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Humanization of Medicine: A Narrative Review

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Abstract

Modern Western medicine is advancing exponentially. Technological innovations enable faster and better diagnosis, tailor therapy to the individual patient and disease, enhance the success of treatment, and shorten the duration of disease. Amid these technological advances, medicine is still about people. This paper aims to synthesize the knowledge on medicine's contemporary approach to human suffering and disease by applying medical humanities to improve medicine humanization.

"The good physician treats the disease; the great physician treats the patient who has the disease."
Sir William Osler, FRS, FRCP (1849–1919), a Canadian physician and co-founding professor of Johns Hopkins Hospital

"The sick person is not a number: he or she is a person who needs humanity."
Pope Francis, 2020

Introduction

Contemporary Western medicine has advanced enormously in recent decades. This progress has involved the development of various classes of drugs (e.g., antibacterial, antiviral, cytostatic, psychotropic, analgesics, and many others) (Pina et al., 2009) and diagnostic methods that span from point-of-care tests confirming pregnancy to sophisticated imaging methods such as computed tomography (CT), positron emission tomography (PET), magnetic resonance imaging (MRI), or single-photon emission computed tomography (SPECT) (Hussain et al., 2022). In addition, vaccines (Saleh et al., 2021) and surgical techniques (McKellar, 2010) have advanced greatly. However, even

though medical technology has skyrocketed (or perhaps because of it), the humanistic aspect of practicing medicine declined during that time (Whatley, 2014).

The dehumanization of medicine has many causes, including the perceived loss of self-determination in patients, the loss of self-awareness in a group, the dissimilarity between patients and medical staff, mechanization (thinking of patients as mechanical systems), reduced empathy, and moral disengagement (Haque & Waytz, 2012). To counteract the dehumanization of medicine, education in the humanization of medicine was created, with medical humanities being developed as a teaching aid (Moore, 1977; Sueiras et al., 2017). This narrative review addresses the concept of medical humanities and its role in contemporary medicine.

Humanization in Medicine and the Medical Humanities

Humanization in medicine can be understood as the pursuit of a relationship between health professionals and patients. This relationship should be guided by a mutual understanding based on ethical and humane behavior. In addition, humanization is related to the quality of healthcare and entails supporting health professionals through working conditions, continuing education, evaluation of services, and recognition of patients' rights (Moreira et al., 2015). Humanization in medicine is supported by the emergence of the medical humanities and their introduction into the medical education of future physicians and other healthcare workers (Han et al., 2019; Rabinowitz, 2021; Wear, 1989). The humanities are disciplines that deal with the recording and interpreting of human experience (Evans, 2002). They include history, literature, philosophy, ethics, sociology, theology, psychology, the arts, and law, among others (Grant, 2002). Thus, the medical humanities are the same disciplines concerned with the human experience of health, illness, disease, medicine, and healthcare (Table 1).

Table 1. Disciplines of humanities with examples of their application in medicine.

Discipline	Use in humanities
History	History of medicine
Literature	Patients experiences in literature
Philosophy	Medical philosophy
Ethics	Medical ethics
Sociology	Sociology of health and illness
Theology	Compassion in healthcare
Psychology	Communication, conflict management
Law	Patients‘ rights

The content of this table is based in part on [Grant, 2002].

The goal of humanization in medicine, and thus of the medical humanities, is to regain interest in the patient as a human being – not just as a medical case, but as a person with all their beliefs, hopes, and fears, with the history of their personal and professional life, and with their plans for the future (Evans, 2003; Greaves & Evans, 2000). Although understanding these needs may seem to have little to do with the treatment process, the impact that mutual understanding, trust, and respect between healthcare professionals and patients has on treatment outcomes is enormous.

In support of this view, a study of 470 patients admitted to orthopedic or internal medicine rehabilitation clinics reported a positive correlation between the quality of the interaction between patient and physician at admission and the patients' health status at discharge and after six months (Dibbelt et al., 2009). In addition, medication adherence in rosacea patients was positively correlated with a good doctor–patient relationship (Perche et al., 2023). Fear of treatment was found to be a significant factor in substance abuse patients dropping out, and it was suggested that addressing these fears and the reasons for them would improve compliance and outcomes (Sarkar et al., 2013). Similarly, when treating depression, addressing the patient's beliefs and attitudes strongly influences the outcome (Demyttenaere, 2001).

The Humanistic Approach to Patient Care: The Biological Mechanism

The biological mechanism behind this positive outcome has much to do with reducing stress. An person with an illness is automatically exposed to stressors related to that illness (Figure 1). Providing medical knowledge in a way that is tailored to the patient, talking to the patient at eye level, showing empathy, providing non-medical information (e.g., contacting a social worker or clergy person), and treating the patient and family respectfully may reduce the level of intensity or remove the stressor (de Wijs et al., 2023; Del Piccolo & Finset, 2018; Dibbelt et al., 2009; Roter et al., 1995).

The belief that the body and mind are separate entities has a long history in medical science. The pioneering work of Hans Selye (1956) on stress and the identification of corticosteroid stress hormones in the 1960s were landmarks that sparked our current understanding of the connection between emotions, stress, and the body's somatic response (de Kloet, 2000). Over many years of research, the mechanism of stress was revealed, its mediators and receptors in the body were identified, and the effects of short- and long-term stress began to be understood (de Kloet & Joëls, 2023; de Kloet et al., 2005). In the human body, cortisol – a steroid hormone – is normally released from the adrenal cortex into body fluids in a diurnal rhythm. It controls the body's use of fats, proteins, and carbohydrates, or metabolism, suppresses inflammation, regulates blood pressure and blood sugar levels, and controls the sleep-wake cycle. Cortisol is also secreted under stress and excessive concentrations or prolonged presence of it in the body

can deregulate all of the above-mentioned functions. The somatic responses to stressors have far-reaching consequences for the body, including negative effects on cognition and the cardiovascular and immune systems, metabolic dysregulation, or accelerated cancer growth (Eckerling et al., 2021; Ma & Kroemer, 2023; Russell & Lightman, 2019). The positive relationship between patient and healthcare worker may help dissolve the stressors, promote the patient's understanding of their illness and therapy, and positively influence the patient's health via the *placebo effect* (Benedetti, 2013). However, when negative, this relationship can worsen the physical symptoms of illness via the *nocebo-effect* (Benedetti, 2013). For this reason, it is tempting to recommend that healthcare workers try to develop a positive relationship with their patients. Such recommendations have already been developed specifically for oncology healthcare workers (Palmer Kelly et al., 2019) and for general healthcare workers (Drossman et al., 2021). Some of the published recommendations consider cultural and racial factors (Qureshi & Collazos, 2011), while others emphasize disease type and patient age (Trachuk, 2018).

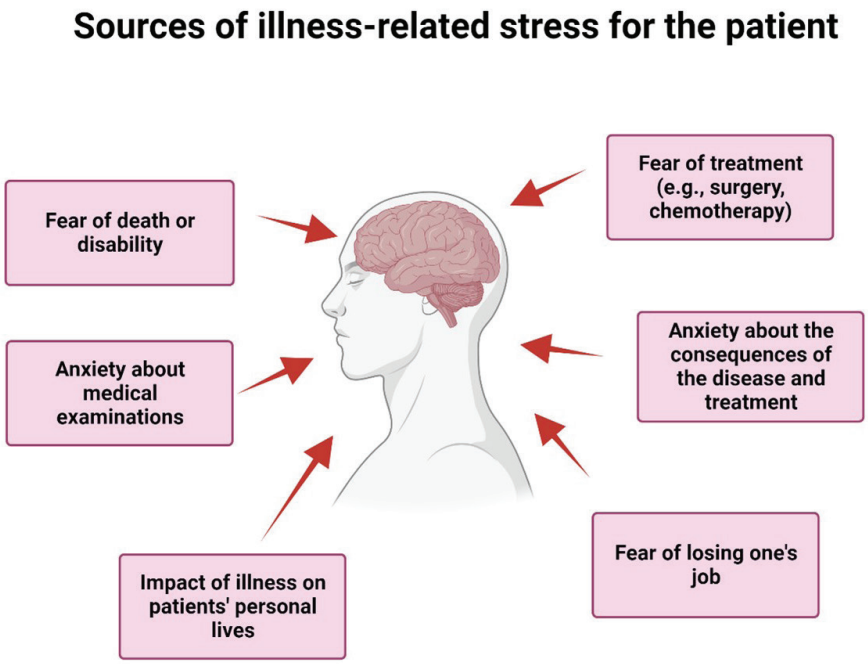

Figure 1. A schematic representation of some of the sources of stress that patients may encounter concerning their diagnosis or treatment. The sources of anxiety in medical settings include fears of death or disability [Khatibi et al., 2020], treatment [Sannes et al., 2019], medical examination [Parker et al., 2018], disease or treatment consequences such as unemployment [Vitturi et al., 2022], and of impact on personal life [Hamlet et al., 2021]. Created with BioRender.com.

Medical Humanities Education

The humanization of medicine and the medical humanities contributes to the development of listening and communication skills, promotes understanding of the ethical aspects of medical practice, and encourages critical thinking and reflection on experience and knowledge. To achieve this, the medical humanities began to be introduced in medical schools in the 1970s and 1980s (Kopelman, 1989; Moore, 1977; Thomasma & Marshall, 1989). Today, the medical humanities are offered at almost every medical school, but a problem has recently been identified: courses are not standardized across schools, course length and allocation to teaching semesters vary, and learning outcomes are assessed in different ways (Carr et al., 2021; Coronado-Vázquez et al., 2023; Dec-Pietrowska & Szczepek, 2021). This phenomenon is worrying, especially when health professionals move not only to other places for employment, but also other countries. There is currently a global trend among medical schools to train universal or global healthcare workers (Brouwer et al., 2020). This trend poses a challenge not only to the creation of a universal curricula in anatomy or physiology, but also to the teaching of *soft skills*, including the medical humanities. One possible solution to this situation would be to establish an international body for medical humanities education. National organizations already exist in some countries, but they have different competencies and goals. Among the organizations identified by Boolean web searches ("medical humanities" AND "association"; or "medical humanities" AND "society"), some were dedicated to research, teaching, and policy development, while others focused on advising healthcare institutions or representing student organizations (Table 2). An additional difficulty is that the legal organization of medical education varies from country to country. Nevertheless, it would be possible to use a platform such as scientific journals (Table 3) to at least start an effort to internationally standardize the training of future healthcare professionals in the humanization of medicine. The process of standardizing medical humanities education should address the subjects to be included (e.g., philosophy, ethics, sociology, psychology, and/or art), the minimum number of hours of study, the teaching methods (lectures, simulations, workshops, films, and/or seminars), and, finally, the methods of testing the students' skills (e.g., Objective Structured Clinical Examination (OSCE) or multiple-choice test [MCT] exams). The value of such standardization would be to equalize the basic knowledge of the medical humanities among medical school graduates worldwide. Since the global migration trend also involves healthcare workers (Aluttis et al., 2014; Bradby, 2014), patients around the world would benefit from a common core of medical humanities knowledge among healthcare professionals. Unfortunately, although the World Federation for Medical Education (WFME) provides global standards for improving the quality of undergraduate medical education, there is no universal core curriculum for medical schools. There are, however, attempts to create such curricula – for example, in the USA (McGuffin, 2014) or Colombia (Quintero et al.,

2020) – as well as to unify the education of so-called global or universal healthcare professionals (Brouwer et al., 2020). Whether or not the medical humanities will be the subject of national or international standardization depends primarily on medical schools, governments, regulatory bodies, and professional associations.

Table 2. Organizations identified by Boolean web search in English-speaking countries that focus on medical humanities.

Organization's name	Web address	Mission Statement/Goals as Stated by Each Association	Nature of the Activities
Association for Medical Humanities	https://amh.ac.uk/	*"The objects of the AMH are to provide a forum for interdisciplinary thinking in the field of the medical/ health humanities locally, nationally and internationally; to add significant value to the field of medical/ health humanities and to promote and support application of medical and health humanities in healthcare, in healthcare education and in society at large."*	Research and education
Health Humanities Consortium	https://healthhumanitiesconsortium.com/	*"(To) promote understanding of the experiences of patients, caregivers, and communities as they are shaped in relation to models of disease, illness, health, and wellness. Share practices and scholarship through an annual meeting. Educate the public, healthcare professionals, and educators about the history, practice, and study of health humanities."*	Research and education; Syllabi Repository
The CHCI Health and Medical Humanities Network	https://chcimedicalhumanities.org/	*"To contribute to the ways medicine and the humanities are taught and practiced; To provide new models for research within and across fields; and to foster collaborations between scholars working in humanities departments and their colleagues in the health sciences."*	Research and education
Planetree	https://www.planetree.org/	*"Humanizing healthcare for Everyone. Everywhere. Every time. Planetree is a passionate not-for-profit healthcare leader setting the global standard for person-centered excellence across the continuum of care. We partner to deliver the leading evidence-based framework for co-designing your roadmap to improved patient and family engagement, better clinical outcomes, increased staff retention and recruitment, and high value care."*	Provides training and consulting services to healthcare institutions in "Person-Centered Excellence"
The American Society for Bioethics and Humanities	https://asbh.org/	*"The Society is an educational organization whose purpose is to promote the exchange of ideas and foster multi-disciplinary, inter-disciplinary, and inter-professional scholarship, research, teaching, policy development, professional development, and collegiality among people engaged in all of the endeavors related to clinical and academic bioethics and the health-related humanities."*	Research, education, policy development

Organization's name	Web address	Mission Statement/Goals as Stated by Each Association	Nature of the Activities
The Health Humanities Society at King's College	https://www.kclsu.org/organisation/11653/	*"The Health Humanities Society at King's aims to celebrate shared interest in diverse intersections between health and the humanities. This encompasses the medical humanities and the use of arts (performance, visual, literary) in healthcare. We want to provide a platform open to all students to explore the richness of this field, to pique curiousity and celebrate creativity- through events such as creative workshops, meetings, talks, gallery tours, just to name a few!"*	Education (student organization)
The Canadian Association for Health Humanities	https://www.cahh.ca/	*"The Canadian Association for Health Humanities exists to promote the exchange of ideas and critical dialogue among scholars and practitioners, as well as foster collaborative explorations nationally and internationally. Through meetings, publications and related activities, CAHH seeks to facilitate initiatives as well as interdisciplinary, cross-professional inquiry into research and educational practices relevant to the health humanities."*	Research and education

Table 3. The list of journals particularly dedicated to medical humanities (based on author's search of Clarivate; https://clarivate.com/)

Title	Web address
Medical Humanities	https://mh.bmj.com/
Journal of Medical Humanities	https://link.springer.com/journal/10912
Ars Medica	https://www.ars-medica.ca/index.php/journal
Research and Humanities in Medical Education	https://www.rhime.in/ojs/index.php/rhime
Journal of Medical Ethics	https://jme.bmj.com/
Literature and Medicine	https://www.press.jhu.edu/journals/literature-and-medicine
Journal of The Surgical Humanities	https://medicine.usask.ca/department/clinical/surgery-pages/surgicalhumanities.php#JournalofSurgicalHumanities
Philosophy, Ethics, and Humanities in Medicine	https://peh-med.biomedcentral.com/

What is All This Good For?

Although the humanistic aspects of medicine were addressed by Socrates and Hippocrates more than 2,000 years ago (Bailey, 2018; Conti, 2018), the need to humanize Western medicine is still seen as a necessity today. The medical humanities are recognized around the world as an educational tool to convey the desired values to future doctors, nurses, paramedics, and other healthcare professionals (Dellasega et al., 2007; Mukunda et al., 2019; Smydra et al., 2022). In today's world, we need a unified set of humanizing standards among healthcare workers that should be supported both during and after their training. Numerous studies have shown that courses in the medical humanities help improve communication within medical teams and with patients and their families (Howley et al., 2020), increase empathy (D'souza et al., 2020), and sensitize people to different cultural, ethnic, and religious backgrounds (Howley et al., 2020; Mukunda et al., 2019). All of this translates into better healthcare, higher patient satisfaction, and a positive impact on the treatment and recovery process (Howley et al., 2020) – which is what medicine is all about.

Of Note

There is a misunderstanding concerning the concepts of humanization of medicine and holistic medicine. The Cambridge dictionary (2023b) defines "humanization" as "the process of making something less unpleasant and more suitable for people," whereas the Merriam-Webster dictionary (2023) says that "to humanize" means "to adapt (something) to human nature or use." The Cambridge dictionary (2023a) (but not Merriam-Webster) defines the term "holistic medicine" as "treatment that deals with the whole person, not just the injury or disease," which would agree with the definition of humanization of medicine. However, *holistic medicine* (also known as complementary or alternative medicine) is described as "the art and science of healing the whole person—body, mind, and spirit—in relation to every person's community and environment. It integrates conventional and unconventional methods, in order to promote optimal health, while being less concerned with pathology and the cure of individual diseases" (Graham-Pole, 2001). The concept of the healing of the spirit is absent from the humanization of medicine. Therefore, it is important to emphasize that while holistic medicine shares with the humanizing approach a holistic view of the patient, it also offers other alternative treatment methods, such as homeopathy, prayer, acupuncture, or meditation. Therefore, using the terms *holistic medicine* and *humanization of medicine* as synonyms is not advisable.

References

Aluttis, C., Bishaw, T., & Frank, M. W. (2014). The workforce for health in a globalized context: Global shortages and international migration. *Glob Health Action*, *7*, 23611. https://doi.org/10.3402/gha.v7.23611

Bailey, J. E. (2018). Socrates's last words to the physician god Asklepios: An ancient call for a healing ethos in civic life. *Cureus*, *10*(12), e3789. https://doi.org/10.7759/cureus.3789

Benedetti, F. (2013). Placebo and the new physiology of the doctor–patient relationship. *Physiol Rev*, *93*(3), 1207. https://doi.org/10.1152/physrev.00043.2012

Bradby, H. (2014). International medical migration: A critical conceptual review of the global movements of doctors and nurses. *Health (London)*, *18*(6), 580. https://doi.org/10.1177/1363459314524803

Brouwer, E., Driessen, E., Mamat, N. H., Nadarajah, V. D., Somodi, K., & Frambach, J. (2020). Educating universal professionals or global physicians? A multi-centre study of international medical programmes design. *Med Teach*, *42*(2), 221–227. https://doi.org/10.1080/0142159x.2019.1676885

Cambridge University Press & Assessment. (2023a). Holistic medicine. In Cambridge.org. dictionary. Retrieved 24.01.2024 from https://dictionary.cambridge.org/dictionary/english/holistic-medicine?q=holistic+medicine

Cambridge University Press & Assessment. (2023b). Humanization. In Cambridge.org. dictionary. Retrieved 24.01.2024 from https://dictionary.cambridge.org/dictionary/english/humanization

Carr, S. E., Noya, F., Phillips, B., Harris, A., Scott, K., Hooker, C., Mavaddat, N., Ani-Amponsah, M., Vuillermin, D. M., Reid, S., & Brett-MacLean, P. (2021). Health humanities curriculum and evaluation in health professions education: A scoping review. *BMC Med Educ*, *21*(1), 568. https://doi.org/10.1186/s12909-021-03002-1

Conti, A. A. (2018). Historical evolution of the concept of health in Western medicine. *Acta Biomed*, *89*(3), 352. https://doi.org/10.23750/abm.v89i3.6739

Coronado-Vázquez, V., Antón-Rodríguez, C., Gómez-Salgado, J., Ramírez-Durán, M. D. V., & Álvarez-Montero, S. (2023). Evaluation of learning outcomes of humanities curricula in medical students: A meta-review of narrative and systematic reviews. *Front Med (Lausanne)*, *10*, 1145889. https://doi.org/10.3389/fmed.2023.1145889

Dec-Pietrowska, J., & Szczepek, A. J. (2021). A study of differences in compulsory courses offering medicine humanization and medical communication in Polish medical schools: Content analysis of secondary data. *Int J Environ Res Public Health*, *18*(24). https://doi.org/10.3390/ijerph182413326

de Kloet, E. R. (2000). Stress in the brain. *Eur J Pharmacol*, *405*(1–3), 187. https://doi.org/10.1016/s0014-2999(00)00552-5

de Kloet, E. R., & Joëls, M. (2023). The cortisol switch between vulnerability and resilience. *Mol Psychiatry*. https://doi.org/10.1038/s41380-022-01934-8

de Kloet, E. R., Joëls, M., & Holsboer, F. (2005). Stress and the brain: From adaptation to disease. *Nat Rev Neurosci*, *6*(6), 463. https://doi.org/10.1038/nrn1683

Dellasega, C., Milone-Nuzzo, P., Curci, K. M., Ballard, J. O., & Kirch, D. G. (2007). The humanities interface of nursing and medicine. *J Prof Nurs*, *23*(3), 174. https://doi.org/10.1016/j.profnurs.2007.01.006

Del Piccolo, L., & Finset, A. (2018). Patients' autonomic activation during clinical interaction: A review of empirical studies. *Patient Educ Couns*, *101*(2), 195. https://doi.org/10.1016/j.pec.2017.08.007

Demyttenaere, K. (2001). Compliance and acceptance in antidepressant treatment. *Int J Psychiatry Clin Pract*, *5*(1), 29. https://doi.org/10.1080/13651500152048423

de Wijs, L. E. M., van Egmond, S., Devillers, A. C. A., Nijsten, T., Hijnen, D., & Lugtenberg, M. (2023). Needs and preferences of patients regarding atopic dermatitis care in the era of new therapeutic options: A qualitative study. *Archives of Dermatological Research*, *315*(1), 75. https://doi.org/10.1007/s00403-021-02321-z

Dibbelt, S., Schaidhammer, M., Fleischer, C., & Greitemann, B. (2009). Patient-doctor interaction in rehabilitation: The relationship between perceived interaction quality and long-term treatment results. *Patient Educ Couns*, *76*(3), 328. https://doi.org/10.1016/j.pec.2009.07.031

Drossman, D. A., Chang, L., Deutsch, J. K., Ford, A. C., Halpert, A., Kroenke, K., Nurko, S., Ruddy, J., Snyder, J., & Sperber, A. (2021). A review of the evidence and recommendations on communication skills and the patient–provider relationship: A Rome Foundation working team report. *Gastroenterology*, *161*(5), 1670. https://doi.org/https://doi.org/10.1053/j.gastro.2021.07.037

D'souza, P. C., Rasquinha, S. L., D'souza, T. L., Jain, A., Kulkarni, V., & Pai, K. (2020). Effect of a single-session communication skills training on empathy in medical students. *Academic Psychiatry*, *44*(3), 289. https://doi.org/10.1007/s40596-019-01158-z

Eckerling, A., Ricon-Becker, I., Sorski, L., Sandbank, E., & Ben-Eliyahu, S. (2021). Stress and cancer: Mechanisms, significance and future directions. *Nature Reviews Cancer*, *21*(12), 767. https://doi.org/10.1038/s41568-021-00395-5

Evans, M. (2002). Reflections on the humanities in medical education. *Med Educ*, *36*(6), 508. https://doi.org/10.1046/j.1365-2923.2002.01225.x

Evans, R. G. (2003). Patient centred medicine: Reason, emotion, and human spirit? Some philosophical reflections on being with patients. *Med Humanit*, *29*(1), 8. https://doi.org/10.1136/mh.29.1.8

Graham-Pole, J. (2001). "Physician, heal thyself": How teaching holistic medicine differs from teaching CAM. *Acad Med*, *76*(6), 662. https://doi.org/10.1097/00001888-200106000-00024

Grant, V. J. (2002). Making room for medical humanities. *Medical Humanities*, *28*(1), 45. https://doi.org/10.1136/mh.28.1.45

Greaves, D., & Evans, M. (2000). Conceptions of medical humanities. *Medical Humanities*, *26*(2), 65. https://doi.org/10.1136/mh.26.2.65

Hamlet, C., Williamson, H., Hotton, M., & Rumsey, N. (2021). "Your face freezes and so does your life": A qualitative exploration of adults' psychosocial experiences of living with acquired facial palsy. *Br J Health Psychol*, *26*(3), 977. https://doi.org/10.1111/bjhp.12515

Han, E. R., Yeo, S., Kim, M. J., Lee, Y. H., Park, K. H., & Roh, H. (2019). Medical education trends for future physicians in the era of advanced technology and artificial intelligence: An integrative review. *BMC Med Educ*, *19*(1), 460. https://doi.org/10.1186/s12909-019-1891-5

Haque, O. S., & Waytz, A. (2012). Dehumanization in medicine: Causes, solutions, and functions. *Perspect Psychol Sci*, *7*(2), 176. https://doi.org/10.1177/1745691611429706

Howley, L., Gaufberg, E., & King, B. E. (2020). *The fundamental role of the arts and humanities in medical education*. Association of American Medical Colleges.

Hussain, S., Mubeen, I., Ullah, N., Shah, S., Khan, B. A., Zahoor, M., Ullah, R., Khan, F. A., & Sultan, M. A. (2022). Modern diagnostic imaging technique applications and risk factors in the medical field: A review. *Biomed Res Int*, *2022*, 5164970. https://doi.org/10.1155/2022/5164970

Khatibi, A., Moradi, N., Rahbari, N., Salehi, T., & Dehghani, M. (2020). Development and validation of fear of relapse scale for relapsing-remitting multiple sclerosis: Understanding stressors in patients. *Front Psychiatry*, *11*, 226. https://doi.org/10.3389/fpsyt.2020.00226

Kopelman, L. M. (1989). Development of the medical humanities program at East Carolina University. *Acad Med*, *64*(12), 730. https://doi.org/10.1097/00001888-198912000-00008

Ma, Y., & Kroemer, G. (2023). The cancer-immune dialogue in the context of stress. *Nature Reviews Immunology*. https://doi.org/10.1038/s41577-023-00949-8

McGuffin, A. M. (2014). Food for thought: The process of bringing a universal medical curriculum to the plate. Part I of III. *Journal of Medical Education and Curricular Development*, *1*, JMECD.S17495. https://doi.org/10.4137/jmecd.S17495

McKellar, S. (2010). A history of surgery: From superstition to science. *Canadian Medical Association Journal*, *182*(8), 809. https://doi.org/10.1503/cmaj.100436

Merriam-Webster. (2023). Humanize. In Merriam-Webster.com dictionary. Retrieved 24.01.2024 from https://www.merriam-webster.com/dictionary/humanize?utm_campaign=sd&utm_medium=serp&utm_source=jsonld

Moore, A. R. (1977). Medical humanities: An aid to ethical discussions. *J Med Ethics*, *3*(1), 26. https://doi.org/10.1136/jme.3.1.26

Moreira, M. A. D. M., Lustosa, A. M., Dutra, F., Barros, E. d. O., Batista, J. B. V., & Duarte, M. C. S. (2015). Public humanization policies: Integrative literature review. *Ciência & Saúde Coletiva*, *20*, 3231.

Mukunda, N., Moghbeli, N., Rizzo, A., Niepold, S., Bassett, B., & DeLisser, H. M. (2019). Visual art instruction in medical education: A narrative review. *Med Educ Online*, *24*(1), 1558657. https://doi.org/10.1080/10872981.2018.1558657

Palmer Kelly, E., Tsilimigras, D. I., Hyer, J. M., & Pawlik, T. M. (2019). Understanding the use of attachment theory applied to the patient-provider relationship in cancer care: Recommendations for future research and clinical practice. *Surgical Oncology*, *31*, 101. https://doi.org/https://doi.org/10.1016/j.suronc.2019.10.007

Parker, D. M., Angeles-Han, S. T., Stanton, A. L., & Holland, G. N. (2018). Chronic anterior uveitis in children: Psychosocial challenges for patients and their families. *Am J Ophthalmol*, *191*, xvi. https://doi.org/10.1016/j.ajo.2018.03.028

Perche, P. O., Singh, R., Cook, M. K., Kelly, K. A., Balogh, E. A., Richardson, I., & Feldman, S. R. (2023). The patient–physician relationship and adherence: Observations from a clinical study. *J Drugs Dermatol*, *22*(8), 838. https://doi.org/10.36849/jdd.7103

Pina, A. S., Hussain, A., & Roque, A. C. (2009). An historical overview of drug discovery. *Methods Mol Biol*, *572*, 3. https://doi.org/10.1007/978-1-60761-244-5_1

Quintero, G. A., Vergel, J., Laverde, Á., & Ortíz, L. C. (2020). Educational strategies to develop and implement a comprehensive health care model focused on primary care in Colombia. *J Med Educ Curric Dev*, *7*, 2382120520930260. https://doi.org/10.1177/2382120520930260

Qureshi, A., & Collazos, F. (2011). The intercultural and interracial therapeutic relationship: Challenges and recommendations. *International Review of Psychiatry*, *23*(1), 10. https://doi.org/10.3109/09540261.2010.544643

Rabinowitz, D. G. (2021). On the arts and humanities in medical education. *Philos Ethics Humanit Med*, *16*(1), 4. https://doi.org/10.1186/s13010-021-00102-0

Roter, D. L., Hall, J. A., Kern, D. E., Barker, L. R., Cole, K. A., & Roca, R. P. (1995). Improving physicians' interviewing skills and reducing patients' emotional distress. A randomized clinical trial. *Arch Intern Med*, *155*(17), 1877.

Russell, G., & Lightman, S. (2019). The human stress response. *Nature Reviews Endocrinology*, *15*(9), 525. https://doi.org/10.1038/s41574-019-0228-0

Saleh, A., Qamar, S., Tekin, A., Singh, R., & Kashyap, R. (2021). Vaccine development throughout history. *Cureus*, *13*(7), e16635. https://doi.org/10.7759/cureus.16635

Sannes, T. S., Simoneau, T. L., Mikulich-Gilbertson, S. K., Natvig, C. L., Brewer, B. W., Kilbourn, K., & Laudenslager, M. L. (2019). Distress and quality of life in patient and caregiver dyads facing stem cell transplant: Identifying overlap and unique contributions. *Support Care Cancer*, *27*(6), 2329. https://doi.org/10.1007/s00520-018-4496-3

Sarkar, S., Nebhinani, N., Kaur, J., Kaur, K., Ghai, S., & Basu, D. (2013). Relationship of reasons and fears of treatment with outcome in substance using population attending a de-addiction centre. *Ind Psychiatry J*, *22*(2), 143. https://doi.org/10.4103/0972-6748.132929

Selye, H. (1956). The stress of life. New York: McGraw-HillBook Co. *Inc USA*.

Smydra, R., May, M., Taranikanti, V., & Mi, M. (2022). Integration of arts and humanities in medical education: A narrative review. *J Cancer Educ*, *37*(5), 1267. https://doi.org/10.1007/s13187-021-02058-3

Sueiras, P., Romano-Betech, V., Vergil-Salgado, A., de Hoyos, A., Quintana-Vargas, S., Ruddick, W., Castro-Santana, A., Islas-Andrade, S., Altamirano-Bustamante, N. F., & Altamirano-Bustamante, M. M. (2017). Today's medical self and the other: Challenges and evolving solutions for enhanced humanization and quality of care. *PLoS One*, *12*(7), e0181514. https://doi.org/10.1371/journal.pone.0181514

Thomasma, D. C., & Marshall, P. (1989). The clinical medical humanities program at Loyola University of Chicago. *Acad Med*, *64*(12), 735. https://doi.org/10.1097/00001888-198912000-00009

Trachuk, L. (2018). Recommendations for a doctor–patient communicating in oncology, obstetrics, gynecology and pediatrics. *Psychosomatic Medicine and General Practice*, *3*(4), e0304126.

Vitturi, B. K., Rahmani, A., Dini, G., Montecucco, A., Debarbieri, N., Bandiera, P., Ponzio, M., Battaglia, M. A., Persechino, B., Inglese, M., & Durando, P. (2022). Stigma, discrimination and disclosure of the diagnosis of multiple sclerosis in the workplace: A systematic review. *Int J Environ Res Public Health*, *19*(15). https://doi.org/10.3390/ijerph19159452

Wear, D. (1989). Instructional issues in the medical humanities. *J Med Humanit*, *10*(1), 13. https://doi.org/10.1007/bf01136377

Whatley, S. D. (2014). Borrowed philosophy: Bedside physicalism and the need for a sui generis metaphysic of medicine. *J Eval Clin Pract*, *20*(6), 961. https://doi.org/10.1111/jep.12214