





Mental Health Workforce Inequities Across Income Levels: Aligning Global Health Indicators, Policy Readiness, and Disease Burden

Mónica Patricia Acuña-Rodríguez ¹, Ornella Fiorillo-Moreno ^{2,3},
Kevin Fernando Montoya-Quintero ⁴, Foday Tejan Mansaray ⁵

¹Department of Human Sciences, Universidad de la Costa, Barranquilla, Colombia; ²Clínica Iberoamérica, Barranquilla, Colombia; ³Clínica El Carmen, Barranquilla, Colombia; ⁴Facultad de Ciencias para la Salud, Universidad de Manizales, Caldas, Manizales, Colombia; ⁵Connaught Hospital, Freetown, Sierra Leone

Correspondence: Foday Tejan Mansaray, Connaught Hospital, I Percival Street, Freetown, Sierra Leone, Email foday.tejam@gmail.com

Abstract: Despite growing recognition of mental health as a global priority, a critical knowledge gap persists regarding how workforce availability aligns with the burden of mental disorders across income levels. This perspective addresses that gap by comparing mental health workforce indicators and disease burden metrics from the World Health Organization and United Nations datasets, stratified by country income level. The findings reveal a striking misalignment: low- and lower-middle-income countries report the highest disability-adjusted life years due to depression, bipolar disorder, and suicide, yet possess the lowest density of psychiatrists, psychologists, nurses, and social workers per 100,000 population. Conversely, high-income countries demonstrate stronger alignment between disease burden and workforce capacity, supported by greater policy readiness and financial allocation. Importantly, this analysis identifies not only a quantitative shortfall in human resources but also a qualitative gap in policy implementation, including limited enforcement, weak integration into primary care systems, and insufficient accountability mechanisms. Even where national mental health plans exist, compliance and execution remain limited, particularly in low-income settings. These inequities compromise efforts toward universal health coverage and Sustainable Development Goal 3.4 on mental well-being. These findings highlight urgent global priorities for mental health investment and system reform to close the persistent treatment gap and advance the Sustainable Development Goals. This evidence may guide investment decisions, inform global health diplomacy, and support policy reforms aimed at closing the persistent mental health treatment gap.

Keywords: mental health, health workforce, socioeconomic factors, health status indicators, public policy

Over the past decade, mental health has gained increasing recognition as a fundamental component of global health and sustainable development.¹ Despite this progress, mental disorders remain among the leading causes of disability worldwide, and the global mental health response continues to face major challenges.¹ The COVID-19 pandemic further exacerbated the mental health crisis, underscoring the urgent need for strengthened governance, cross-sectoral action, and investment in mental health services, particularly in low- and middle-income countries.²

Within the global mental health agenda, workforce availability has long been recognized as a critical bottleneck.³ Numerous calls for scaling up the mental health workforce have been made in global reports and political declarations.³ However, little attention has been given to empirically assessing the extent to which workforce availability aligns with the actual burden of mental disorders and core global mental health indicators.^{1,3} While several studies have addressed mental health financing and access disparities,^{4,5} few have evaluated the correlation between mental disorder burden and workforce distribution across income groups. This gap hinders efforts to prioritize interventions, allocate resources, and guide health diplomacy and policy reform.

To better understand this gap, a brief analysis of global mental health metrics was carried out, stratified by countries' income levels. The aim was to assess how well key global mental health indicators align with the availability of the

mental health workforce worldwide, using data reported by the World Health Organization (WHO)’s Global Health Observatory.⁶

We extracted raw data from the WHO’s World Mental Health Report,¹ focusing on priority indicators, and compared them with measures related to mental health service availability and governance, especially those connected to the workforce. In addition, metrics on the burden of disease and the prevalence of mental disorders were sourced from the United Nations World Population Prospects,⁷ also stratified by income level. Countries were stratified into four income groups based on the World Bank classification system.⁸ Indicators were extracted manually from WHO Global Health Observatory⁶ and UN⁷ datasets published in 2021–2022. Only countries with available data across all core indicators were included in the final analysis. All data were gathered up to the most recent year available in each dataset.

Descriptive statistics, including averages and population-weighted means, were used to compare mental health indicators across income groups. As the study relied on official aggregated data from open-access global databases, and only included countries with complete indicator records, missing data were not imputed. All averages in this table are population-weighted by country.

The analysis identified that low-income countries bear some of the highest burdens in key indicators such as Disability Adjusted Life Years (DALYs) due to depressive disorders (725 per 100,000 people) and DALYs due to bipolar disorder (97.3 per 100,000 people), yet simultaneously have the lowest proportion of specialized mental health workforce globally. For instance, these countries have only 0.4 mental health nurses, 0.1 psychologists, 0.1 psychiatrists, and 0.1 social workers per 100,000 population (Table 1).

Table 1 Comparison Between the Status of the Mental Health Workforce and Global Mental Health Indicators, Stratified by Income Level.*

Mental Health Workforce	High-Income Countries	Upper-Middle Income Countries	Lower-Middle Income Countries	Low Income Countries
Psychiatrists per 100,000 population for 2021	8.6	1.7	0.4	0.1
Mental health nurses per 100,000 population for 2021	29	5.1	1.3	0.4
Psychologists per 100,000 population for 2021	10.7	1.6	0.3	0.1
Social workers per 100,000 population for 2021	2.9	1.1	0.2	0.1
Other specialized workers per 100,000 population for 2021	4.1	0.7	0.1	0.1
Global mental health indicators				
DALYs by depressive disorders per 100,000 people for 2021	863.3	647.8	706.2	725
DALYs by schizophrenia per 100,000 people for 2021	214.1	210.3	177	110.3
DALYs by bipolar disorder per 100,000 people for 2021	161.2	97.2	83.9	97.3
DALYs by eating disorders per 100,000 people for 2021	81.2	37	37.5	26.2
DALYs by anxiety disorders per 100,000 people for 2021	719.5	563.2	469	470.3
Schizophrenia prevalence for 2021 (%)	0.3	0.3	0.3	0.2
Depressive disorders prevalence for 2021 (%)	4.5	3.4	4.3	5.3
Anxiety disorders prevalence for 2021 (%)	5.9	4.5	3.9	4.2
Bipolar disorder prevalence for 2021 (%)	0.7	0.4	0.4	0.5
Eating disorders prevalence for 2021 (%)	0.5	0.2	0.2	0.1
Suicide deaths for 2021 (n)	165,211	243,917	293,076	43,634
Countries with a mental health policy or plan (%)	87	89	78	83

(Continued)

Table 1 (Continued).

Mental Health Workforce	High-Income Countries	Upper-Middle Income Countries	Lower-Middle Income Countries	Low Income Countries
Countries that report a fully compliant mental health policy or plan (%)	60	50	45	45
Countries that report implementing a fully compliant mental health policy or plan (%)	25	32	14	3
Countries that allocated the required human resources for mental health (%)	36	49	33	29
Countries that allocated the required financial resources for mental health (%)	43	43	27	8

Notes: *Green: Indicators in the most optimal condition; Red: Indicators in the most critical condition. Source: WHO Global Health Observatory (2021–2022), WHO Mental Health Atlas (2020), UN World Population Prospects (2024).

Abbreviation: DALYs, Disability Adjusted Life Years.

In lower-middle-income countries, the highest suicide mortality was reported, with 293,076 deaths in 2021, surpassing all other income groups. This group also bears a considerable burden of disease caused by depressive disorders (706.2 DALYs per 100,000 people) and schizophrenia (177 DALYs per 100,000 people) in 2021 (Table 1). However, the availability of human resources remains critically low, with only 1.3 mental health nurses, 0.4 psychiatrists, 0.3 psychologists, and 0.2 social workers per 100,000 population (Table 1), revealing a profound mismatch between population needs and system capacity in mental health care.

In upper-middle-income countries, a notable disease burden is also observed in indicators such as schizophrenia (210.3 DALYs per 100,000 people), anxiety disorders (563.2 DALYs per 100,000 people), and suicide mortality (243,917 deaths in 2021) (Table 1). These countries also present some of the highest prevalence rates of anxiety disorders (4.5%) and schizophrenia (0.3%). Nonetheless, despite a higher density of mental health workforce compared to lower-income groups, the availability remains insufficient relative to high-income countries, with 5.1 mental health nurses, 1.7 psychiatrists, 1.6 psychologists, and 1.1 social workers per 100,000 population (Table 1).

In high-income countries, although the absolute number of suicide deaths remains high (165,211 deaths in 2021), so does the burden of disease across all major mental health disorders, including depression (863.3 DALYs per 100,000 people), schizophrenia (214.1), bipolar disorder (161.2), eating disorders (81.2), and anxiety disorders (719.5) (Table 1). However, the mental health system response is proportionally stronger, with 29 mental health nurses, 10.7 psychologists, 8.6 psychiatrists, and 2.9 social workers per 100,000 people, indicating greater alignment between disease burden and professional workforce availability.

Regarding health policy readiness and public mental health policy implementation, a significant gap exists between high-income and lower-income countries. While at least 50% of upper-middle and high-income countries report having national mental health policies, the compliance rate in low- and lower-middle-income countries remains $\leq 45\%$ (Table 1).

Similarly, policy implementation rates are $\geq 25\%$ in higher-income countries, compared to less than 15% in lower-income countries. High-income countries also demonstrate a timelier response to financial and human resource needs in mental health, with over 40% meeting these indicators, while less than 30% of lower-income countries meet the same benchmarks (Table 1). To address these disparities, it is not sufficient to scale up individual workforce cadres; rather, integrated health system reforms that prioritize mental health within primary care, task-sharing models, and capacity-building are essential.^{1,3}

The findings from this brief analysis underscore a persistent and troubling misalignment between the burden of mental disorders and the availability of the mental health workforce across income levels.⁹ As highlighted in the WHO Mental Health Atlas 2020¹⁰ and the World Mental Health Report 2022,¹ bridging the treatment gap in mental health requires not only financial investment but also a well-distributed, adequately trained mental health workforce.^{1,2} Our results reinforce and quantify this challenge, particularly in low- and lower-middle-income countries, where the burden of depression, suicide, and schizophrenia remains high, but the mental health workforce is critically scarce.^{1–3}

For example, low-income countries reported some of the highest DALYs due to depressive disorders and bipolar disorder but had the lowest density of psychiatrists, psychologists, and mental health nurses. Lower-middle-income countries, despite having the highest number of suicide deaths globally (293,076 in 2021), reported only 0.4 psychiatrists and 1.3 nurses per 100,000 people. These findings reflect a chronic underinvestment in human resources for mental health, a gap that is not solely financial but also structural,¹⁰ as noted in WHO's 2022 report on transforming mental health for all.¹ These workforce gaps also reflect structural inequities and power imbalances in the global health system. Mental health workforce shortages in low-income countries are not merely technical challenges, but issues of social and health justice.^{1,3}

Furthermore, the disparity extends beyond clinical care to governance. While 87–89% of high- and upper-middle-income countries report having a mental health policy or plan, only 25–32% report its full implementation. In low-income settings, these figures are even more alarming, with only 3% reporting full implementation and 8% allocating sufficient financial resources. This underscores a key insight: policy existence does not equate to policy effectiveness.¹¹

The novelty of this analysis lies in its comparative perspective: by stratifying data across income levels and aligning disease burden with workforce availability, the analysis reveals an equity gap not only in mental health outcomes but also in system response. These inequities are central to achieving the Sustainable Development Goals (SDG) and universal health coverage, particularly SDG target 3.4 on promoting mental health and well-being.¹²

Then, this perspective highlights a critical and underexplored dimension of global mental health: the mismatch between population needs and workforce capacity. Our analysis provides compelling evidence of inequities in the allocation of mental health professionals, which persist despite the growing burden of mental disorders, particularly in low- and middle-income countries. Future research should focus on country-level case studies, longitudinal analyses of workforce investments, and evaluations of policy implementation effectiveness.

This analysis is subject to limitations, including variability in national reporting practices, differences in definitions of policy implementation, and the absence of outcome measures linked to policy compliance.

However, these findings serve as a practical tool for policymakers and global stakeholders to realign investment, strengthen workforce planning, and monitor progress using standardized global indicators. The added value of this analysis lies in its integration of epidemiological burden, service availability, and policy implementation, elements that are often examined in isolation.^{13,14} This highlights the relevance and importance of further research and action on this issue.^{15–17} It also reinforces the call to action made by WHO and partners: mental health must be integrated into broader health systems, with a well-resourced and equitably distributed workforce at its core. Without addressing this fundamental misalignment, the goals of mental health for all by 2030 will remain out of reach.³

A few countries offer valuable lessons in scaling mental health services. For example, Chile's national mental health plan successfully integrated mental health into primary care through community-based models,¹⁸ while Liberia's post-conflict mental health program rapidly expanded its trained workforce by partnering with non-governmental organizations.¹⁹ These examples demonstrate that with political will and contextual adaptation, low- and middle-income countries can strengthen their mental health systems despite limited resources.

Addressing the mental health workforce gap requires coordinated, multisectoral efforts. We recommend that global donors prioritize investments in regionally relevant training programs; that national governments adopt task-sharing strategies and integrate mental health into primary care systems; and that multilateral organizations strengthen accountability through harmonized tracking of workforce metrics. These steps are essential not only for building responsive health systems, but also for advancing health equity and realizing the right to mental health globally. Without meaningful action, the goals of Sustainable Development Goal 3.4 and Universal Health Coverage will remain unmet. Global stakeholders, especially the WHO, international donors, and civil society, must act in coordination to ensure that mental health workforce strengthening becomes a shared global priority, with dedicated funding and technical support tailored to local contexts.

Abbreviations

DALYs, Disability Adjusted Life Years; SDG, Sustainable Development Goals; WHO, World Health Organization.

Data Sharing Statement

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Author Contributions

All authors contributed to the conceptualization; data curation; formal analysis; investigation; methodology; validation; writing—original draft; writing—review & editing. All authors gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Disclosure

The authors declare no conflicts of interest in this work.

References

1. World Health Organization. World mental health report: transforming mental health for all [Internet]. [Consulted April 6, 2025]. Available from: <https://www.who.int/publications/i/item/9789240049338>. Accessed June 14, 2025.
2. Penninx BWJH, Benros ME, Klein RS, Vinkers CH. How COVID-19 shaped mental health: from infection to pandemic effects. *Nat Med*. 2022;28(10):2027–2037. doi:10.1038/s41591-022-02028-2
3. World Health Organization. Comprehensive mental health action plan 2013–2030 [Internet]. [Consulted April 6, 2025]. Available from: <https://www.who.int/publications/i/item/9789240031029>. Accessed June 14, 2025.
4. Chisholm D, Docrat S, Abdulmalik J, et al. Mental health financing challenges, opportunities and strategies in low- and middle-income countries: findings from the Emerald project. *BJPsych Open*. 2019;5(5):e68. doi:10.1192/bjo.2019.24
5. Abdulmalik J, Olayiwola S, Docrat S, Lund C, Chisholm D, Gureje O. Sustainable financing mechanisms for strengthening mental health systems in Nigeria. *Int J Ment Health Syst*. 2019;13:38. doi:10.1186/s13033-019-0293-8
6. World Health Organization. Global health observatory: indicators [Internet]. [Consulted April 6, 2025]. Available from: <https://www.who.int/data/gho/data/indicators>. Accessed June 14, 2025.
7. United Nations. World Population Prospects 2024 [Internet]. [Consulted April 6, 2025]. Available from: <https://www.un.org/development/desa/pd/world-population-prospects-2024>. Accessed June 14, 2025.
8. World Bank. World Bank Country and Lending Groups [Internet]. [Consulted April 6, 2025]. Available from: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups>. Accessed June 14, 2025.
9. Mongelli F, Georgakopoulos P, Pato MT. Challenges and opportunities to meet the mental health needs of underserved and disenfranchised populations in the United States. *Focus*. 2020;18(1):16–24. doi:10.1176/appi.focus.20190028
10. World Health Organization. Mental Health ATLAS 2020 [Internet]. [Consulted April 6, 2025]. Available from: <https://www.who.int/publications/i/item/9789240036703>. Accessed June 14, 2025.
11. Patel V, Saxena S, Lund C, et al. Transforming mental health systems globally: principles and policy recommendations. *Lancet*. 2023;402(10402):656–666. doi:10.1016/S0140-6736(23)00918-2
12. Votruba N, Thornicroft G; FundaMentalSDG Steering Group. Sustainable development goals and mental health: learnings from the contribution of the FundaMentalSDG global initiative. *Glob Ment Health*. 2016;3:e26. doi:10.1017/gmh.2016.20
13. Polinsky EJ, Bradsell JEB, Keeley JW, Cardin SA. Analysis of mental health workforce: implications for social work practice and profession. *Soc Work Public Health*. 2022;37(6):560–580. doi:10.1080/19371918.2022.2054891
14. Olfson M. Building the mental health workforce capacity needed to treat adults with serious mental illnesses. *Health Aff*. 2016;35(6):983–990. doi:10.1377/hlthaff.2015.1619
15. Lozada-Martinez ID, Hernandez-Paz DA, Fiorillo-Moreno O, Picón-Jaimes YA, Bermúdez V. Meta-research in biomedical investigation: gaps and opportunities based on meta-research publications and global indicators in health, science, and human development. *Publications*. 2025;13(1):7. doi:10.3390/publications13010007
16. Acuña-Rodríguez M, Fiorillo-Moreno O, Bolaño-Romero MP, Cují-Galarza W. Academic and scientific thinking on global mental health in future healthcare professionals: a new challenge aligned with contemporary needs. *Inge CUC*. 2025;21(1):1–11. doi:10.17981/ingecuc.21.1.2025.05
17. Lozada-Martinez ID, Lozada-Martinez LM, Fiorillo-Moreno O. Leiden manifesto and evidence-based research: are the appropriate standards being used for the correct evaluation of pluralism, gaps and relevance in medical research? *J R Coll Physicians Edinb*. 2024;54(1):4–6. doi:10.1177/14782715241227991
18. Calderon J, Rojas G. Integration of mental health into primary care: a Chilean perspective on a global challenge. *BJPsych Int*. 2016;13(1):20–21. doi:10.1192/S2056474000000945
19. Patterson AS, Clark MA, Rogers AV. Network power and mental health policy in post-war Liberia. *Health Policy Plan*. 2024;39(5):486–498. doi:10.1093/heapol/czae020

Psychology Research and Behavior Management

Dovepress

Taylor & Francis Group

Publish your work in this journal

Psychology Research and Behavior Management is an international, peer-reviewed, open access journal focusing on the science of psychology and its application in behavior management to develop improved outcomes in the clinical, educational, sports and business arenas. Specific topics covered in the journal include: Neuroscience, memory and decision making; Behavior modification and management; Clinical applications; Business and sports performance management; Social and developmental studies; Animal studies. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/psychology-research-and-behavior-management-journal>