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Whole person healthcare as social and environmental justice: new research directions toward a paradigmatic integration of an ecological whole system medicine framework

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With increasing recognition of the interdependencies of human and planetary health, calls for a socially and environmentally just framework of health have centered on whole person healthcare (WPHC) approaches. This perspective piece proposes an argument for broadening the definition of human health from WPHC to one that is guided by the philosophical orientation of traditional whole system medicine (WSM) approaches, undergirded by the values of social and environmental justice, and supported by the practices of an allopathic-integrative medicine-based WPHC framework. This piece presents opportunities for praxis offered by a WSM-WPHC framework to address global inequity, environmental disparities, and sustainability challenges. An ecological WSM–WPHC framework envisages social and environmental justice in material and discursive ways by foregrounding environmental planetary ecological consciousness as constitutive of human consciousness and biopsychosocial composition. It argues for structural support through formalized programmatic pathways targeting funding opportunities and mechanisms that invite investigations addressing epistemic challenges of expanding definitions of evidence constituting basic science knowledge domains beyond mechanistic, causal, and formative paradigms. Furthermore, it calls for innovative research directions examining the integration and validation of evidence-based approaches incorporating the ontologically diverse and epistemically distinct ontological orientation of WSM and clinical approaches. A WSM-WPHC framework that positions human health within the parameters of social and environmental justice principles envisions the material enactment of the practice of health and medicine as a universal planetary value.

KEYWORDS

whole person healthcare, whole system medicine, social justice, environmental justice, human health, planetary health

Introduction

A whole person healthcare (WPHC; also known as whole health or One Health, World Health Organization, 2023) framework recognizes that human health, planetary health, and ecosystem health are mutually interdependent in complex ways. Systemic effects stemming from ecological shifts, such as those attributed to climate change or more localized weather

phenomena, affect individual lifestyles, community organizations, and social movements. At an individual level, the characteristics of built spaces, presence of nature, healthy food and nutrition, and ability to live in an environment free of air, water, land, sound, and light pollution are deemed increasingly fundamental to positive human wellbeing. Ecological instability exacerbates the global health burden, leading to disruptions associated with mass migration, pandemics, non-communicable diseases, and emerging infectious diseases. The shift toward WPHC emphasizes how health is constituted by physical, mental, emotional, religious, spiritual, social, and environmental wellbeing (National Academies of Sciences, Engineering, and Medicine, 2023, hereafter, National Academies). The multilayered and complex definition of WPHC calls for modes of assessment of individual health outcomes that recognize both the connection with social and environmental health and the obligation to integrate these elements with equity and balance. Achieving human health in accordance with the goals of the WPHC framework intersects fundamentally with the imperatives of social and environmental justice. This perspective piece proposes an argument for broadening the definition of human health to one that is guided by the philosophical orientation of traditional whole system medicine (WSM) approaches, undergirded by the values of social and environmental justice, and supported by the practices of a WPHC framework.

Environmental justice affirms the integrity of nature, ecological interdependence, and the right to be free from ecological destruction. Within these core principles, environmental justice affirms the right to ethical, balanced, and responsible use of natural resources. Their use should be guided by an emphasis on the cultural integrity of communities, in a manner that supports sustainability and renewal of planetary components and emphasizes fair access for all to all the resources. Environmental justice is fundamentally connected with social justice in the realm of health. The principles of environmental justice imply that everyone's choices are in alignment with eschewing waste, overconsumption, and exploitation of resources and wealth, to live simply and with regard to the good health of the natural world for the present and future generations (Environmental Working Group, 2007). Health equity seeks to reduce disparities in health and its determinants and serves to reference social justice in health. Health is a social justice value because ill health can exclude individuals from fully participating in their endeavors to live a fulfilling life, seek accomplishments that allow them to fully realize their goals and values, and receive support in overcoming disadvantages and barriers in life (Sen, 2009).

The principle of social justice is central to the goals of health communication (see Kreps, 1998) and states that each person has the right to achieve their optimum health status, without distinction based on race or ethnic group, religion, language, or nationality, socioeconomic resources, gender identity, sexual orientation, age, physical, mental, or emotional disability or illness, geography, or political affiliation, or any characteristic that is linked historically to structural or social discrimination or marginalization (Braveman et al., 2011). A socially just vision of WPHC creates transformative understandings of health as an experience of freedom of choice and the right to flourish (Agarwal, 2020). The ethical principle of distributive justice states that for an individual to achieve their optimal health status, the resources needed to be healthy should be distributed fairly and in accordance with the need and proportionate benefit (Sen,

2009). By giving due consideration to all facets that shape an individual's life context, whole person healthcare (WPHC; National Academies of Sciences, Engineering, and Medicine, 2023) fulfills a socially just vision of health and healthcare.

This article is organized as follows: First, it examines the philosophical orientation of traditional WSM frameworks, the shared values of WSM and WPHC, and their intersection with the principles of social and environmental justice. It then considers the challenges posed to the achievement of the goals of WSM-WPHC integration from the perspective of aligning medical and health models with distinct ontological philosophical foundations. It examines the challenges posed to meaningful integration by (a) the task of bridging epistemological differences in implementation and (b) the process of engaging in evidence-based research that interrogates and aligns the assumptions of how evidence is conceptualized in these vastly differing perspectives. The perspective article concludes with a call for the need to identify criteria and parameters for conceptualizing human health based on a WSM-WPHC framework, the principles of social and environmental justice, and future directions for epistemological approaches.

Proposal for an ecological WSM– WPHC framework

A WSM-WPHC framework centers on an ecologically premised conceptualization of health in an interdependent, embodied, and intersubjective unifying relational framework. Traditional WSM approaches include traditional Tibetan medicine, AYUSH (Ayurveda, Yoga and Naturopathy, Unani Tibb, Siddha, and Homeopathy; under the National Ayush Mission of the Government of India), Traditional Chinese Medicine, anthroposophic, and Native American Medicine (Mills et al., 2017). For instance, Ayurvedic concepts are based on anthropologic assumptions that encompass varying levels of existence in healing approaches and integrate the environment, science, medicine, and spirituality in its culturally rooted healing approach (Kessler et al., 2013; Agarwal, 2022, 2024a). A comprehensive whole person health assessment takes into account the social determinants of health, providing for interoperability across systems and organizations and for integration within electronic health infrastructures (Austin, 2023). From a systemic perspective, WPHC seeks to offer an integration of biological, behavioral, social, environmental, organizational, and cultural information in understanding the health status of an individual and construct contexts that empower individuals to take ownership of their health decision-making.

WPHC takes into account the relationships and resources, clinical follow-up, wellness education and treatment support, and coordination of care needed for health and wellbeing (National Academies of Sciences, Engineering, and Medicine, 2023). These components nudge biopsychosocial approaches to conceptualizing healthcare processes and structures through more complex, systemlevel perspectives in ways that benefit both the patient and the provider. For instance, research suggests that religious and spiritual communication is helpful in the patient–provider relationship in a range of domains by addressing the whole person (e.g., during goals of care discussions, Puchalski, 2001; Luckhaupt et al., 2005; Ernecoff et al., 2015). Integrative medicine, a component of WPHC, seeks to incorporate individual or a combination of complementary and alternative medicine (CAM) practices (e.g., meditation, yoga, and acupuncture) within the allopathic medicine setting or, conversely, by incorporating allopathic biomedicine approaches into hospitals and clinics of traditional medicine systems. As part of the WPHC framework, integrative medicine is well-positioned to align whole health and WSM orientations by investigating ways of bridging the distinct paradigmatic orientations across diverse knowledge worldviews (National Academies of Sciences, Engineering, and Medicine, 2023).

Opportunities for a socially and environmentally just praxis in WSM–WPHC

The call to examine praxis through the lens of a WSM-WPHC framework is premised on its potential to center global inequity, environmental disparities, and sustainability challenges. Integrating the therapeutic relationship dimensions to envision the clinical provider-patient interaction as embodied opens the space for cultivating intersubjectivity by enhancing inclusive understandings of health and illness (Agarwal, 2021; Mattes and Lang, 2021). Furthermore, integrating a WSM orientation includes the environment as a central component of the patient and provider identity and context (e.g., AYUSH, TCM, and Native American Medicine include elements of the planetary and ecological environment in understanding health and disease). Thus, integrating WSM positions a planetary-nature perspective as a component of the biopsychosocial, spiritual, and relational domains (Agarwal, 2022), offering ways to think in more complex, interconnected, and relational ways about human health, ecosystem health, and planetary health. An ecological WSM-WPHC framework encourages praxis that builds upon a mutually constitutive relationship between human consciousness and planetary ecological consciousness and promotes social and environmental justice in material and discursive ways.

First, WSM is fundamentally lifestyle-centered in its praxis. Lifestyle medicine targets preventive, cost-effective, and alternative, health promotion at the intersection of public health approaches and clinical interventions (Smirmaul et al., 2020; Lianov et al., 2022). The application of environmental, behavioral, and psychological principles to enhance physical and mental wellbeing, based on a coachingcentered approach and evidence-based behavior change strategies, shifts the clinical emphasis on disease management to equity in lived environments that support healthy lifestyles, quality of life, and wellbeing. The lifestyle-centered premise of WSM approaches (e.g., AYUSH, TCM, and Native American Medicine) is exemplified in its approach to clinical management of disease domains ranging from integrative oncology (Mao et al., 2022) to diabetes (Sharma et al., 2019), irritable bowel syndrome (McKenzie et al., 2016), and Alzheimer's disease (Gregory et al., 2021). Lifestyle medicine is increasingly employed in the management of a range of domains such as healthy aging (Friedman, 2020), mental health (Sarris et al., 2014), rehabilitation (Phillips et al., 2020), chronic disease management (Kushner and Sorensen, 2013), and cardiology (Rozanski et al., 2023). The emerging move toward a clinical field of lifestyle medicine in chronic disease management is bolstered by its support for the core facets of health equity in environmental conservation and the structure of constructed environments such as neighborhoods, housing, and workplaces.

Second, the WSM-WPHC perspective provides a socially and environmentally just framework (e.g., alignment with critical consciousness, local cultural values, and knowledge of natural botanical resources). WSMs center sustainability practices (as employed in ethnopharmacopoeia) and an ethical approach to healthcare settings. For instance, WSMs offer an interdependent and complex lens to categorizing outcomes at the system level (in contrast with positive and negative outcomes; e.g., constructing triaging protocols for patients by employing conceptual frameworks that allow for the emergence of system-level outcomes in a whole system environmental context over time, Bell and Koithan, 2006). Research centering on the interpersonal context of healthcare interactions emphasizes the environment and the biopsychosocial nature of therapeutic responses. For instance, studies examining the patient-CAM provider therapeutic relationship identify how contextual, environmental, and interpersonal dimensions shape patients' health and wellbeing (e.g., Agarwal, 2018a,b, 2024b). Emerging directions of potential WSM-WPHC integration suggest innovative epistemological ways of modeling relationships through a focus on process dynamics. Of particular note are findings examining interactions across biopsychosocial scales ranging from empathy, intra-psychic conflict, and physiological arousal to quantum entanglement (lending support to the WSM view of shared existence and consciousness), leukocyte telomerase activity (as connected with employment of herbal regimens and nutraceuticals in WSM for aging and age-related diseases), and cross-scale information exchange across temporal non-locality (that impacts how WSM approaches conceptualize communication across space-time; e.g., Pincus, 2012). The system-level, connected, and shared consciousness WSM-WPHC approach considers social and environmental justice through inclusion and equity as central to its premise.

Third, the argument for WSM-WPHC-centered approaches to mitigate the global burden of chronic diseases supports the goals of health promotion and disease prevention by advocating for a socially and environmentally just orientation (e.g., through lifestyle medicine and healthy human-environment relationships). Disparities in the utilization of whole person integrative medicine approaches in the United States suggest that sociodemographic variables (such as race and ethnicity, household income, and education) play a significant role in the use of integrative medicine therapies. The barriers to access and availability include awareness, availability, accessibility, and affordability. Individuals with less than high school-level education often cite a lack of knowledge as a factor in not using CAM therapies. A statistically significant trend toward less overall use of integrative therapies exists among minorities, less-educated, and economically disadvantaged individuals and communities (Saper, 2016). Variability in access to WSM-integrative medicine approaches by geographical location also exacerbates such disparities. These range from a lack of access to healthy foods to a lack of availability of CAM approaches and integrative medicine practices at the neighborhood level. For example, the findings suggest that yoga studios, acupuncturists, and massage therapists are predominantly located in neighborhoods where mean resident income is greater than the city average and absent in areas where it is lower than the median (Saper, 2016). Accessibility in making it to mind-body studios, keeping acupuncture appointments, or attending a yoga class is an issue for those with low job autonomy,

facing transportation challenges, lack of English language competency, or lack of childcare (Saper, 2016). Affordability poses a challenge, as out-of-pocket costs for CAM visits (e.g., acupuncture, massage, and yoga classes) and products remain high and are frequently non-reimbursable by insurance. This renders them out of reach for low-income patients with little or no discretionary income (Saper, 2016).

On a programmatic level, a structural shift toward incorporating public health and WSM-WPHC approaches alongside policy reform can potentially help address systemic disparities (Saper, 2016). Such policies and programs are fundamentally responsive to the concerns of social and environmental justice. For instance, innovative programs such as the Department of Family Medicine, Integrative Medicine, and Health Disparities program at Boston Medical Center have sought to create a new rotation for preventive medicine residents (Berz et al., 2015; Keosaian et al., 2016) that provide a structural pathway to integrating IM care for preventive medicine in family practice. Researchers advocate assessing the social justice impact of WSM-IM systems by undertaking interprofessional efforts, prioritizing effectiveness studies over efficacy trials, and focusing IM research on underserved populations where disparities exist and there is a plausibility of effectiveness based on preliminary evidence (Saper, 2016; e.g., mind-body interventions for pain and Ayurvedic lifestyle modifications for cardiovascular disease and diabetes). The community-based and patient-centered ethos of WSM approaches strengthens patient ownership and self-management of disease prevention and health promotion orientation in daily living while bolstering community resilience and resources.

Recentering the planetary consciousness paradigm of WSM as social justice

A whole person vision of health understands health as a state of mental, physical, and social wellbeing (World Health Organization, 1946) and, as this article argues, is also in balance with the environment. Although the field of "omics," "precision," and "personalized" medicine targets the human health-environmental health relationship, it does so from the perspective of the primacy of biomedicine and technology (Logan et al., 2019; Baccarelli et al., 2023). By centering a connected and interdependent view of health promotion and disease prevention for a collective human-planetary body (Pettan-Brewer et al., 2021; One Health, World Health Organization, 2023), WSM approaches envision environmental justice as social justice and position both as core premises of health, health promotion, and disease prevention (Redvers et al., 2022). Such a premise is egalitarian and historically indigenous in its knowledge base, and thus its appropriation risks perpetuating and constructing social inequities and an othering of the planetary environmental relationship (Dutta et al., 2021). The centrality of planetary health in human health is increasingly considered in emerging research. The Rockefeller-Lancet Commission on Planetary Health report (Whitmee et al., 2015) defines planetary health as "the health of human civilization and the state of the natural systems on which it depends" and articulates its goal as finding "solutions to health risks posed by our poor stewardship of our planet," by advocating for "environmental sustainability, tackling health inequities, reducing the environmental impacts of health systems, and increasing the resilience of health systems and populations to environmental change." Although commendable in its illustration of a potential socially and environmentally just WSM–WPHC pathway, critiques of the Lancet report on planetary health have noted that the report presents the conceptualization of planetary health a historically. In doing so, it appropriates the conceptualization of planetary health from its historically indigenous, women-held, and local, communitypropagated knowledge roots, and the holistic, and culturally based practices of WSM (Prescott and Logan, 2019).

The need to address the challenge to social and environmental justice by colonial appropriation of knowledge orientation goes beyond the potential of misrepresentation of indigenous WSM conceptual frameworks as embedded in the values and relational ideologies of harmony and balance within a shared humanenvironment-planetary body (Redvers et al., 2022). It targets medical privilege and calls for a critique of institutionally sanctioned authoritarian elitism conferred by conventional medical education (Prescott and Logan, 2019). The biomedically sanctioned professional medical authority is associated, in turn, with the conferring of a socially dominant orientation of cultural competency as it translates in clinical settings. Envisioning social and environmental justice in the clinical domain is to become aware of one's own biases, values, and assumptions and challenge the conditions of injustice and health inequalities stemming from contextual social and human-planetary power hierarchies.

Thus, recognizing and centering the traditional, indigenous, and globally diverse basis of WSM is an essential first step in examining how to reconceptualize health from its current human-centered orientation in positioning nature, the planet, and biodiversity resources as assets necessary for the maintenance of mental health and the healthspan perspective (as represented in the Lancet report, Whitmee et al., 2015). In its stead, a socially and environmentally just WSM-WPHC paradigm will emphasize, for example, lifestyle medicine in alignment with an experience of nature as cultivating a planetary health consciousness that translates into an environmentally conscious relationship with the planet (e.g., Logan et al., 2019; Pathak et al., 2022). Such integrations of WSM-WPHC have far-reaching implications for global health inequity in domains such as chronic disease management. An environmentally constitutive conceptualization of human physiology that is geographically, spatially, and seasonally shaped in alignment with its planetary constitution constructs relationships of stewardship and mutual responsibility in a shared construction of health. WSMs such as TCM, traditional Tibetan medicine, Native American Medicine, and the AYUSH systems are each constructed on a shared foundation of a co-constitutive vision of planetary-nature-human health and wellbeing.

Paradigmatic challenges of integration in WSM–WPHC

Ontologically, several paradigmatic challenges need to be addressed if a WSM–WPHC integration could be pragmatically considered in theory and practice. One central concern pertains to identifying evidence-based mechanisms that can measure the treatment–effect–outcome relationship simultaneously in the whole body at a system level alongside their local and regional effects

(Bell and Koithan, 2006). A review study of the existing models of WSM-WPHC found that these models ranged from allopathic care that included self-care and CAM approaches to including evidencebased health coaching for behavioral change and integrative medicine programs (Jonas and Rosenbaum, 2021). These programs, implemented under labels such as whole health and integrative health, report benefits in clinical outcomes, greater patient satisfaction, lower provider burnout, and lower costs. On a process-based level, the authors report that more research is needed to understand the underlying mechanisms of healing to develop a comprehensive theory for whole person care (e.g., current programs range from emphasizing diet to others focusing on mind-body approaches or biofield-centered practices). They suggest examining placebo response processes as these are agnostic to the treatment employed (involving mechanisms such as belief, conditioning, or social learning as embodied in the ritual of therapy) to examining non-instrumental approaches to healing (e.g., spiritual healing, mind-body practices, psychotherapy, and the communication processes in patient-provider encounter) (Jonas and Rosenbaum, 2021). Epistemically, probing the phenomena referenced by the integration of WSM-WPHC models (e.g., yoga, progressive relaxation, meditation, acupuncture, coaching, and breathing) suggests the need to understand both the WSM knowledge domains as informing diverse understandings of healing and treatment mechanisms as conceptualizing the body as a complex, dynamic, and interactive ecological system (Jonas and Rosenbaum, 2021).

Furthermore, epistemologically, the implementation process and structure of integrative WSM-WPHC models remain fragmented and piecemeal, giving rise to challenges stemming from contexts where both the application of the values of conventional allopathic systems and the traditional WSM are compromised. Calls to conceptualize integrative medicine frameworks center on a few parallel directions. They call for research that is (a) multimodal in its design (e.g., assessing the effectiveness of diet, herbs, yoga, meditation, and breathing exercises in the management of coronary heart disease via an Ayurvedic intervention program), (b) comprehensive in its assessment of WSM effects (i.e., seek to assess the multidimensional and multidirectional effects of these systems of healing, allowing for dynamically unpredictable or emergent findings), and (c) directed toward evaluating the impact of the system in its entirety (i.e., predicated on an understanding that incorporating therapies into holistic treatment programs goes beyond the treatment of systems to activate the body's self-organizing healing mechanisms that treat the root cause of illnesses and their associated symptoms, Mills et al., 2017). Finally, they call for broadening the paradigmatic conceptualization of evidence in the epistemic protocols of such investigations to include innovative directions that draw upon constructionism and subjectivism as validated modes of experience and understanding.

Methodologically, whole system practitioners focus their treatment approach on reconstituting the balance of the person by examining the body from an emergent systems perspective. WSM seeks to achieve this balance by creating an appropriate environmental context in the body and its external elements for the emergence of health (Bell and Koithan, 2006). In recognition of this approach, new paradigmatic directions advocate for analytical approaches that employ a network science and non-linear dynamical complex system

(NDS) lens to study the complex, global-environmental, and interactive perspectives of traditional WSM. Network science and NDS approaches are better equipped to study system-level phenomena that emphasize the creation of conditions that lead to the emergence of health as they differ from the reductionistic bioscientific model that focuses on isolated local organs, cells, and molecular mechanistic perspectives of pharmaceutically based biomedicine (Bell and Koithan, 2006). The worldview hypotheses and research design approaches from NDS take a contextual, interactive-integrative approach. To illustrate, in the area of nutrition, a WPHC approach might focus on dieticians, nutritionists, food deserts, and the family physician to analyze the cellular profile and metabolism. In contrast, a WSM approach will intervene to align dietary elements that are compatible with the individual's constitution type defined through a system-level approach as comprising alignment with environment, body type, genomics, geography, and dominance of a specific energy profile to create conditions that balance the body as a system.

In WSM, the individual as a system is rebalanced to allow for the emergence of longitudinal, system-level, diffuse, indirect, and complex effects in the individual's body and the body-environment interaction (Bell et al., 2012). For instance, the TCM constitution-based approach examines congenital differences through the genetic profile of parents, the acquired differences by factors based on lived environment, lifestyle behaviors, and dietary habits to understand the potential risk factors for TCM constitution-based assessment of individual constitution, yang deficiency, yin deficiency, and phlegm status (Hsu et al., 2022). Its parallel in WPHC might be reflected in a health improvement approach that targets overall health improvement to assess whole-body effects. System-level scholars advocate for pattern identification-based approaches for suggesting health improvement strategies for clinical research investigations (Birch, 2019). Pattern identification is a diagnostic system employed in WSM systems such as TCM and AYUSH (e.g., in modalities such as acupuncture, moxibustion, and herbal medicine) that guides clinical reasoning by using signs and symptoms of patients to identify diagnostic patterns (e.g., an "excess" pattern is "drained," or a "deficient" pattern is "tonified"; Lu et al., 2013). In WSM, patterns are used as the treatment target rather than the pathogens or objectively measurable states, and pattern identification is employed to inform diagnostic decisionmaking (based on sensory observations, e.g., the Chinese methodology of "bian zheng"; Bae et al., 2022). System-level interdependence, intersubjectivity, and relationality inform WSM pattern identification orientations assessed through emergence, which considers their complex and diffuse effects of human-planetary interdependence.

Future directions: a call for prioritizing innovative research paradigms

WSMs are premised on an integrated system-level constructionist and subjectivist relational orientation with individual and planetary health, including the biotic and abiotic components that comprise the environment. Their integration with WPHC calls for a recognition of the significant paradigmatic challenges that stymie their integration in whole person-centered healthcare systems and public health programs. This perspective piece calls for innovative research directions that validate evidence-based approaches integrating the

philosophical worldview of WSM (e.g., the call for examining placebo response processes, Jonas and Rosenbaum, 2021). This article suggests examining healing as a system-level, integrated phenomenon through methodologies such as pattern identification and NDS to appropriately consider its emergent and integrated system-level nature. This research direction can be supported by funding opportunities and mechanisms through formalized programmatic pathways to invite investigations that address the challenges of (a) understanding healing as an emergent system-level integrated whole person outcome and (b) expanding the notion of evidence beyond mechanistic, causal, formative paradigms to capture diffuse, indirect, and complex outcomes. Defining an integrative WSM-WPHC vision required addressing the challenges posed by such a paradigmatic integration at multiple levels: the model level (WSM-WPHC models), in methodology and epistemic processes (mechanistic-reductionist, clinical research study, NDS models), in praxis (individual healthplanetary-human health), and in axiology (anthropogenic utilitarian materialistic ethics-the ethic of universal equity in sentience to all living beings and ecosystems).

An affirmation of human health as an ethical value is predicated on the recognition of the principles of social and environmental justice as a universal value. Addressing this call through paradigmatic re-centering of research directions invites opportunities for creating innovative pathways. The intersection of WPHC with environmental justice is not new; it draws upon historical, indigenous, often woman-owned knowledge of nature and earth centered in ancient traditional WSMs. The call to envision an ecological WSM-WPHC paradigmatic model is relevant and urgent in prioritizing a socially and environmentally just foundation of health. This vision centers on a system-level emergent perspective of health as constructed through complex, interdependent, and connected healing processes and supported by evidence-based methodological approaches emphasizing balance and integration. The programmatic prioritization of innovative frameworks of praxis emphasizes the interdependence of planetary and human health, their constructed and intersubjective nature, and their collective evolution reflective of a shared and unifying embodied identity.

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