

Medicine and literature through time: A historical approach

Ioanna Maniou ¹, Maria Manola ², Fotini, Maniou ¹ and Ioannis Pagkalos ^{3,*}

¹ Sustainable Urban and Regional Development, Harokopion University of Athens, Greece.

² Department of Tourism and Management, University of West Attica, Greece.

³ Medical School, University of Rome Sapienza

Magna Scientia Advanced Research and Reviews, 2025, 15(01), 138-144

Publication history: Received on 26 August 2025; revised on 04 October 2025; accepted on 06 October 2025

Article DOI: <https://doi.org/10.30574/msarr.2025.15.1.0120>

Abstract

The relationship between medicine and literature has deep historical roots. From the first physician-writers, such as Anton Chekhov and Thomas Percival, to modern creators such as Richard Selzer and Michael Crichton, literature has served as a tool for understanding and communicating the experiences of medical practice. Its integration into medical education aims to develop linguistic and emotional skills, enhancing the ability to understand patients. At the same time, it promotes empathy, moral judgment and self-awareness of health professionals. Through storytelling, students learn to see the patient as a whole and to recognize the humanistic dimension of medicine. Literature, therefore, connects scientific knowledge with humanistic values, promoting a more comprehensive and humane care. Overall, the study and use of literature enhances the education of sensitive, ethically aware and technically competent doctors.:

Keywords: Medicine; Literature; Empathy; Culture; Patient.

1. Introduction

Modern medical education increasingly recognizes the value of humanities studies. Literature, philosophy, and social sciences enable students to understand the human dimension of medicine, develop empathy, and address complex ethical issues.

Many medical schools now incorporate humanities courses into their curricula, providing students with opportunities for reflection, creativity, and emotional growth. Humanities courses do not replace basic medical education but complement it, enhancing professional integration and the ability to provide humanistic care.

The history of the relationship between medicine and literature demonstrates that many doctors have used writing as a means of understanding and communicating their experience. Anton Chekhov, for example, through his short stories presented the daily lives of patients and the moral pressure experienced by the doctor. Richard Selzer, with his works, highlighted the human side of medical practice, writing poems, essays and stories that express the sensitivity and reflection of a health professional.

Michael Crichton, who began his career as a physician, admitted that writing fiction was a way of processing the intense experiences he faced in his daily practice. These experiences, such as managing patients who refused treatment, significantly influenced his professional career and led him to reflect on the ethical dimension of medicine.

* Corresponding author: Ioannis Pagkalos

The literature is not limited to the personal narratives of doctors; it also examines the broader social and cultural dimension of the disease, enhancing the understanding of the role of the doctor within a broader ethical and social context.

2. Literature As An Educational Means In Medicine

The integration of literature into medical education began with the reform of medical curricula in the 1970s, aimed at cultivating empathy and critical thinking in medical students. Today, many medical schools in the United States and Europe have integrated humanities and literature courses into their programs, such as "Poetry in Medicine" at the University of California, Berkeley, where students examine how poetry and literature express human values around health and illness.

The use of literary texts in education allows students to recognize the importance of language and communication in clinical practice. Through the narratives of physician-writers, students better understand the psychological and social needs of patients and the complexity of a doctor's daily professional life.

Many programs include the writing of personal essays or poetry, allowing students to process their own experiences, reflect, and develop moral and emotional judgment skills. In this way, literature functions not only as a theoretical tool but also as a practical exercise in cultivating humanistic values.

3. Human Values And Empathy In Medicine

Literature also provides doctors with an opportunity to reflect on their own professional experiences. Through writing, they can express the emotions evoked by the difficulties of daily practice, such as managing illness and pain, ethical challenges, and facing death. This process enhances emotional resilience, self-awareness, and professional maturity.

Language, whether through poetry or narrative, makes the doctor more sensitive to the needs of patients, helping him to recognize their values, priorities, and concerns. The human dimension of medicine is not only about compassion; it also includes understanding the personal and social dimensions of illness and treatment.

Empathy and humanity are fundamental values for modern medical practice. Through literature, students and healthcare professionals can experience emotions and situations that would otherwise remain abstract. Reading patient or physician stories helps develop the ability to understand the emotions and perceptions of others, which is essential for effective and ethical clinical practice.

4. Applications And Examples

The practical application of literature in medical education includes:

1. **Reading and analyzing texts:** Works are selected that explore themes of illness, healing, and death. Students discuss ethical and emotional issues that arise from the texts.
 2. **Writing personal narratives:** Students describe clinical practice experiences or personal experiences with the aim of reflection and developing empathy.
 3. **Discussions about ethics and bioethics:** Through literature, ethical dilemmas are highlighted and the reactions of professionals and patients are examined.
 4. **Interdisciplinary courses:** They combine medicine, philosophy, literature and psychology to develop a comprehensive humanistic education.
-

5. Case Studies: Anton Chekhov Thomas Percival Richard Selzer-Michael Crichton.

Notable examples include the works of Anton Chekhov and Thomas Percival Selzer, where the physician-writer describes the relationship with patients, ethical challenges, and human suffering, and Crichton, who used literature to process his experiences as a physician and realize his personal values and priorities.

- **-Anton Chekhov**, as a physician and writer, highlighted through his literary stories the human dimension of illness, focusing on the daily lives of patients, their emotional needs and their psychological state. Through

storytelling, he emphasized the importance of empathy, the ethical stance of the physician and the understanding of human vulnerability, influencing the way medicine sees the patient as a whole (Cole, 2002; Shapiro et al., 2003).

- **Thomas Percival** considered fundamental to the development of medical ethics. Through his works, especially *Medical Ethics* (1803), he established rules for the professional conduct of physicians, responsibility towards patients, and moral integrity in the practice of medicine. Percival's contribution was decisive in establishing ethical standards that link scientific knowledge with responsibility for human life and social justice (Magee, 2009).
- **Richard Selzer** He is considered a pioneer in linking medicine with literature, highlighting the importance of storytelling as a means of understanding the body and the experience of illness (Selzer, 1976). By combining lyrical and realistic writing, he highlighted new ways of approaching pain, mortality and human vulnerability (Selzer, 1979). In his works, the doctor is presented not only as a scientist with technical skills, but also as a companion to the patient in the course of treatment (Selzer, 1982). His stories enhance empathy and respect for human dignity, values that are at the core of medicine (Selzer, 1992). At the same time, they bring to the fore the ethical dimension of medicine and the dilemmas faced by health professionals (Selzer, 2001). His contribution is decisive for education, as he encourages medical students to reflect on their personal identity and their professional role (Pellegrino, 1980). For the reader, Selzer's texts open up perspectives to see the patient as a whole, with emotions, values and needs (Gude, 1992). Overall, Selzer is a fundamental voice in medical literature, promoting a more humane and comprehensive care for the patient.
- **Michael Crichton**, a graduate of Harvard Medical School, used writing as a way to express his experiences and dilemmas during his journey as a young doctor (Crichton, 1988). In the work *Five Patients* he records true stories of hospitalized patients, illuminating the social and psychological dimensions of illness and emphasizing that behind every medical incident there is a unique human experience (Crichton, 1970). Through his narratives he highlights the importance of listening to the patient's voice in the context of treatment, bridging the technocratic dimension of medicine with the need for humanistic care (Charon, 2006). At the same time, he focuses on the dangers of excessive dependence on technology, raising critical ethical questions for the future of medicine (Turner, 2002). For Crichton, literature is not only a means of storytelling but also a tool for self-knowledge for the doctor, inviting him to reflect on his values and priorities (Shapiro et al., 2003). At the same time, patients find elements of their own experience in his stories, which enhances the sense of understanding and support. Thus, his writing activity goes beyond entertainment and contributes substantially to the formation of a medical humanistic education that is not limited to technical proficiency, but is enriched by a deep understanding of the human dimension of illness.

Richard Selzer and Michael Crichton represent two different but complementary aspects of medical literature. Selzer, with his lyrical and philosophical style, highlights the existential dimension of illness, focusing on pain, mortality and human vulnerability (Selzer, 1976; 1992). Through his works, the doctor is presented as a companion to the patient, while his writing cultivates empathy and a deeper understanding of the human experience of illness (Pellegrino, 1980; Maniou, 2025). In contrast, Crichton uses narrative primarily as a means of social commentary and exploration of the limits of medical science. In *Five Patients* (1970), he highlights the everyday reality of hospitals and the ethical challenges of medical practice, while in science fiction he emphasizes the dangers of technological excess (Turner, 2002; Charon, 2006). Literature for Crichton becomes a tool for critical thinking and self-awareness, helping both doctors to reflect on their values and patients to recognize their own experience within his stories (Shapiro et al., 2003). Overall, Selzer illuminates the internal, humanistic dimension of medicine, while Crichton focuses on its relationship with society and technology. Both, however, contribute decisively to the strengthening of medical humanistic education and to the emergence of narrative as a fundamental tool for a more humane and comprehensive care of the patient.

6. Research Findings

The combined contributions of Chekhov, Percival, Selzer, and Crichton to medicine combine a humanistic approach, ethical guidance, and a literary reflection of the human experience. Anton Chekhov, through his writing and medical practice, highlighted the psychological and emotional dimension of illness, emphasizing the need for empathy and understanding of the uniqueness of each patient. Thomas Percival established the ethical framework of medical practice, guiding the professional behavior and responsibility of the doctor towards patients. Richard Selzer, with a lyrical and philosophical style, illuminates the existential dimension of illness, pain, and human vulnerability, enhancing the empathy and self-awareness of health professionals. Michael Crichton utilizes literature for social commentary and moral criticism, highlighting the challenges of everyday medical practice and the dangers of technological excess. Together, these four creators contribute decisively to comprehensive medical education, promoting technical skill,

ethical judgment and human understanding, making storytelling and moral education fundamental tools for a more humane and holistic patient care.

7. Discussion

Literature functions not only as a tool for knowledge but also as a means of personal and professional development. Through reading and writing, students and healthcare professionals enhance the human dimension of medical practice, connecting science with art and promoting an education that focuses on comprehensive human care.

The humanities and literature provide valuable tools for cultivating empathy and ethical judgment in medical students. Through reading and writing narratives, students are able to reflect on their personal experiences, understand the emotional reactions of patients, and enhance the humanistic dimension of medical practice (Maniou, 2025; Gude, 1992; Pellegrino, 1980; Selzer, 1991; Crichton, 1988).

The integration of humanities in education has been shown to be associated with improved communication, enhanced moral sensitivity, and personal development of students, as demonstrated in multidisciplinary studies in the field of health and cultural entrepreneurship (Maniou et al., 2025a; Maniou et al., 2025b; Maniou et al., 2025c).

Overall, the integration of literature into medical education offers multiple benefits:

- It enhances the empathy and humanity of doctors.
- It helps to understand the feelings, values, and needs of patients.
- It promotes moral judgment and professional maturity.
- It broadens doctors' understanding of their role in society and in the lives of patients.

Literature, therefore, is not simply a supplement to medicine, but an essential component for the development of integrated, sensitive, and ethically mature health professionals.

Finally, we emphasize the significance of all digital technologies in the field of literature medicine and education, which is highly effective and productive and facilitates and improves assessment, intervention, and educational procedures via mobile devices that bring educational activities everywhere [22-24], various ICTs applications that are the main supporters of education [25-29], and AI, STEM, and ROBOTICS [30-33] that raise educational procedures to new performance levels. Additionally, the development and integration of ICTs with theories and models of metacognition, mindfulness, meditation, and the cultivation of emotional intelligence [34-47], accelerates and improves more the practices and results, especially in literature medicine and education domains.

8. Conclusions

In conclusion, literature is a crucial tool for developing the humanistic dimension of medicine, as it enhances empathy, moral judgment and self-awareness of students and health professionals. Through reading and writing, doctors cultivate the ability to deeply understand the emotions, values and needs of patients, treating the patient as a whole and not simply as a set of symptoms. Anton Chekhov, combining his experience as a doctor with his literary skill, highlights the psychological and emotional dimension of illness, emphasizing the importance of a human approach to care. Thomas Percival established the ethical frameworks of medical practice, offering clear rules of ethics and responsibility that guide the professional behavior of doctors. Richard Selzer, with a lyrical and philosophical style, illuminates the existential dimension of illness and cultivates the empathy and moral sensitivity of health professionals. Michael Crichton uses literature for social commentary and criticism, highlighting ethical dilemmas, the challenges of everyday medical practice, and the dangers of technological excess. Together, these four authors make a significant contribution to comprehensive medical education, connecting scientific knowledge, ethical education, and humanistic understanding. Medical literature thus becomes a tool for self-knowledge, strengthening critical thinking, and developing a person-centered approach, promoting more comprehensive, ethically aware, and humane patient care.

Compliance with ethical standards

Acknowledgments

The Authors would like to thank the SPECIALIZATION IN ICTs AND SPECIAL EDUCATION: PSYCHOPEDAGOGY OF INCLUSION Postgraduate studies Team, for their support.

Disclosure of conflict of interest

The Authors proclaim no conflict of interest.

References

- [1] Bruyère, C., Maniou, I., Habre, C., Botsikas, D., et al., 2020. Pelvic MRI for Endometriosis: A Diagnostic Challenge for the Inexperienced Radiologist. How Much Experience Is Enough? *Academic Radiology*, 28(3). doi: 10.1016/j.acra.2020.02.023.
- [2] Charon, R. (2006) *Narrative Medicine: Honoring the Stories of Illness*. Oxford: Oxford University Press.
- [3] Chekhov, A. (1892) *Ward No. 6*. Moscow: Adolf Marks.
- [4] Crichton, M. (1970) *Five Patients: The Hospital Explained*. New York: Knopf.
- [5] Crichton, M. (1988) *Travels*. New York: Knopf.
- [6] Turner, L. (2002). Medical facilities as moral worlds. *Medical Humanities*, 28(1), 16–20.
- [7] Cole, T. (2002) *Medical Humanities: An Introduction*. Cambridge: Cambridge University Press.
- [8] Maniou, F. (2025). *Medical Humanities in Practice*. Athens: Papazisis.
- [9] Maniou, F., Mitoula, R., Manola, M., Maniou, I. & Diannis, I., 2025c. Cultural Entrepreneurship in Capri and Casa Malaparte.
- [10] Maniou, F., Mitoula, R., Manola, M., Maniou, I. & Diannis, I., 2025b. Cultural entrepreneurship and painting heritage: The case of Athens in cultural tourism. *Global Journal of Engineering and Technology Advances*, 16(2), pp.392–400.
- [11] Maniou, F., Mitoula, R., Manola, M., Maniou, I. & Pangalos, I., 2025a. Cinecittà as a pillar of cultural entrepreneurship: From the golden age of Italian cinema to the sustainable development of Rome. *Global Journal of Engineering and Technology Advances*, 16(2), pp.357–366.
- [12] Maniou, I., Kontos, M., Kontzoglou, K., Zografos, G.C., et al., 2019. The learning curve of breast lesion excision system: Balancing patient's safety and surgical training. *The Breast Journal*, 26(4). doi:10.1111/tbj.13632.
- [13] Maniou, I., Michalopoulos, NV, Zografos, GC & et al., 2011. Health-related quality of life after stereotactic vacuum assisted breast biopsy utilizing radiofrequency: The Greek trial experience. *The Breast*, 20(1). doi:10.1016/S0960-9776(11)70112-6. Conference: St. Gallen 2011. License: CC BY-NC-ND 4.0.
- [14] Michalopoulos, NV, Maniou, I. & Zografos, GC, 2012. Breast Lesion Excision System Biopsy: The Learning Curve. *American Journal of Roentgenology*, 199(5), W667. doi:10.2214/AJR.12.9154.
- [15] Magee, W. (2009). *Biographical memoirs of Thomas Percival (1804)*. Kessinger Publishing.
- [16] Pellegrino, ED (1980). *Humanism and the Physician*. Knoxville: University of Tennessee Press.
- [17] Percival, T. (1803) *Medical Ethics: Or, a Code of Institutes and Precepts, Adapted to the Professional Conduct of Physicians and Surgeons*. London: Longman, Hurst, Rees, Orme, and Brown.
- [18] Selzer, R. (1976). *Mortal Lessons: Notes on the Art of Surgery*. New York: Simon and Schuster.
- [19] Selzer, R. (1992). *Down from Troy: A Doctor Comes of Age*. New York: Morrow.
- [20] Shapiro, SL, Astin, JA, Eisenberg, DM, & Forsys, KL (2003). Mind-body medicine: state of the science, implications for practice. *The Journal of the American Board of Family Practice*, 16(2), 131-147.
- [21] Zagouri, F. & Maniou, I., 2016. Supportive Care During Pregnancy. In: *Managing Cancer during Pregnancy*. Springer, pp. 89–95. doi:10.1007/978-3-319-28800-0_8.
- [22] Stathopoulou, et al 2018, Mobile assessment procedures for mental health and literacy skills in education. *International Journal of Interactive Mobile Technologies (IJIM)*, 12(3), 21-37, <https://doi.org/10.3991/ijim.v12i3.8038>
- [23] Stathopoulou A, Karabatzaki Z, Tsiros D, Katsantoni S, Drigas A, 2019. Mobile apps the educational solution for autistic students in secondary education , *Journal of Interactive Mobile Technologies (IJIM)* 13 (2), 89-101, <https://doi.org/10.3991/ijim.v13i02.9896>

- [24] Drigas A, DE Dede, S Dedes 2020 Mobile and other applications for mental imagery to improve learning disabilities and mental health International , Journal of Computer Science Issues (IJCSI) 17 (4), 18-23 DOI:10.5281/zenodo.3987533
- [25] Drigas A, Petrova A 2014 ICTs in speech and language therapy , International Journal of Engineering Pedagogy (ijEP) 4 (1), 49-54 <https://doi.org/10.3991/ijep.v4i1.3280>
- [26] Alexopoulou, A., Batsou, A., & Drigas, A. S. (2019). Effectiveness of Assessment, Diagnostic and Intervention ICT Tools for Children and Adolescents with ADHD. International Journal of Recent Contributions from Engineering, Science & IT (IJES), 7(3), pp. 51–63. <https://doi.org/10.3991/ijes.v7i3.11178>
- [27] Bamicha V, Drigas A, 2022 The Evolutionary Course of Theory of Mind - Factors that facilitate or inhibit its operation & the role of ICTs , Technium Social Sciences Journal 30, 138-158, DOI:10.47577/tssj.v30i1.6220
- [28] Galitskaya, V., & Drigas, A. (2020). Special Education: Teaching Geometry with ICTs. International Journal of Emerging Technologies in Learning (ijET), 15(06), pp. 173–182. <https://doi.org/10.3991/ijet.v15i06.11242>
- [29] Chaidi I, Drigas A, 2022 "Parents' views Questionnaire for the education of emotions in Autism Spectrum Disorder" in a Greek context and the role of ICTs , Technium Social Sciences Journal 33, 73-9, DOI:10.47577/tssj.v33i1.6878
- [30] Lytra N, Drigas A 2021 STEAM education-metacognition-Specific Learning Disabilities , Scientific Electronic Archives journal 14 (10) <https://doi.org/10.36560/141020211442>
- [31] Demertzi E, Voukelatos N, Papagerasimou Y, Drigas A, 2018 Online learning facilities to support coding and robotics courses for youth , International Journal of Engineering Pedagogy (ijEP) 8 (3), 69-80, <https://doi.org/10.3991/ijep.v8i3.8044>
- [32] Chaidi I, Drigas A 2022 Digital games & special education , Technium Social Sciences Journal 34, 214-236 <https://doi.org/10.47577/tssj.v34i1.7054>
- [33] Doulou A, Drigas A 2022 Electronic, VR & Augmented Reality Games for Intervention in ADHD , Technium Social Sciences Journal, 28(1), 159-169. <https://doi.org/10.47577/tssj.v28i1.5728>
- [34] Drigas A, Mitsea E, Skianis C 2021 The Role of Clinical Hypnosis & VR in Special Education , International Journal of Recent Contributions from Engineering Science & IT (IJES) 9(4), 4-18. <https://doi.org/10.3991/ijes.v9i4.26147>
- [35] V Galitskaya, A Drigas 2021 The importance of working memory in children with Dyscalculia and Ageometria , Scientific Electronic Archives journal 14 (10) <https://doi.org/10.36560/141020211449>
- [36] Drigas A, Mitsea E, Skianis C. 2022, Virtual Reality and Metacognition Training Techniques for Learning Disabilities , SUSTAINABILITY 14(16), 10170, <https://doi.org/10.3390/su141610170>
- [37] Drigas A., Sideraki A. 2021 Emotional Intelligence in Autism , Technium Social Sciences Journal 26(1), 80-92, <https://doi.org/10.47577/tssj.v26i1.5178>
- [38] Mitsea E, Drigas A., Skianis C, 2022 Breathing, Attention & Consciousness in Sync: The role of Breathing Training, Metacognition & Virtual Reality , Technium Social Sciences Journal 29, 79-97 <https://doi.org/10.47577/tssj.v29i1.6145>
- [39] Chaidi, I. , & Drigas, A. (2022). Social and Emotional Skills of children with ASD: Assessment with Emotional Comprehension Test (TEC) in a Greek context and the role of ICTs. , Technium Social Sciences Journal, 33(1), 146–163. <https://doi.org/10.47577/tssj.v33i1.6857>
- [40] Kontostavrou, E. Z., & Drigas, A. 2021. How Metacognition Supports Giftedness in Leadership: A Review of Contemporary Literature. , International Journal of Advanced Corporate Learning (ijAC), 14(2), pp. 4–16. <https://doi.org/10.3991/ijac.v14i2.23237>
- [41] Drigas A, Mitsea E, Skianis C, 2022 Intermittent Oxygen Fasting and Digital Technologies: from Antistress and Hormones Regulation to Wellbeing, Bliss and Higher Mental States , Technium BioChemMed journal 3 (2), 55-73
- [42] Drigas A, Mitsea E 2021 Neuro-Linguistic Programming & VR via the 8 Pillars of Metacognition X 8 Layers of Consciousness X 8 Intelligences. Technium Social Sciences Journal 26(1), 159–176. <https://doi.org/10.47577/tssj.v26i1.5273>
- [43] Drigas A, Papoutsis C, Skianis C, Being an Emotionally Intelligent Leader through the Nine-Layer Model of Emotional Intelligence-The Supporting Role of New Technologies, Sustainability MDPI 15 (10), 1-18

- [44] Drigas A, Mitsea E 2022 Breathing: a Powerful Tool for Physical & Neuropsychological Regulation. The role of Mobile Apps , Technium Social Sciences Journal 28, 135-158. <https://doi.org/10.47577/tssj.v28i1.5922>
- [45] Drigas A, Karyotaki M, Skianis C, 2017 Success: A 9 layered-based model of giftedness , International Journal of Recent Contributions from Engineering, Science & IT 5(4) 4-18, <https://doi.org/10.3991/ijes.v5i4.7725>
- [46] Drigas A, Mitsea E, Skianis C 2021. The Role of Clinical Hypnosis and VR in Special Education , International Journal of Recent Contributions from Engineering Science & IT (IJES) 9(4), 4-17.
- [47] Drigas A, Bakola L, 2021 The 8x8 Layer Model Consciousness-Intelligence-Knowledge Pyramid, and the Platonic Perspectives , International Journal of Recent Contributions from Engineering, Science & IT (ijES) 9(2) 57-72, <https://doi.org/10.3991/ijes.v9i2.22497>