss, and social isolation have significantly worsened mental health conditions for many, particularly among vulnerable populations. Addressing these socioeconomic determinants is crucial for enhancing mental health and resilience following the pandemic.

DECLARATIONS

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Availability of data

Data is available upon request to the corresponding author

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