




Reflection, refraction, resilience: the transformative potential of art

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“Study the science of art. Study the art of science. Develop your senses – learn how to see. Realize that everything connects you to everything else.”

- Leonardo da Vinci

The COVID-19 pandemic has exposed our world's profound interconnectivity and interdependence. As the virus swept swiftly around the world, the scientific community rapidly rallied to share information and innovate collaboratively across the globe. But researchers did not rely only on hard science to help humanity survive the pandemic. Scientific and artistic disciplines move in tandem; they share cross-functional skills and mutually inform each other's practices and motivations. The human spirit can propel imagination and humanistic empathy because the needs of others can drive innovation. The interdisciplinary field of medical humanities perfectly showcases this dance of science and art. It includes the application of humanities, social sciences, and art to medical education and practice,¹ and promotes knowledge building, mastering skills, professional transformation, and social advocacy.² During the pandemic, our team led a medical humanities curriculum in the Pediatric Critical Care Program at The Hospital for Sick Children. We aimed to harness the strengths of the arts to enrich clinical practice by encouraging participants to reflect and come to terms with their professional

experiences through their artistic practices. Trainees and faculty were all invited to the program, but participation was voluntary as some clinicians might not embrace this way of expressing their inner reflections. A range of artistic media was offered to facilitate clinicians' choices, talents, and preferences and ultimately their involvement in the program. The groups met once to twice per month and were kept intentionally small (less than ten participants) so the meeting could remain an “open space” where the participants could be vulnerable, explore and witness experiences, and engage in reflection through art. The faculty's diverse background in education, art, ethics, anthropology, and the addition of an art scholar made facilitations of the evenings easier. To that end, we met virtually and in-person to create works of music, creative writing, and the visual arts. We then shared and discussed these creations within our group and even the critical care community in Toronto. Art served as both the substance and the spark for engaging conversations between colleagues about their professional lives as we grappled with complex questions of ethical practice, professional meaning, and individual purpose.

In this piece, we aim to share how the arts facilitated and enhanced our ability to reflect, as well as to accept and nurture ourselves as reflective beings more fully attuned to the highs and lows of our professional and personal worlds. Just as the journal content *Reflection* aims to “challenge [our] readers to examine their own perspectives and reflect on how this content may impact [their own] clinical care,”³ our piece describes reflection through art, its importance and impact for intensive care clinicians.

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Reflection and its purpose

We define reflection to mean “a term for those intellectual and affective activities in which individuals engage to explore their experiences in order to [gain] a new

understanding and appreciation.”⁴ An experience can expand and contract in time, from a moment in our day to an entire career in intensive care, or in dimension, from one interaction with a patient to our existence within the world around us in medicine and beyond. Reflection is a process through which we elaborate on and interrogate an experience. This allows for a deeper appreciation of our experiences, and reflection can be transformed into action through new knowledge, understanding, attitudes, or endeavours.⁵ This transformation enables us to discover meaning in our work while deepening our own comprehension of the intersection between our professional and personal worlds.⁶ Reflection can be a transformative tool that helps us become and remain resilient, professional, caring clinicians.^{7,8}

Individual and collective transformation through art

Reflection inherently involves looking back at the past to reconcile with who we are in the present and dream about who we want to be in the future. Engaging in artistic disciplines—writing, reading, music, the visual arts—can allow us to enter a kind of portal into the different dimensions of our life and the lives of others, real and imagined, which can in turn encourage empathy and remind us that our experiences can transform through the very act of reflection. Art provides an avenue to explore different facets of ourselves as we transition from one phase of our lives to the next. It allows us to choose parts of our experience to guide us in the process of these transitions. Moreover, when we share our reflections about art with others, it strengthens our sense of community and belonging. That is, the subjective nature of experiencing and interpreting artworks can allow for an open dialogue between individuals where they can freely share their perspectives in a supportive environment. These conversations can be both richly informative about the range, kind, and depth of professional experiences currently affecting participants, and mutually affirming in allowing group members to build trust over sharing their reflections through art, which can be a deeply vulnerable activity. Thus, reflecting about artworks can be personally and collectively transformative.

Humanities as one of the potential remedies to burnout in critical care medicine

The search for solutions to burnout has captured the attention of individuals and organizations in medicine, particularly in the intensive care community where professional burnout is an especially urgent and troubling

issue.⁹ Our constant exposure to high intensity situations and our practice of medicine at the border of life and death makes us particularly vulnerable to moral distress, which can lead to burnout.¹⁰ Like Sisyphus, who cheated death but was fated to push a boulder up a hill for the rest of his existence, intensivists continuously nudge our boulders on, knowing that gravity is against us and will necessitate our constant efforts to continue and re-continue. Thus far, identified risk factors for burnout are described as both modifiable and non-modifiable. While no single solution to burnout exists, proposed solutions require both systemic and individual commitment. Individuals must be encouraged to build their own resilience and build healthy, prosperous careers within a supportive system.^{11,12} Unsurprisingly, a growing body of literature suggests that cultivating resilience can decrease levels of burnout in various roles in the intensive care unit. Also, individual and collective reflection and support can foster resilience and prevent burnout in a group.¹³ Neurocognitive studies shed light into the processes and parts of the brain involved in reflection that allows us to *monitor* our own perceptions and make judgements about our own well-being.¹⁴ Reflection facilitates a greater self-awareness that sustains a sense of well-being.¹⁵ Cultivating self-awareness and development of core values through reflection and transformation leads to a resilient practitioner.^{16–18}

Reflection through art is one of various ways to help clinicians express and process crucial events of their professional and personal lives. In the past years, seven of our faculty and 25 trainees have engaged in a humanities evening. Our Pediatric Critical Care training program, the largest in Canada, offers more than ten different curricula targeting CanMEDS roles, with the humanities evenings ranked second. The greatest show of its success is the fact that trainee and faculty come back evening after evenings, opening up their heart and mind to reflect and make meaning of their experiences and help others do the same. Some have discovered talents or rediscovered their childhood passions and continue to use art even outside these evenings. Our graduated trainees remain in touch, some have instituted similar programs in the places that they have joined, and all continue to create art, inspired from their experiences, which they proudly continue to share with us.

As the intensive care community deals with burnout, humanities and arts programs are simple interventions that can be supported by individuals to catalyze reflection, transformation, and resilience. Furthermore, the benefits of reflection through various creative arts have been shown to improve physical symptoms as well as emotional or psychological wellbeing.¹⁹ Herein lies the opportunity to

contextualize our professional lives through humanistic reflections to help us foster our own resilience.

Like many curricula in medical education, the medical humanities have been scrutinized for their effectiveness; some reviews question their impact.²⁰ Considering the breadth and diversity of humanities disciplines, it is natural that studies vary in their underlying ideas about the value, role, and place they should have in medicine. While tools to measure the value of reflections still exist,²¹ the achievements of these curricula cannot be measured in a conventional manner. Quantifiable markers of achievement could be detrimental to the positive impact the reflection through art aims to achieve and as mentioned by some authors “the very essence and purpose of reflection may be compromised when it is enforced in an overly prescriptive manner, or when it is subjected to formal evaluation”.²²

The impacts of reflection—such as insight and self-awareness—just like the beauty of art itself, are extremely hard to define and measure in studies. The outcomes studied have tried to capture some of the aspects that can be measured;^{17,18,23,24} however, the other and arguably most important aspects might be better analyzed with qualitative methodology. For clinicians trying to integrate these programs in their settings, they would first need to explore their colleagues’ openness to art and reflection, then find experienced facilitators to aid with the program and attempt to illustrate impact with a combination of qualitative and quantitative methodologies.

As medical professionals combating the COVID-19 pandemic, we depended on our scientific knowledge to care for patients, explore treatments, and develop vaccines. As human beings experiencing the COVID-19 pandemic, we depended on the arts to help us navigate our emotions of uncertainty, despair, hope, understanding, loss, and love. Creating and discussing art allowed us to appreciate both our profession and our humanity, to help us express ourselves and connect with others in an especially isolating time. Equipping ourselves with the capacity to tell and listen to stories, the ability to appreciate beauty around us, the pleasure of listening to moving music, and the effort of finding meaning through a painting or a photo are achievements unto themselves. We hope to inspire wellness and fulfillment in healthcare providers by taking the time to reflect, transform ourselves, and live fully cognizant of our roles in a changing world. We aim to help combat burnout with beauty and to savour the human connection between us and our patients as a reminder that medical science is rooted in humanity. As we all continue to work through these uncertain times, we ask our readers to look to art to understand the delicate balance in our world and to join the eternal dance of science and art.

Optimism

- Jane Hirshfield

More and more I have come to admire resilience.

Not the simple resistance of a pillow, whose foam returns over and over to the same shape, but the sinuous

tenacity of a tree: finding the light newly blocked on one side,

it turns in another. A blind intelligence, true.

But out of such persistence arose turtles, rivers, mitochondria, figs — all this resinous, unretractable earth.

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