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SPECIAL ARTICLE

The S20 Brazilian Mental Health Report for building a just world and a sustainable planet: Part I

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This is the first of two documents prepared by experts for the Brazilian S20 mental health report. These reports outline strategies aimed at addressing the exacerbated mental health challenges arising from a post-pandemic world. Ongoing psychiatric epidemiology research has yielded evidence linking mental health with intricate social determinants, including gender, race/ethnicity, racism, socioeconomic status, social deprivation, and employment. More recently, the focus has expanded to also encompass violence and social oppression. By prioritizing prevention and early intervention, harnessing technology, and fostering community support, we can mitigate the long-term impact of emerging mental disorders throughout the life course. By utilizing evidence-based practices and forging partnerships between the health and education sectors, S20 countries can promote the health and safety of their student population, paving the way for a more promising future for the next generations. The first document focuses on addressing the mental health concerns of vulnerable populations, catering to the needs of children, youth, and aging populations, assessing the current state of alcohol and drug addictions, scaling up psychosocial interventions in primary care, exploring the potential integration of health and educational systems, and emphasizing the imperative adoption of human rights in mental health policies.

Keywords: Vulnerable populations; child health services; social determinants of health; psychiatric epidemiology; human rights

Introduction

The 2024 edition of the S20 adopts the motto ''Science for Global Transformation'' and will center around five key thematic axes: bioeconomy, health challenges, artificial intelligence (AI), social justice, and the energy transition process.[1] The S20 serves as the collective platform for the national science academies of the 19 countries with the highest gross domestic product (GDP), along with scientific representatives of the European community.[2] While other discussions within the G20 often prioritize economics and development, as noted by Brazilian Academy of Sciences (Academia Brasileira de Ciências, ABC), the focus of the S20 lies squarely on science.[2,3] However, it it important to note that these topics are not isolated discussions. ''All of this depends on science,'' emphasized Helena Nader, president of ABC.[4] In addressing health challenges and science, the initiative aims to involve Brazilian mental health experts in preparing documents commissioned by the ABC.[1] The goal is to put forward suggestions that may be embraced by various countries to advance mental health initiatives globally. These ideas are intended as proposals for discussion among all participating Academies of Sciences. They do not constitute official mandatory guidelines, but rather serve as a collection of ideas that can influence the future trajectory of global mental health.

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There is only one health, and it lies in understanding the interconnectedness of the environment, ecosystems, physical, spiritual, and mental health within the context of a universal, holistic worldview.[5,6] These principles align with the Sustainable Development Goals aimed at promoting mental health and well-being, which include enhancing longevity and improving quality of life for all individuals affected by mental health conditions worldwide.[7] As part of the Brazilian coordination of the S20, we have identified key principles summarized as follows: the future of mental health entails integrating physical and mental health; priority should be given to prevention efforts; strengthening the integration of health and education systems is crucial; expanding mental health services through primary care is essential; fighting stigma and racial discrimination surrounding mental health is imperative; involving health professionals, teachers, and the community in delivering mental health care is vital; the role of culture in the manifestation of mental disorders across different societies must be considered; and users of the health system must participate in implementing services and policies.

Evidence indicates that around 5% of the working-age population grapples with severe mental health conditions, while an additional 15% are affected by more common mental disorders.[8] Furthermore, it is estimated that one in two individuals will experience mental ill-health at some point in their lives, impacting their employment prospects, productivity, and wages.[8] The direct and indirect costs associated with mental ill-health can exceed 4% of the GDP.[8] The coronavirus disease 2019 (COVID-19) pandemic has further exacerbated the burden of mental disorders, demanding policy changes to address this emerging challenge.[9] Epidemiological data reveal a high prevalence of mental disorders globally, particularly affecting vulnerable groups such as women, migrants, those with low literacy, individuals in low social classes, unskilled workers, the unemployed, people living in deteriorated urban areas, those exposed to violence, and the socially excluded.[10] Notably, oppression, inequities and violence play a significant role as determinants of poor mental health. Bullying involvement in any form can adversely affect young people's social adjustment and result in lasting mental health consequences, underscoring the need to strengthen ties between the educational and health systems and develop preventive interventions in schools to reduce violence and prevent substance abuse.[11,12] Moreover, modern Western culture, marked by competitive environments, social inequality, and loneliness, is contributing to the rising rates of mental disorders, including depression. Periods of isolation and the economic impacts resulting from health crises are expected to increase the prevalence of mental disorders and depression, particularly in low-income countries. In the opening section of the S20 Brazilian Mental Health Report, detailed strategies for addressing the heightened mental health challenges arising from contemporary society in a post-pandemic world are proposed. Given the complexity surrounding mental health, the report will be presented in two parts (Part I and Part II).

Part I focuses on addressing the mental health concerns of vulnerable populations, a paradigm shift to focus on prevention, meeting the needs of children and aging populations, exploring the potential integration of health and educational systems, examining the current state of alcohol and drug addiction, scaling up psychosocial interventions in primary care, emphasizing the imperative adoption of human rights in mental health policies, and encouraging the involvement of mental health users in the implementation of mental health care services and policies.

Epidemiology and mental health of vulnerable populations

The mental health of the economically disadvantaged has been a major topic in Latin American psychiatric epidemiology since the series of pioneering community surveys conducted in Chile in the context of major health and mental health reforms from the late 1950s to the early 1970s.[13] In Lima, Peru, prevalence studies of psychological distress and social factors, led by Seguin & Mariátegui,[14] were published between 1958 and 1969. In these studies, a local cultural approach included research on acculturation and mental health among indigenous populations. In Brazil, epidemiological studies have been strongly influenced by a tradition of culture-sensitive research regarding vulnerable groups of society.[15]

The first generation of social psychiatry research in Brazil in the early 1970s focused on sociocultural factors, employing fundamentally explanatory models oriented by concepts of acculturation, modernization, and marginalization. Culture and adaptation predominated in the earliest research, with the focus then moving on to poverty and social exclusion. Population mental health was then studied, with a focus on economic development, such as the associations between migration and mental illness and between unemployment or informal labor and poor mental health. Findings of this second generation of studies supported the ''inverse care hypothesis'': those in greater need have less access to health services, while those who are at a lower risk of suffering from a severe mental disorder show higher use of the healthcare system.[16] Subsequently, the introduction of social determination models represented a turning point in the agenda of epidemiological research, integrating ecological diversity, economic inequality, and social inequity.

Recently, mental health issues of vulnerable populations (defined by ethnicity/race, migrant status, or homelessness; LGBTIQ+; indigenous/aboriginal, etc.) have become a topic of interest in Brazil. Santana et al.[17] studied the association between racism and depression among adolescents and young adults in Salvador, state of Bahia, and concluded that perception of racism and experience of racial discrimination, but not skin color or race itself, was a strong risk factor for depressive disorders in this vulnerable group. Interaction analyses (now known by the umbrella term of ''intersectionality'') of race/ethnicity and social factors, mediated by gender and

inequalities have been reported.[18] Since the pioneering work of Heckert et al.,[19] several studies have found that practically all homeless people in Brazilian cities have a mental health problem, often comorbid with some form of substance dependence and other psychiatric disorders. In different regions of Brazil, studies of specific population groups continued to be carried out – for instance, with older adults,[20] children and adolescents,[21] and populations living in slums.[22] The São Paulo Megacity Survey found anxiety to be the most prevalent condition, followed by depression, impulse-control and substance use disorders; in this survey, findings were consistent with the so-called income inequality theory.[23,24] Data obtained from the Brazilian High-Risk Cohort,[25] collected initially when children were aged 6-14 years and during follow-up when they were 15-23 years old, demonstrated how childhood poverty heightened the probability of externalizing disorders in early adulthood due to increased exposure to stressful life events.[26]

Among LGBTIQ+ groups, Terra et al.[27] found higher rates of anxiety disorders, depressive disorders, and posttraumatic stress disorder (PTSD) than in heterosexual groups. Reis et al.[28] found a high prevalence of psychiatric disorders and a significant association between mental health conditions, lack of treatment for these conditions, and suicidality among transgender women. Dornelles et al.[29] found an extremely high prevalence (85%) of non-psychotic mental disorders and anxiety symptoms in a Brazilian LGBTQIAP+ cohort during the COVID-19 pandemic. Research on the mental health of indigenous peoples is still scarce and limited in scope in Latin America and in Brazil, but inequalities in mental health care have been documented.[30] Paiva de Araujo et al.[31] reported trends in suicide rates among Indigenous peoples in Brazil between 2000 and 2020 and found a nearly threefold rate of deaths by suicide among Indigenous Brazilians compared to the overall Brazilian population in 2020 (17.5 vs. 6.35 suicide deaths per 100,000 population, respectively).

Social inequality has been a key topic for psychiatric epidemiological research on the social determination of mental health in Brazil. The current generation of psychiatry epidemiology studies has produced evidence correlating mental health with complex social determinants, such as gender, race/ethnicity, racism, social class, social deprivation, employment, etc., and, more recently, violence and social oppression.[15] Vulnerable populations, such as migrants, Black women, older adults, the LGBTIQ+ community, Indigenous Brazilians, those who faced losses during the pandemic, and those experiencing financial deprivation, will need far more attention.[15]

Addressing the needs of children and adolescents

The mental health of children and adolescents has emerged as a critical concern worldwide, compounded by the challenges exacerbated by the COVID-19 pandemic.[32-34] The recognition of early-life mental health as a pivotal component of overall well-being necessitates a comprehensive, strategic approach that transcends geographical and socioeconomic boundaries. These challenges are particularly pronounced in low- and middle-income countries (LMICs), where most the world's youth reside and where resources for mental health services are often limited.[35]

Data from the Global Burden of Disease Study suggest that, worldwide, 293 million individuals aged 5 to 24 years have at least one diagnosable mental disorder, and 31 million have a substance use disorder – corresponding to an average prevalence of 11.63 and 1.22%, respectively.[36] Importantly, during the first decades of life, the prevalence of mental disorders varies substantially across narrow age groups, almost doubling over this developmental period: 6.80% in childhood (5 to 9 years), 12.40% in early adolescence (10 to 14 years), 13.96% in late adolescence (15 to 19 years), and 13.63% in early adulthood (20 to 24 years).[36]

Furthermore, mental disorders as a group constitute the leading cause of health-related disability among children and adolescents worldwide, accounting for one-fifth of years lived with disability (YLDs) between ages 5 and 24.[36] Considering the overall impact of mental disorders across the life course, one quarter of all YLDs attributable to mental disorders were recorded before age 25 years, emphasizing that, in contrast to what is seen for most physical conditions, the burden imposed by mental disorders begins early in life.[36]

Mental disorders not only affect the immediate well-being of young individuals but also have long-term implications for their development, education, and integration into society.[35] Recognizing the substantial burden imposed by mental disorders early in life not only highlights the challenges this poses but also unveils a tremendous opportunity for prevention and early intervention. The early onset and high incidence of mental health conditions among children and adolescents underscore the potential to significantly alter life trajectories through timely and effective actions. This perspective shifts the narrative from one of burden to another of opportunity, emphasizing that early engagement can lead to improved outcomes across the lifespan. The following strategic directions are proposed to address the mental health needs of this population.

Evidence-based psychosocial interventions

Early intervention focuses on identifying and addressing mental health issues as they emerge, using development and implementation of screening tools within educational and healthcare settings to detect early signs of mental distress. Providing immediate access to care through evidence-based interventions can prevent the escalation of symptoms and facilitate a return to well-being.[37]

Embracing technological advancements

The digital revolution offers unprecedented opportunities to extend the reach of mental health services. Telepsychiatry, online therapy sessions, and mobile health applications can overcome traditional barriers to access, facilitating ongoing support and providing platforms for

preventive education and self-management tools tailored to young users.[38]

Fostering global collaboration

Addressing the mental health needs of children and adolescents requires a concerted global effort. Sharing best practices, research findings, and resources among countries can enhance collective capacity to develop and implement effective mental health strategies. Global partnerships are paramount to advancing mental health care for young populations.[39]

Tailoring services to cultural and local contexts

Adapting mental health services to fit cultural and local contexts involves engaging with communities to ensure that interventions are culturally sensitive and relevant. This ensures the effectiveness of mental health services across diverse populations.[40]

Advocacy and policy support

Achieving progress in mental health care for children and adolescents necessitates strong advocacy and policy support. Governments, non-governmental organizations, and international bodies must prioritize mental health in public health agendas, allocate sufficient resources, and implement policies that support the integration of mental health services into primary care and educational settings.[40]

Mental health needs of the aging population

Population aging is a global phenomenon, but it is happening much more rapidly in LMICs, with significant implications for healthcare, social services, and the overall well-being of older people. One of the most pressing concerns associated with aging is the surge in dementia. It has been estimated that 57.2 million people were living with dementia in 2019, a figure that is projected to triple by 2050.[41]

Age-related cognitive disorders such as Alzheimer's disease and other dementias can impact various aspects of daily life, including independent living. As dementia is, in general, progressive, people with the condition will at some point need help with their daily activities. The resulting burden mainly falls on family members – often on another older adult, who will also have their health compromised by the demands of this care responsibility.[42] Studies on dementia-associated costs have shown that although formal costs are higher in high-income countries (HICs) due to the age composition of the population, better diagnosis, and greater access to medications and therapies, informal costs, which are related to the care provided by family members, are higher in LMICs.[42]

Despite recent advances in biomarkers (which can provide information about the presence or progression of dementia-related brain changes) and potential new treatments, there is still no cure, and the best option to decrease dementia burden is to reduce risk. Some HICs have reported a decrease in incidence,[43] which has been attributed to improvements in education and better control of cardiovascular diseases and their risk factors. The Lancet Commission on Dementia, using a life course approach, has shown that about 40% of global dementia cases could be attributed to 12 modifiable risk factors: less education, hypertension, hearing impairment, smoking, obesity, depression, physical inactivity, diabetes, alcohol consumption, traumatic brain injury, air pollution, and social isolation.[44] There seems to be more room for prevention in LMICs, given that, in general, the prevalence of these risk factors is greater in these countries.[45]

Social isolation, beyond being a well-established late-life risk factor for dementia, has emerged as a significant concern, particularly in many modern societies where social structures are evolving and traditional support networks are breaking down. Older adults often experience social isolation due to factors such as retirement, mobility limitations, and the loss of friends and family members. The proportion of older adults who are socially isolated varies between regions and depending on the definition used; a recent systematic review suggested a global pooled prevalence of 25%,[46] while the reported prevalence of loneliness is 25-29% in the United States,[47] 25-32% in Latin America, and 18% in India.[48] Social isolation and loneliness have been shown to have detrimental effects on physical and mental health, increasing the risk of depression and suicide.[49,50] According to the Global Health Estimates (GHE) for 2019, more than a quarter of deaths by suicide (27.2%) occurred among people aged 60 or over, and suicide is more common in older men, particularly those over 80 years of age.[51]

A multifaceted approach that considers not only healthcare and social support, but also a shift in people's attitudes, is necessary to address the unique needs of older people. It is important to increase the social engagement of the older population through the development of community programs and support groups, as well as by supporting intergenerational activities that can help ensure that they remain connected to others. Additionally, technology should be used to facilitate virtual social interactions and to help overcome mobility barriers, thus allowing older adults to stay in closer touch with their families and feel connected to their communities. Furthermore, it is important that health and social work professionals identify and address the needs of older adults by, for example, screening for signs of social isolation during routine contact and referring individuals to appropriate support services when necessary to try to prevent loneliness and its negative effects on the well-being of older adults.

Emerging trends in alcohol and drug addictions

Substance use-related disorders pose significant public health challenges worldwide, with profound implications for individuals, families, and communities. Worldwide, 3 million deaths every year result from the harmful use of alcohol, which represents 5.3% of all deaths. Overall, 5.1% of the global burden of disease and injury is attributable to alcohol, as measured in disability-adjusted

life years (DALYs).[52] Concerning illicit substance use, according to the World Drug Report 2023, 5.8% of the world population aged 15 to 64 years old used drugs. Cannabis is still the most-used illicit substance, followed by amphetamine, cocaine, and ecstasy-type substances.[53]

While substantial progress has been made in understanding the neurobiological and psychosocial underpinnings of addiction, emerging trends continue to reshape the landscape of substance use disorders. The growth of novel psychoactive substances (NPS), including synthetic opioids, synthetic cannabinoids, and designer stimulants, poses new challenges to the addiction field, as their physiological actions, epidemiology, and treatment are still only partially known. Rapid detection methods and proactive surveillance systems are essential for monitoring NPS trends and providing data for prevention and treatment strategies.[53]

In clinical research, one of the main discussions concerns the definition of treatment success. For many years, abstinence was the only desirable outcome, and all efforts and research were driven in that direction. However, other endpoints have recently received special attention from the scientific and clinical community. Improving quality of life, reducing the amount of substance use, and decreasing road traffic accidents due to intoxication, overdose deaths, and emergency department visits are examples of new outcomes being evaluated and considered successful.[54] An important benchmark for this perspective was the creation of a Harm Reduction Research Network funded by the National Institutes of Health (NIH). Through the National Institute on Drug Addiction (NIDA), this program is expected to invest US$36 million over 5 years.[55]

It has become increasingly clear that a one-size-fits-all approach to clinical treatment is inadequate. The needs of each patient should be carefully evaluated. Patients who use different substances will demand different approaches; what works for cannabis use disorder will not necessarily work for opioid use disorder, for instance. Also, psychiatric comorbidities, clinical comorbidities, and psychosocial network support are some of the issues that must be considered when designing a treatment plan. Medications and psychosocial interventions are the cornerstones of available treatment strategies.

Various psychosocial therapies have demonstrated efficacy in treating substance use disorders, either independently or in combination with pharmacotherapy. Among the most commonly employed interventions are motivational interviewing, cognitive behavioral therapy (CBT), contingency management, and 12-step facilitation.[56] As for medications, those with demonstrated efficacy are limited to nicotine, opioid, and alcohol use disorders. There are no approved medications to treat disordered use of stimulants, cannabis, benzodiazepines, barbiturates, inhalants, ketamine, or 3,4- methylenedioxymethamphetamine (MDMA).[56] In recent years, cannabidiol and delta-9-tetrahydrocannabinol are being studied as potential agents for the treatment of several substance use disorders,[57] as are classical psychedelics, such as lysergic acid diethylamide (LSD), psilocybin, dimethyltryptamine (DMT), and mescaline, which are promising breakthrough agents.[58] Finally, for stimulant use disorders, agonist-based treatment seems to be a very promising approach, as demonstrated by recent findings.[59,60]

Concerning public policies, the flexibilization of laws regarding access to cannabis has perhaps been the most significant advance worldwide. In many countries, such as Portugal, Uruguay, and Canada, as well as in some states of Australia, the United States, and, more recently, Germany, use of some or all substances has been decriminalized, and even recreational use is allowed by law (with some regulatory constraints). Several factors have contributed to a shift away from the criminalization of substance use behavior, including the nonsignificant increase in substance use in countries or states where decriminalization has occurred, greater acknowledgment of substance use disorders as a medical issue, and concerns regarding the infringement of human rights endorsed by the United Nations (UN).[56,61] The impact of these new policies on substance use prevalence is both a matter of concern and an exciting topic for in-depth research in the next few years. Also, from a political perspective, it is essential to think of substance-use policies specially tailored to minorities or to minoritized majorities, such as the LGBTIQ+ population, refugees, women, and marginalized ethnic groups.[62]

Scaling up psychosocial interventions in mental health

The introduction of evidence-based psychosocial interventions administered by non-specialists is a critical strategy for expanding access to mental health.[63-65] Technology-based interventions, both for detection and treatment, are realities that increase the effectiveness of services.[66,67] The gateway for mental health patients is at the primary care level. However, detection, care, and referral of mental disorders at this level are low due to factors related to the patient, system, and health care providers, as well as social and environmental conditions.[68-70]

In Brazil, a scalable, well-defined model of care that includes task-shifting associated with the Estratégia Saúde da Família (ESF) program is fundamental to bridging the mental health gap. Such strategies have been implemented successfully in Mozambique and now in New York City, by researchers affiliated with Columbia University.[66]

The involvement of mental health professionals, psychiatrists, and psychologists in primary care is necessary in complex and severe cases, such as severe depression and anxiety, borderline personality disorder, and substance dependence; these patients often do not adapt to community-based care at Psychosocial Care Centers (CAPS), which are oriented to more chronic cases needing rehabilitation and social reintegration. Once stabilized by the intervention of mental health professionals, patients can receive maintenance care from primary health providers in the ESF.

Less than half of those affected by mental health disorders receive proper treatment.[71] Andrade et al.[23]

studied the prevalence, severity, and treatment of recent active mental disorders in São Paulo and found that 10% of interviewees had severe mental disorders, with only one-third of these having received treatment in the previous year. Conversely, these epidemiological data showed that two-thirds of all cases were mild to moderate in severity. A step-up approach to care plus a task-shifting program with evidence-based interventions involving primary care is vital to addressing this gap.

The ESF in Brazil has made remarkable progress in achieving universal primary-care coverage of the population in recent decades, but there has been comparatively little investment in mental health.[72] Each ESF team consists of a physician, a nurse, a nursing technician (NT), and six to 12 community health workers (CHWs). CHWs and NTs are, therefore, an essential human resource for health in Brazil. Training this workforce in detecting suspected cases of mental disorders and providing evidence-based interventions for mild cases can be a crucial point in identifying cases that might otherwise go undiagnosed and untreated. These providers can be trained to administer validated instruments to screen for the most prevalent disorders, refer more complex cases to specialized professionals, and implement evidence-based interventions in mild cases.

Interpersonal counseling (IPC), a concise psychosocial intervention spanning four sessions and rooted in interpersonal therapy principles, can be administered by CHWs to address mild cases of depression and anxiety. IPC has demonstrated effectiveness in non-specialized settings when delivered by individuals without specialized training. The intervention centers around exploring the connection between interpersonal challenges, such as disputes, life transitions, grief, and social isolation, and psychiatric symptoms.

Cases of substance use disorders can receive a motivational interview administered by NTs or CHWs, as well as a brief four-session therapeutic approach that employs empathetic listening to explore patients' goals, resolve ambivalence, and elicit motivation to change.[73,74] Specially trained nontraditional health workers can also evaluate suicide risk, using validated instruments designed for laypeople. Individuals identified as at-risk can then promptly enter an evidence-supported program: the Safety Planning Intervention (SPI).[75] Those at acute risk of suicide will collaborate with the provider to develop a Suicide Safety Plan tailored to their needs, comprising coping strategies and support resources to manage a suicidal crisis. Additionally, ESF nurses can assess severe psychiatric cases and receive training to administer validated instruments. Positive cases will then be referred to primary care physicians or mental health specialists.[76]

Psychologists in the ESF team should be trained to apply evidence-based psychotherapeutic interventions in person or remotely – CBT or interpersonal therapy for patients with depressive disorder (unipolar and bipolar) and anxiety[77-79] and dialectical behavior therapy (DBT) for borderline personality disorder[80,81] – as well as in introduction of CBT for substance use disorders and integration of health services with support groups such as Alcoholics (AA) or Narcotics Anonymous (NA).[82,83]

Integration of the health and education systems

Preventive strategies are crucial to mitigating the onset and potential chronicity of mental health disorders. Creating supportive environments in schools and communities that promote emotional well-being from a young age is critical. Educational programs enhancing emotional literacy, resilience, and coping skills can empower children and adolescents to navigate life's challenges more effectively. Integrating mental health education within the school curriculum can demystify mental health issues, reduce stigma, and promote a culture of support and understanding.[84-86]

According to the most recent Pesquisa Nacional de Saúde do Escolar (PeNSE) (Instituto Brasileiro de Geografia e Estatística [IBGE], 2021), a nationwide survey of 13- and 17-year-old Brazilian students, 65.5% of this population has already used alcohol and 13% has taken illicit drugs at least once in their lifetime. Bullying is also frequent, with 23% of respondents reporting experiences of being bullied, while 12% admitted to bullying others in the preceding month. Brazil's response to these issues has been historically fragmented, with health and education initiatives often operating independently. This lack of coordination has diminished the potential impact of prevention programs. However, recent shifts towards more integrated approaches recognize the complex relationship between student health and educational accomplishment.

In 2013, the Brazilian government, within the framework of the National Plan Against Crack Cocaine, brought three drug prevention programs to Brazil in a partnership between the United Nations Office for Drugs and Crimes and the Ministry of Health.[87] These programs had already shown positive results in other countries: Unplugged, targeted at adolescents aged 12 to 14 in middle schools; the Good Behavior Game, designed for children aged 6 to 10 in primary schools; and the Strengthening Families Program, focused on the families of adolescents aged 10 to 14. After cultural adaptation to the Brazilian reality, these programs respectively became Tamojunto, Elos, and Famílias Fortes, disseminated by the integration of three sectors: health, education, and social welfare. All three programs have been successfully implemented to date, despite some disruptions during changes in federal administrations. Two (Tamojunto and Elos) have been implemented in some Brazilian schools, aiming to reduce alcohol and drug use, bullying, and aggressiveness. Their proposal integrates work by teachers and health professionals.[88]

Tamojunto, inspired by the Unplugged curriculum, targets middle-school students to foster life skills and resilience, addressing social influences on drug use and enhancing emotional competencies. Over the years, the program has undergone three cultural adaptations in Brazil and, in its current version, has shown effectiveness in reducing the initiation of alcohol use among students, decreasing bullying practices mediated by reduced alcohol consumption, and increasing negative beliefs about alcohol. This latter aspect was the main mediator of the significant reduction in alcohol use among these

adolescents, who had an average age of 13 years and were attending the eighth grade.[89-91] Within the framework of interventions for primary-school children, Brazil currently has the Elos program, which is the Brazilian adaptation of the most famous and longest-evaluated North American program: the Good Behavior Game, known as a "behavioral vaccine." This program aims to enhance mental health and mitigate disruptive or aggressive behaviors by fostering cooperative interactions between teachers and students. It targets early risk and protective factors related to drug use, aiming for long-term drug use prevention. Elos' effects have been evaluated through two extensive studies. The first one found that the program, in its first adapted version, reduced aggressiveness among boys with a mean age of 8 years.[92] The second study, evaluating the second version of the program, found that Elos was associated with significant improvements in children's prosocial and concentration skills and a decrease in disruptive behavior.[88]

Effective prevention strategies for students in Brazil have included fostering resilience and promoting life skills. Programs aimed at equipping young people with decision-making tools, resistance to peer pressure, and stress management have shown promise in reducing substance use and violent behaviors within the classroom. The entire school community's involvement, including educators, administrators, parents, and students, is crucial for creating supportive environments where students can safely discuss these issues.

Policy plays a significant role in guiding the implementation of school-based prevention programs. Clear policies that define the roles and responsibilities of health and education professionals, as well as adequate supporting funding and resources, are necessary for the success of these initiatives.

The success of these programs highlights the importance of a multifaceted prevention approach that includes students, teachers, families, and the wider community. Their effectiveness demonstrates how interventions, when culturally and socially tailored, can significantly reduce substance use and violence among adolescents.

Human rights and mental health

International human rights law creates an effective mechanism that defends the rights and dignity of people with mental disabilities. This ensures that the equality of every person before the law is recognized and their rights always protected. The Resolution on Mental Health and Human Rights introduced by the UN Human Rights Council in July 2016, which has been widely adopted, is one of the main achievements in this field. This resolution brought to light that people with illnesses associated with mental health or psychosocial disabilities are victims of discrimination, stigma, bias, harassment, social isolation, and segregation. It also exposed the adverse consequences of inappropriate institutionalization, overmedicalization, and treatment practices that overlook the autonomy, willpower, and consent of patients. It encouraged countries to involve a human rights perspective in the community and mental health care system to eliminate any form of violence, discrimination, and oppression, while promoting inclusion within society.[93,94]

However, these international commitments notwithstanding, the implementation of mental health rights remains variable worldwide. The implementation of human rights explored in the Compassion, Assertive action, Pragmatism, and Evidence Vulnerability Index (CAPE Index) is a challenge in numerous countries, especially highly vulnerable states. The CAPE Index is an interesting tool to target international assistance, which can include mental health programs, by defining those countries with the biggest vulnerability. This structured approach does not aim to simply improve aid within bilateral agreements, but also to bring to the attention of the world that mental health plays a significant role in overall wellness.[95]

A study that investigated the correlation between the CAPE Index and common mental health disorders found that the prevalence of mental health problems was significantly lower in vulnerable countries compared to their richer peers. This indicates the possibility of underreporting and the existence of a great shortage of mental health services in these areas. The disparity in access to mental health facilities and the paucity of skilled professionals like psychiatrists and psychologists add to the problem of underestimation. Moreover, social stigma and imperfect awareness about mental health disorders worsen the difficulties of such individuals in getting the care they need.[96,97]

Besides the physical harm they cause, wars and forced migrations also deeply affect mental health. The resulting social isolation, poverty, and unemployment amplify the risk of mental disease (particularly depression, anxiety, and PTSD) significantly in these vulnerable populations. This reiterates the critical need for better global mental health services for refugees and migrants.[98,99]

The intersection of human rights and mental health in Brazil emphasizes the need for diverse and fair policies and interventions. Legal and policy frameworks regulating mental health services remain vital in ensuring access to care and protecting the rights of persons with mental illness. Highlighting stigma and discrimination, safeguarding rights during involuntary hospitalization, and developing specialized services for target groups (for instance, children, older adults, and minorities) are essential. Community-based models of care and a robust monitoring mechanism are at the core of maintaining social inclusion and holding accountable those responsible for mental health violations. Finally, education and awareness activities should be designed to remove the stigma around mental illness and to increase mental health literacy among the general population.[100-103]

The transition of mental health policy in Brazil from recognizing people as users of care services to treating them as persons with rights demonstrates the country's development in the field of mental health advocacy. Nevertheless, struggles are still evident, such as the resistance of some within the mental health field, as well as other stakeholders such as family members and non-mental health professionals. This demanding challenge requires a holistic approach, which should include

enhancing the engagement of people with lived experience, training professionals, and launching mass media campaigns. These initiatives should be designed to improve support and social inclusion and to increase the provision of mental health services in primary care settings, which in turn will reduce stigma and improve access to mental health care for marginalized populations.[100,101]

A study comparing involuntary psychiatric admissions in Brazil versus in England and Wales found some important differences, which show that procedures in Brazil need to be more transparent and the system of supervision must improve. The barriers that social minorities encounter in accessing mental health services can only be torn down by reduction of stigma and provision of equal opportunities. Additionally, the cognitive intersectionality of race, gender, and mental problems, most evident in the case of Black women in northeastern Brazil, confirms the enlargement of existing health disparities and the need to develop and strengthen specialized programs and interventions for such intersectionally marginalized groups.[102-104]

The Brazilian mental health care system faces problems concerning human resources and service availability where the treatment gap is most evident, such as older people. The inequitable distribution of services and resources across the country leads to the inefficient use of funds, implementation of mental health programs, and enhancement of professional training. A more robust plan is needed to establish linkages between primary care and mental health services while striving to improve the mental health system as a whole.[105] To narrow the gap and ensure equal access to mental health services, primary health care teams should be trained either to treat the most widespread mental health issues, conduct thorough needs assessments, and provide long-term support for the management of older patients in their own homes, or to address other needs altogether.

Non-coercive practices encompass a broad spectrum of interventions, ranging from verbal de-escalation techniques to comprehensive care models that prioritize patient autonomy and consent. A fundamental aspect underlying non-coercive approaches is the emphasis on informed consent as central to quality healthcare delivery.[106] The shift towards minimizing or eliminating coercive practices aligns with global efforts advocating for more humane and ethical treatment modalities in mental healthcare. There is an urgent need for theoretically informed research developed collaboratively with individuals having lived experience of mental health issues.[107]

Modern psychiatry has come to be entirely focused on applying nonviolent therapies in the treatment of mental health disorders.[108] By paying special attention to the patient's autonomy and dignity, these methods aim to build a bond of relationship grounded on trust and collaboration.[108] The most effective approach is to use non-coercive and multi-model interventions.[109] Many such interventions exist, from psychotherapy techniques like CBT and DBT to holistic methods such as mindfulness-based interventions and expressive therapies supported by art or music. Consequently, these methods often entail an active patient role in decision-making during the treatment planning process. This encourages personal ownership of the mental health journey and simultaneously implies a sense of taking the reins of one's own recovery.[109]

Nonviolent strategies are no longer limited to treatment approaches; they cover a wider scope in the broad context of the psychiatric care system. This includes the adoption of trauma-informed principles, which are aimed at addressing the prevailing cases of trauma that individuals with mental illnesses have experienced and at ensuring that there is a safe and supportive treatment environment.[110] Moreover, attempts are underway to reduce the number of involuntary hospitalizations and the use of restraints, as well as to seek professional help from community and peer support networks and institute crisis intervention teams.[111] The shift toward a non-coercive psychiatry has been a shift away from paternalistic "top-down" constructions of care that favor repressive measures and instead toward collaborative, respectful, principle-driven care models that protect the individual rights and dignity of people experiencing mental health issues.

Final considerations and recommendations

This first report focuses on addressing mental health challenges faced by vulnerable populations, advocating for a shift towards prevention, catering to the needs of children and aging individuals, exploring potential integrations between health and educational systems, assessing the state of alcohol and drug addiction, expanding psychosocial interventions in primary care, and emphasizing the crucial incorporation of the human rights approach in mental health policies.

The current generation of psychiatry epidemiology research has produced evidence correlating mental health with complex social determinants, such as gender, race/ethnicity, racism, social class, social deprivation, employment, and, more recently, violence and social oppression. Vulnerable groups such as migrants, Black women, older adults, LGBTIQ+ populations, indigenous populations, those who faced losses during the COVID-19 pandemic, and those experiencing financial deprivation need far more attention. A recent review of the Brazilian mental health epidemiology literature, demonstrating the role of social determinants in mental health, has been published elsewhere.[15]

The early onset of mental disorders presents not only a challenge but also a profound opportunity for action. By prioritizing prevention and early intervention, leveraging technology, and fostering community support, we can mitigate the long-term impact of mental disorders emerging in children and adolescents. This approach, supported by global collaboration, offers a pathway to both reduce the burden of mental disorders and enhance the overall well-being and potential of future generations. As we move forward, ensuring that children and adolescents are at the heart of mental health strategies and recognizing their right to a healthy, fulfilling life becomes

imperative. The S20 meeting provides a unique opportunity to galvanize international support and commitment towards this goal, setting the stage for a new era in mental health care that prioritizes the well-being and potential of every child and adolescent. By utilizing evidence-based practices and cultivating partnerships between the health and education sectors, S20 countries can safeguard the health and safety of their student population, thus paving the way for a more promising future for the next generation. This integration is crucial for promoting the well-being of students and fostering safer learning environments. Our collective responsibility for the future is to ensure that mental health care is accessible, equitable, and attuned to the diverse needs of children and adolescents around the world.

Dementia continues to be significantly underrecognized, especially in LMICs, where diagnosis rates remain low. This can largely be attributed to the pervasive stigma surrounding the disease, limited public awareness, and inadequate access to healthcare services. There is an urgent need to provide family caregivers with enhanced support to safeguard their own health and well-being. Promoting brain health through initiatives such as increased physical activity, healthy nutrition, and cognitive stimulation can help mitigate cognitive decline, ultimately enhancing the overall well-being of older adults and reducing the risk of dementia. Efforts to diminish stigma and advocate for help-seeking behaviors should be initiated to prompt older adults and their families to seek assistance when facing emotional distress or other mental health-related challenges. Additionally, healthcare professionals, caregivers, family members, and community stakeholders all play pivotal roles in enhancing the well-being of older individuals and should receive training to identify warning signs of depression, suicide, and dementia. Ensuring access to effective mental health services is also crucial in addressing the changing needs of older adults.

The prevalence of substance use and school violence has prompted a reassessment of prevention approaches, highlighting the need for integrated strategies that incorporate both health and education initiatives. Brazilian efforts to prevent alcohol use, drug use, and violence in schools emphasize the importance of a collaborative approach that goes beyond traditional sectoral boundaries. Future directions in alcohol and drug addiction include evaluating the effectiveness of artificial intelligence (AI) and machine learning in the identification, diagnosis, and treatment of substance use disorders.[112,113] AI-based prototypes are currently being developed and tested to provide counseling to patients as a strategy for preventing relapse, following training by specialized professionals. Another emerging area of study involves wearable devices, which offer an objective means of measuring drug use and related occurrences such as overdose and withdrawal syndrome with minimal invasiveness. Resembling ordinary wearable items like watches or activity trackers, these devices help mitigate the stigma associated with drug use monitoring. Many of these devices have the advantage of continuous data collection, thereby reducing potential observer bias. Additionally, geolocation trackers enable monitoring to determine whether individuals are approaching areas with heightened risk factors or triggers for potential relapse, or to swiftly locate individuals in the event of an overdose.[114] Furthermore, gamified therapeutic tools show promise in enhancing engagement, motivation, and treatment adherence among individuals with substance use disorders. Although these technological approaches are enticing and exciting, they should not distract or detract from the basics. Addressing social determinants and health inequities is fundamental. Structural factors, including poverty, unemployment, discrimination, and lack of access to healthcare, disproportionately impact vulnerable populations and contribute to health disparities in substance use outcomes. Culturally sensitive and community-driven interventions are essential for promoting equity and fostering resilience within underserved communities.

Developing a holistic and comprehensive strategy that considers human rights with the aim of adapting to the specific circumstances faced by all vulnerable groups, while employing the least coercive practices, offers the greatest potential to enhance the mental health framework. Focusing on these systems provides stakeholders with an opportunity to establish a mental health system where the equitable care of every individual aligns with the principles of international human rights provisions.

The G20 mental health working group is dedicated to leveraging scientific insights to foster innovation and propose actionable recommendations for implementation in Brazil and participating countries. These proposals serve as a foundation for refining ideas and identifying essential elements that could shape the future of mental health. This initiative aligns with comprehensive approaches integrating physical and mental health, advancing holistic human health in alignment with Sustainable Development Goal 3 (SDG 3), which prioritizes ensuring healthy lives and promoting well-being for all, across all ages.

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Author contributions

JJM: Conceptualization, Writing – review & editing.
CK: Writing – original draft.
CF: Writing – original draft.
JCM: Writing – original draft.
NRS: Methodology.
MFM: Writing – original draft.
TF: Writing – original draft.
ZS: Writing – original draft.
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