

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,¹⁷ 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.

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

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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 review¹ on the evidence for the role of arts in improving health and wellbeing, and subsequent evidence syntheses,^{2,3} 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,⁴ we have seen high profile engagement from major cultural institutions, artists, and media platforms calling attention to the relationship between the arts and health.⁵

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

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 cultures¹⁶ 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.^{17,18} 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,¹⁹ 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.²⁰ 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,²¹ 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?²² 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.²³

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.^{24,25}

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