

confronted and addressed. These sources of distrust also compromise the global response to other existential threats, such as climate change and war.

There is no simple solution to building trust, but we believe there are actions that governments, communities, and the multilateral system can take. These actions include efforts to better understand and acknowledge the geopolitical, social, and economic context within which stakeholders work; commitment to strengthen the multilateral system and global governance so that every country is treated equitably; initiatives to build social capital through real dialogue based on listening to and understanding one another, within and through local communities; and a resolute commitment to science, evidence, transparency, and accountability.

Unless these steps are taken, we remain gravely concerned that the ongoing PPPR reforms will not deliver solutions that are sufficiently powered to address the challenges of pandemics and other health emergencies,<sup>17</sup> and the world will remain vulnerable to the potential catastrophic impact of the next pandemic. The future of current and future generations depends on the actions to strengthen PPPR that the global community takes now.

We are the Co-Chairs of the Global Preparedness Monitoring Board. KG-K is former President of Croatia and is also a Global Ambassador for Immunization for Women Political Leaders, a Member of the High-Level Advisory Council for the High Representative for the UN Alliance of Civilizations, a Chair Emerita of the Council of Women World Leaders, an Executive in Residence at the Zagreb School of Economics and Management, and serves on the boards of non-profit institutions, including the US Atlantic Council, Halifax International Security Forum, Concordia Leadership Council, GLOBSEC, and Friends of Europe. KG-K is an independent member of the International Olympic Committee and chairs the Future Host Commission for the Games of the Olympiad. She is also a member of the Nizami Ganjavi International Centre. KG-K reports receiving consulting fees from ECOLOG (a supply chain management company active in health-care services) and support to attend a meeting of the Pandemic Fund Governing Board. JP is former Minister of Health of Botswana and is also Chair of the RBM Partnership to End Malaria, Executive Secretary of the African Leaders Malaria Alliance, and Chair of the Global Safe to Learn Initiative and reports support to attend a meeting of the UNPGA.

\**Kolinda Grabar-Kitarović, Joy Phumaphi*  
 gpmbsecretariat@who.int

Zagreb, Croatia (KG-K); African Leaders Malaria Alliance, Dar es Salaam, Tanzania (JP)

- 1 WHO. WHA58.3 Revision of the International Health Regulations. 2005. [https://apps.who.int/gb/ebwha/pdf\\_files/WHA58-REC1/english/A58\\_2005\\_REC1-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA58-REC1/english/A58_2005_REC1-en.pdf) (accessed Oct 6, 2023).
- 2 Gostin LO, Katz R. The International Health Regulations: the governing framework for global health security. *Milbank Q* 2016; **94**: 264–313.
- 3 Fidler D, Gostin L. The WHO Pandemic Influenza Preparedness Framework: a milestone in global governance for health. *JAMA* 2011; **306**: 200–01.
- 4 WHO. WHA69(9) Reform of WHO's work in health emergency management: WHO Health Emergencies Programme. 2016. [https://apps.who.int/gb/ebwha/pdf\\_files/WHA69-REC1/A69\\_2016\\_REC1-en.pdf#page=27](https://apps.who.int/gb/ebwha/pdf_files/WHA69-REC1/A69_2016_REC1-en.pdf#page=27) (accessed Oct 6, 2023).
- 5 United Nations. A/70/723 Protecting humanity from future health crises. Report of the High-level Panel on the Global Response to Health Crises. 2016. <https://digitallibrary.un.org/record/822489> (accessed Oct 6, 2023).
- 6 Brende B, Farrar J, Gashumba D, et al. CEPI—a new global R&D organisation for epidemic preparedness and response. *Lancet* 2017; **389**: 233–35.
- 7 WHO. WHO and World Bank Group join forces to strengthen global health security. 2018. <https://www.who.int/news/item/24-05-2018-who-and-world-bank-group-join-forces-to-strengthen-global-health-security> (accessed Oct 6, 2023).
- 8 WHO. SSA2(5) The world together: establishment of an intergovernmental negotiating body to strengthen pandemic prevention, preparedness and response. Dec 1, 2021. [https://apps.who.int/gb/ebwha/pdf\\_files/WHASS2-REC1/WHASS2\\_REC1-en.pdf#page=17](https://apps.who.int/gb/ebwha/pdf_files/WHASS2-REC1/WHASS2_REC1-en.pdf#page=17) (accessed Oct 10, 2023).
- 9 WHO. WHA75(9) Strengthening WHO preparedness for and response to health emergencies. May 27, 2022. [https://apps.who.int/gb/ebwha/pdf\\_files/WHA75-REC1/A75\\_REC1\\_Interactive\\_en.pdf#page=1](https://apps.who.int/gb/ebwha/pdf_files/WHA75-REC1/A75_REC1_Interactive_en.pdf#page=1) (accessed Oct 10, 2023).
- 10 The World Bank. New fund for pandemic prevention, preparedness and response formally established. Sept 9, 2022. <https://www.worldbank.org/en/news/press-release/2022/09/09/new-fund-for-pandemic-prevention-preparedness-and-response-formally-established> (accessed Oct 10, 2023).
- 11 Global Preparedness Monitoring Board. A world in disorder: GPMB annual report 2020. <https://www.gpmb.org/annual-reports/annual-report-2020> (accessed Oct 10, 2023).
- 12 Global Preparedness Monitoring Board. From worlds apart to a world prepared: GPMB annual report 2021. <https://www.gpmb.org/annual-reports/annual-report-2021> (accessed Oct 10, 2023).
- 13 UN. Political Declaration of the United Nations General Assembly High-level Meeting on Pandemic Prevention, Preparedness and Response. Oct 5, 2023. <https://www.un.org/pga/77/wp-content/uploads/sites/105/2023/08/Final-text-for-silence-procedure-PPPR-Political-Declaration.pdf> (accessed Oct 10, 2023).
- 14 Bollyky, T, Kickbusch I, Peterson M. The trust gap: how to fight pandemics in a divided country. Foreign Affairs. Jan 30, 2023. <https://www.foreignaffairs.com/united-states/trust-gap-fight-pandemic-divided-country> (accessed Oct 10, 2023).
- 15 Global Preparedness Monitoring Board. A fragile state of preparedness: GPMB 2023 annual report. Oct 30, 2023. <https://www.gpmb.org/> (accessed Oct 30, 2023).
- 16 Global Preparedness Monitoring Board. GPMB monitoring framework. 2023. <https://www.gpmb.org/annual-reports/overview/item/gpmb-monitoring-framework-full> (accessed Oct 10, 2023).
- 17 Global Preparedness Monitoring Board. A manifesto for preparedness: three tests of global reforms. Feb 22, 2023. <https://www.gpmb.org/news/item/22-02-2023-global-preparedness-monitoring-board-outlines-three-tests-of-global-health-reforms> (accessed Oct 10, 2023).



## The Jameel Arts & Health Lab in collaboration with the WHO–Lancet Global Series on the Health Benefits of the Arts

Published Online  
 September 19, 2023  
[https://doi.org/10.1016/S0140-6736\(23\)01959-1](https://doi.org/10.1016/S0140-6736(23)01959-1)

Interest in the individual and collective health benefits of engaging with the arts has been increasing in the 21st century, particularly for addressing complex health challenges that have psychosocial, behavioural, and

biological origins. The 2019 publication of the WHO scoping review<sup>1</sup> on the evidence for the role of arts in improving health and wellbeing, and subsequent evidence syntheses,<sup>2,3</sup> showed how active and receptive

participation in the arts can play an important role in promoting good health and health equity, preventing illness, and treating acute and chronic conditions across the lifespan. In the wake of the COVID-19 pandemic, during which balcony performances garnered public attention,<sup>4</sup> we have seen high profile engagement from major cultural institutions, artists, and media platforms calling attention to the relationship between the arts and health.<sup>5</sup>

For example, recent epidemiological studies have revealed significant associations between arts engagement and social networks in adolescence,<sup>6</sup> mental health in adults,<sup>7</sup> and healthy ageing.<sup>8</sup> A 10-week programme of group singing was shown to reduce symptoms of postpartum depression by an average of 38% and improve recovery time.<sup>9</sup> Recreational choir singing has been demonstrated to significantly reduce depressive symptoms in older care home residents with dementia.<sup>10</sup> Music and museum interventions have been linked to pain management<sup>11,12</sup> and creative arts therapies have been shown to alleviate symptoms of anxiety and depression while enhancing coping capacities.<sup>13-15</sup>

Despite the growing evidence base supporting the beneficial effect that general and targeted arts engagement can have, the integration of arts interventions into health-care settings and public health efforts is still far from mainstream. One commonly stated reason for this lack of integration is the trope of the division between the two cultures<sup>16</sup> of art and science and what either considers to be evidence. There is a belief that while the biomedical scientist is said to rely on objective, measurable, and generalisable fact, the artist is said to derive meaning from personal experience and subjective feelings. Yet, the truth of these two cultures is more complicated and the space between them is fertile ground for powerful interdisciplinary partnerships and innovative forms of creative inquiry. In fact, for more than 20 years, neuroscience, psychology, public health, and cognitive science researchers have been working together with arts practitioners through dynamic translational models to strengthen health communication and support greater health and wellbeing.

A second barrier is that arts-based interventions are often used to address complex physical and mental health challenges that have multiple symptoms and root causes, making it difficult to identify the biochemical, structural, or functional systems involved. This is



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because arts-based experiences and interventions are themselves complex and multi-modal. Their health and wellbeing effects are achieved by improving multiple different psychological, physiological, behavioural, and social processes, via dozens of active ingredients.<sup>17,18</sup> This means that establishing causality, at least to the degree that is sometimes required in the medical sciences, is often not possible. In the same way that it is difficult, time-consuming, and expensive to determine beyond doubt whether physical measures such as hand-washing or wearing masks stop or slow down the spread of respiratory viruses,<sup>19</sup> so too is it difficult, time-consuming, and expensive to determine beyond doubt whether, for example, the integration of music can reduce the stress response to surgery even though there is now promising evidence to support this.<sup>20</sup> This bar of absolute certainty for arts interventions is also arbitrary. The reality is that we do not know the exact physiological mechanisms at play in many approved pharmacological interventions, but they are accepted and adopted for medical use.

A third important reason that is hampering the uptake and widespread use of arts practices in how we define and think about health, is the lack of awareness of and investment in a rigorous evidence base. There is a misperception that the arts are nice to have but not as necessary for our health and wellbeing as are exercise, good nutrition, and sleep. Although there have been substantial gains in the form of cultural, educational, and health policies that expand access to the arts and creative arts therapies,<sup>21</sup> more research is essential, especially from low-income and middle-income countries. Evidence

syntheses and meta-analyses that focus on how engaging with the arts can mitigate risk factors (including social determinants of health) and respond to specific health outcomes are needed. For the arts to become an important contributor to how we think about health-care systems, their benefit must be demonstrated in terms of feasibility, efficacy, and cost-effectiveness at the population level. In other words, arts and health interventions need to demonstrate their scalability. An epidemiological approach to explore predictors of arts engagement for health is needed, to interrogate the fundamental question: does participating in the arts, whether through specifically designed, targeted, clinical interventions, or generally as part of arts events, activities, or experiences, constitute a health behaviour?<sup>22</sup> This will help identify actions and intersectoral policy recommendations at the population level to ensure that the health benefits of arts engagement are accessible to everyone.<sup>23</sup>

The Jameel Arts & Health Lab in collaboration with the WHO–Lancet Global Series on the Health Benefits of the Arts aims to address these issues and other challenges. With a focus on non-communicable diseases, which are a leading cause of death and disability worldwide, the series will help sharpen the evidence base, suggest a conceptual framework to share knowledge within and between the two cultures, and move us closer to a whole society approach to prevention and treatment in which all available resources, including community-based arts and cultural resources, are mobilised towards increasingly holistic, effective, and equitable systems of care.<sup>24,25</sup>

The authors alone are responsible for the views expressed in this article and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated. NS and NF are co-leads of the Jameel Arts & Health Lab in collaboration with the WHO–Lancet Global Series on the Health Benefits of the Arts. Financial support for the series has been provided by Community Jameel, a global philanthropic organisation, to NYU Steinhardt and the WHO Regional Office for Europe. We declare no other competing interests. We wish to acknowledge the editorial support provided by Christopher Bailey, Raquel Chapin Stephenson, Ian Koebner, Susan Magsamen, Hod Orkibi, Pier Luigi Sacco, Jill Sonke, and Stephen Stapleton.

\*Nisha Sajjani, Nils Fietje  
nls4@nyu.edu

NYU Steinhardt School of Culture, Education, and Human Development, New York, 10003 NY, USA (NS); World Health Organization Regional Office for Europe, Copenhagen, Denmark (NF)

- 1 Fancourt D, Finn S. What is the evidence on the role of the arts in improving health and well-being? A scoping review. Health Evidence Network synthesis report: 67. Copenhagen: World Health Organization Regional Office for Europe, 2019.
- 2 CultureForHealth. The CultureForHealth report: scoping review of culture, well-being and health interventions and their evidence, impacts, challenges and policy recommendations for Europe. Culture Action Europe, 2022.
- 3 Pesata V, Colverson A, Sonke J, et al. Engaging the arts for wellbeing in the United States of America: a scoping review. *Front Psychol* 2022; **12**: 791773.

- 4 UN. Even during COVID-19, art 'brings us closer together than ever.' UN News. 2020. <https://news.un.org/en/story/2020/04/1061802> (accessed Sept 1, 2023).
- 5 Marshall A. Bringing world-class art, and wonder, to mental health patients. *New York Times*. 2022. <https://www.nytimes.com/2022/11/17/arts/design/hospital-rooms-murals.html> (accessed Sept 1, 2023).
- 6 Bone JK, Fancourt D, Fluharty ME, Paul E, Sonke JK, Bu F. Cross-sectional and longitudinal associations between arts engagement, loneliness, and social support in adolescence. *Soc Psychiatry Psychiatr Epidemiol* 2023; **58**: 931–38.
- 7 Bone JK, Fancourt D, Sonke JK, et al. Creative leisure activities, mental health and well-being during 5 months of the COVID-19 pandemic: a fixed effects analysis of data from 3725 US adults. *J Epidemiol Community Health* 2023; **77**: 293–97.
- 8 Bone JK, Fancourt D, Sonke JK, Bu F. Participatory and receptive arts engagement in older adults: associations with cognition over a seven-year period. *Creat Res J* 2023; published online Aug 29. <https://doi.org/10.1080/10400419.2023.2247241>
- 9 Fancourt D, Perkins R. Effect of singing interventions on symptoms of postnatal depression: three-arm randomised controlled trial. *Br J Psychiatry* 2018; **212**: 119–21.
- 10 Baker FA, Lee YC, Sousa TV, et al. Clinical effectiveness of music interventions for dementia and depression in elderly care (MIDDEL): Australian cohort of an international pragmatic cluster-randomised controlled trial. *Lancet Healthy Longev* 2022; **3**: e153–65.
- 11 Leis JA, Morrison CI. An integrative review of arts-based strategies for addressing pain and substance use disorder during the opioid crisis. *Health Promot Pract* 2021; **22** (suppl): 445–525.
- 12 Koebner IJ, Fishman SM, Paterniti D, et al. The art of analgesia: a pilot study of art museum tours to decrease pain and social disconnection among individuals with chronic pain. *Pain Med* 2019; **20**: 681–91.
- 13 Blomdahl C, Guregård S, Rusner M, Wijk H. Recovery from depression: a 6-month follow-up of a randomized controlled study of manual-based phenomenological art therapy for persons with depression. *Art Ther (Alex)* 2022; **39**: 13–23.
- 14 Hyvönen K, Pylvänäinen P, Muotka J, Lappalainen R. The effects of dance movement therapy in the treatment of depression: a multicenter, randomized controlled trial in Finland. *Front Psychol* 2020; **11**: 1687.
- 15 Orkibi H, Keisari S, Sajjani NL, de Witte M. Effectiveness of drama-based therapies on mental health outcomes: a systematic review and meta-analysis of controlled studies. *Psychology of Aesthetics, Creativity, and the Arts*. 2023. Advance online publication. <https://doi.org/10.1037/aca0000582>
- 16 Snow CP. The two cultures and the scientific revolution. London: Cambridge University Press, 1959.
- 17 Warran K, Burton A, Fancourt D. What are the active ingredients of 'arts in health' activities? Development of the INgredients in ArTs in hEalth (INNATE) Framework. *Wellcome Open Res* 2022; **7**: 10.
- 18 de Witte M, Orkibi H, Zarate R, et al. From therapeutic factors to mechanisms of change in the creative arts therapies: a scoping review. *Front Psychol* 2021; **12**: 678397.
- 19 Jefferson T, Dooley L, Ferroni E, et al. Physical interventions to interrupt or reduce the spread of respiratory viruses. *Cochrane Database Syst Rev* 2023; **1**: CD006207.
- 20 Fu VX, Oomens P, Sneiders D, et al. The effect of perioperative music on the stress response to surgery: a meta-analysis. *J Surg Res* 2019; **244**: 444–55.
- 21 Dow R, Warran K, Letrondo P, Fancourt D. The arts in public health policy: progress and opportunities. *Lancet Public Health* 2023; **8**: e155–60.
- 22 Rodriguez AK, Akram S, Colverson AJ, Hack G, Golden TL, Sonke J. Arts engagement as a health behavior: an opportunity to address mental health inequities. *Community Health Equity Res Policy* 2023; published online May 17. <https://doi.org/10.1177/2752535X231175072>.
- 23 WHO. Intersectoral action: the arts, health, and well-being. Copenhagen: World Health Organization Regional Office for Europe, 2019.
- 24 Patel V, Saxena S, Lund C, et al. Transforming mental health systems globally: principles and policy recommendations. *Lancet* 2023; **402**: 656–66.
- 25 Food and Agriculture Organization of the United Nations, United Nations Environment Programme, WHO, and World Organisation for Animal Health. Global plan of action on One Health. Towards a more comprehensive One Health, approach to global health threats at the human-animal-environment interface. 2022. <https://www.fao.org/documents/card/en/c/cc2289en> (accessed Sept 1, 2023).