



Sağlık Bilimleri Üniversitesi Gülhane Tıp Tarihi ve Tıp Etiği Dergisi

Tıp Etiği Tarihinde Bir Paradigma Değişimi: Hipokrat Yemininden Biyoetiğe

Ercan Avcı

Özet

Tıp, Hipokrat zamanından beri sağlık profesyonelleri ve hastalar arasındaki ilişkide farklı etik kurallar ve standartlar uygulamıştır. Tıp uygulamasıyla ilgili en eski metin olan Hipokrat Yemini, hekimin iyiliği, hastaların zarardan korunması ve gizliliğin korunması da dahil olmak üzere sekiz taahhüdü içermektedir. Tarihsel süreçte, tıp etiği farklı dönemlerde farklı dönüşümler göstermiştir. Bu makale, tıp etiğinin gelişimini göstermek amacıyla, tıp etiğinin tarihini dört dönem altında kısaca inceleyerek ilgili dönemlerin temel özelliklerine vurgu yapmaktadır. Makale, her dönemin- Hipokrat Yemini, Galen etiği, Thomas Percival etiği ve biyoetik - önemli değişiklikler gösterdiğini, ancak biyoetik döneminin: hekimin iyiliğine dayalı anlayışı, özerklik ve adalete dayalı bir yaklaşıma dönüştürmek; çevre dahil, tüm varlıklara karşı bir etik davranış gösterme gerekliliğini vurgulamak; güçlü bir akademik alan oluşturmak suretiyle bir paradigma değişimi gösterdiğini ortaya koymaktadır.

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A Paradigm Shift in the History of Medical Ethics: From the Hippocratic Oath to Bioethics

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Abstract

Medicine has applied different ethical rules and standards in the relationship between healthcare professionals and patients since the time of Hippocrates. As the oldest script about the practice of medicine, the Hippocratic Oath promises eight commitments, including the physician's benevolence, the protection of patients from harm, and the fulfillment of confidentiality. Throughout the process of history, medical ethics has exhibited different transformations through distinct periods. This article briefly examines the history of medical ethics under four periods and highlights their primary characteristics to demonstrate its progressive development. The article reveals that each period – the Hippocratic Oath, Galen ethics, Thomas Percival's ethics, and bioethics – demonstrates substantial alterations, but the bioethics era shows a paradigm shift by transforming the physician's benevolence-based focus into an autonomy- and justice-based approach, concentrating on moral conduct toward all beings, including environment, and creating a new powerful academic field.

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Introduction

In the preface of *A Short History of Medical Ethics*, Albert R. Jonsen introduces bioethics as the “newer version” of medical ethics (p. vi) (1). Jonsen does not provide details concerning the characteristics of old and new versions but describes the change as a progression in medical ethics rather than a replacement of traditional duties with new ones (1). Beauchamp and Childress specify this alteration by the deficiency of the Hippocratic tradition in contemporary issues, such as privacy, informed consent, and research with human subjects (2). However, bioethics-emerging factors did not appear “with a Big Bang” (p. 3) (3). Many events/developments/incidences contributed to the change. The Nazis’ atrocious medical experiments and some other research with human subjects, like the Tuskegee Syphilis experiment, political and judicial engagement in healthcare ethics, human rights developments, and liberal policies brought about a new approach to health-associated areas. The outcomes of these incidents and developments placed adequate public attention on individual autonomy and justice in the allocation of medical research-based benefits and burdens. Through forming consecutive commissions, the United States government’s involvement in bioethics facilitated the spread of the new human rights-based medical ethics. The efforts of the Hastings Center and Kennedy Institute in the United States promoted and endorsed the emergence of the bioethics field. The United Nations Educational, Scientific, and Cultural Organization’s (UNESCO) commitment to bioethical issues established universally acceptable principles. From this perspective, this article aims to examine briefly the history of medical ethics under four periods through a literature-based assessment to reveal the evolution of medical ethics from the Hippocratic Oath to the bioethics period.

The Hippocratic Oath

In some countries like Türkiye, whenever physicians breach moral rules or patient rights, they are condemned not only due to their actions but also because of, apparently, violating the Hippocratic Oath. Similarly, physicians sometimes defend themselves and deny blame by underscoring their loyalty to the Hippocratic Oath which they took at the beginning of their professional lives. This anecdote demonstrates that the Hippocratic Oath is the symbol of moral conduct in medicine, both for lay people and physicians. Not merely medical students in Türkiye but many medical schools worldwide have used either the classical or a modified version of the Oath in the ritual of commencements for many years (4,5). The overwhelming majority of the oaths taken during graduation ceremonies indicate moral values that are far from the moral perspective reflected by the original Hippocratic Oath (6). Nonetheless, all these oaths are still referred to as the ‘Hippocratic Oath.’ Furthermore, the general perception regarding the Oath in medical ethics and literature indicates that the Hippocratic Oath denotes something more than just a custom of graduation ceremonies; it is primarily “the foundation of medical ethics for physicians” (p. 7) (7).

The Hippocratic Oath is a document addressing certain moral stances in practicing medicine. The Oath’s estimated date of birth is about 400 BCE. However, the only fact we know about the Oath is that it is an ancient Greek script. As Steven H. Miles expounds, the author or authors of the Oath is/are unknown; it is unclear whether the Oath had any significance and impact during the period it was formed; and there is no hint whether it was the only oath composed at that time (8). Amid these questions, Miles accentuates the possibility that there might have been several similar oaths, but only the Hippocratic Oath came to reach us (8). Miles’ speculation seems plausible because different schools in ancient Greece taught “different medical and philosophical beliefs” (p. 7) (7). Therefore, the Oath may have merely illustrated the religious or philosophical position of one of these schools or a group in ancient Greece. Ludwig Edelstein claims that the Oath does not mirror the ethics of all ancient Greek physicians but “a small segment of Greek opinion” (p. 62). (9). Edelstein identifies this group as the Pythagoreans. According to Edelstein, it was only the Pythagoreans who were supporting and representing the moral values depicted by the Hippocratic Oath because, contrary to the Oath’s reflection, ancient Greek physicians were performing surgery, assisting patients who requested suicide, and providing abortive drugs (9). Edelstein’s opinion concerning the origin of the Oath and its recognition in its own time is the ground for many ethicists to regard the Oath as the Pythagoreans’ religious reading shaping their approach to medical practices (10,4). Additionally, according to Robert M. Veatch, it is not only Edelstein who addresses the connection between the Oath and the Pythagoreans, but some other studies have also reached the same conclusion for three centuries (4). However, Albert R. Jonsen emphasizes the criticism of Edelstein’s interpretation by saying that explaining the morality in ancient medicine merely by the Pythagorean philosophy is an inadequate approach to elaborate the complicated structure of ancient medicine (1).

Another important discussion around the Hippocratic Oath is about its survival; if it was not commonly accepted and applied in ancient Greece, how did it reach the present day, or how did it survive? Edelstein calls the first part of the Oath a *covenant* and the second part an *ethical code* and asserts that both are consistent with the Pythagorean philosophy, manifesting a religious mindset, but inconsistent with medical practices at the time of Hippocrates. In Edelstein's view, the Oath did not find a widespread ground until the beginning of the Middle Ages, but the similarity between Pythagoreanism and Christianity on certain concepts and practices, such as purity, holiness, and abortion, brought about a rapid rise in the popularity of the Oath in the Medieval Period (9). Robert M. Veatch specifies the influence of the Oath on the Medieval Period by citing others like Carlos Galvao-Sobrinho, Antonia Garzya, and Jacques Jouanna and comes to a judgment that in the early Middle Ages, the Oath had a small leverage on Christian medical ethics (4). However, the interaction between these two distinct religious traditions increased in the later Middle Ages. Veatch describes the growing effect of the Oath on Christian medicine as "assimilation of Christian and classical Greek culture" by the pagan Hippocratic Oath (p. 33) (4). Regarding the relationship between the Oath and other religions, Islamic sources and studies show that the Oath played a significant role in medieval Islamic medical ethics, and slightly modified versions of the Oath were adapted to Islamic medical practices (5,4).

Along with the abovementioned considerations, inquiring whether this pagan religion-oriented document has any merit is also essential. Edelstein chiefly highlights the Pythagoreanistic characteristic of the Oath and disdains the value of the Oath by concluding that "the Hippocratic Oath is a Pythagorean manifesto and not the expression of an absolute standard of medical conduct" (p. 63) (9). Veatch reveals a similar point of view on the religious feature of the Oath but limits his criticism to the inapplicability of the Oath to modern medical ethics. Veatch says, "my aim is not to suggest it was inappropriate for the group practicing Hippocratic medicine in ancient Greece. Rather, I am saying the Oath is seriously deficient for dealing with the medical morality of the present day" (p. 11) (4). Veatch details why he believes the Oath cannot satisfy contemporary medical ethics, but it is possible to summarize his arguments under the paternalistic and absolutistic traits of the Oath, which merely concentrates on the physician's personal judgment and benevolence with the moral certainty of its rules (4). However, Jonsen criticizes Edelstein's stance on the merit of the Oath. According to Jonsen, oath-taking was common in ancient Greek culture, and the Hippocratic Oath is a part of this culture and reflects a pure deontological approach.¹ He delineates the Hippocratic ethics as "an ample exposition of decorum that can be seen either as mere etiquette or as an ethics of virtue and character" (p. 8) (1).

The Hippocratic Oath promises eight commitments; some of them require positive obligations to do something, and some others contain negative obligations to avoid doing something as follows:

- benefiting patients: "I will apply dietetic measures for the benefit of the sick according to my ability and judgment;"
- avoiding harm and injustice: "I will keep them from harm and injustice."
- not providing lethal drugs and not promoting suicide: "I will neither give a deadly drug to anybody if asked for it, nor will I make a suggestion to this effect."
- not providing abortive remedies: "I will not give to a woman an abortive remedy."
- promising purity and holiness: "In purity and holiness I will guard my life and my art."
- not performing surgery: "I will not use the knife, not even on sufferers from stone, but will withdraw in favor of such means as are engaged in this work."
- refraining sexual relationship with patients: "whatever houses I may visit, I will come for the benefit of the sick, remaining free of all intentional injustice, of all mischief and in particular of sexual relations with both female and male persons, be they free or slaves."
- promising confidentiality: "What I may see or hear in the course of the treatment or even outside of the treatment in regard to the life of men, which on no account one must spread abroad, I will keep to myself holding such things shameful to be spoken about" (p. 6) (9).

Evaluating all these obligations classified into eight categories as having no value in medical ethics would be a very harsh argument. Of course, it is plausible to oppose these obligations either completely or partially when comparing them with today's medical ethics, as Veatch does. Nevertheless, totally rejecting the

morality of this document, which was composed approximately 2500 years ago, may address a very optimistic view on the history of human beings. If physicians in even the 1930s and 1940s were loyal to this religious, paternalistic, and deontological Oath or any modified form of the Oath, many atrocious incidents, such as the Nazi physicians' experiments and Tuskegee Syphilis Research, would not have occurred. Any interpretation of purity, holiness, justice, 'do not harm,' and 'do good' should have prevented the physicians from engaging in such brutalities. As a result, the Oath could be criticized due to its religious, hard paternalistic, and deontological characteristics, but it does not prove that the Oath has no ground in the history of medical ethics.

Galen Ethics

In the historical development of medical ethics, Galen, a physician in the Roman Empire, is the most prominent character who reinterpreted the Hippocratic tradition by focusing on "a decorum ethics, stressing attitudes and virtues rather than rules and duties" (p. 11) (1). It is important to note that the term Hippocratic tradition does not indicate the Hippocratic Oath but the medical practice of Cos, an island in the Aegean Sea in ancient Greece (11, 4). The primary aim of Galen is to describe how it is possible to practice medicine like a physician of the time of Hippocrates and become "true followers of Hippocrates," which demands the acquisition of certain virtues (p. 34) (1). From Galen's perspective, a physician should not be ambitious for money and pleasure because all evils stem from the appetite for financial gains and pleasure; temperance, honesty, and learning logical methods are essential virtues each physician must possess. According to Galen, all these necessitate learning the logical, physical, and ethical parts of philosophy. In other words, "all true doctors must also be philosophers ... in order to employ their art in the right way" (p. 33) (11).

Galen directly points out Hippocrates while defining the ideal characteristics of physicians. However, it is not clear whether his description covers the physicians the Hippocratic Oath portrays. Therefore, asserting any connection between the Hippocratic Oath and Galen's ethics may be difficult. Nevertheless, these two approaches reveal different moral grounds. The Hippocratic Oath demonstrates a deontological perspective by imposing specific rules without recognizing any exception or excuse, whereas Galen's position is based on a virtue-oriented character description; a physician with certain virtues would perform his art appropriately like Hippocrates. For this reason, the former shows a deontological morality, while the latter illustrates classical traits of virtue ethics.

Post-Galen time was a silent period for medicine and medical ethics for about five centuries (1). Moreover, Christian institutions' fluctuating engagement in medicine did not generate a significant transformation in Western medical ethics until Thomas Aquinas' natural law theory, which indicates a reinterpretation of Aristotelian philosophy and relies on the belief that as creations of God, through reason and experience, human beings can decide what is morally right and wrong (12). On the other hand, some people deduce that the Hippocratic Oath survived due to the common religious and deontological grounds between the Hippocratic Oath and Christianity. However, Veatch disputes such an argument by claiming that "there is virtually no evidence that early Christian writers were aware of the Hippocratic Oath ... until about the tenth century, when many Greek writings, including the Hippocratic writings, were recovered from Arabic sources" (p. 9) (7). From the ninth century to the end of the Middle Ages, Muslim Scholars such as Razi (865-925), Ali ibn Abbas Ahvazi (Haly Abbas, 930-994), and Ibn Sina (Avicenna, 981-1037) played a more prominent role in medical ethics (13,1).

Thomas Percival Period

John Gregory (1724-1773) and Thomas Percival (1740-1804) are two leading British physicians who shaped medical ethics in the modern era by transforming the general aspect of medical ethics into medical professionalism (14). Laurence B. McCullough summarizes the major features of Gregory's and Percival's ethics by underscoring three fundamental characteristics of physicians: being competent by acquiring reliable medical knowledge and clinical skills; prioritizing their patients' interests over their own interests and utilizing their knowledge and skills to benefit their patient; and acknowledging that "[m]edicine does not belong to physicians alone, but it is a corporate and social entity that exists primarily for the benefit of patients and science" (p. 13) (14). In light of this approach, certain similarities can be seen between Gregory's and Percival's professional ethics and Galen's ethics, as well as the Hippocratic Oath. Galen explains certain virtues to identify an ideal physician and rejects the physician's greed for financial gains. Gregory and Percival propose a similar perspective by addressing the main qualities of a physician and asking the physician to

ignore his/her self-interest. However, Galen focuses on learning philosophy, while Gregory and Percival concentrate on gaining medical knowledge and skills. In terms of the commonality between the Hippocratic Oath and Gregory's and Percival's medical professionalism, it may be asserted that both approaches emphasize the benefit of patients, even in a paternalistic manner.

Even though the medical ethics literature recognizes Gregory's contribution, Percival's influence, particularly in the United States due to his impact on the American Medical Association's *Code of Medical Ethics*, is more visible (15). Thomas Percival's work *Medical Ethics*, which was published in 1803, was the first source in the literature using the term *medical ethics*(1). Gary S. Belkin deems *Medical Ethics* "as a milestone in the Western discussion of medical ethics" (p. 40) (16), Ivan Waddington regards it as "an important break-point between ancient and modern medical ethics" (p. 36) (17) and Robert M. Veatch considers it "the foundation of modern Anglo-American professional physician ethics" (p. 10) (7). Percival's *Medical Ethics* resulted from a specific conflict in the Manchester Infirmary among physicians, surgeons, and apothecaries. Therefore, it contained certain guidelines to resolve the conflict by describing these professions' professional etiquette and responsibilities to ensure a sustainable relationship (18). For this reason, rather than physician-patient-based ethical problems, *Medical Ethics* was directed at the relationship between practitioners (17). Nevertheless, it does not mean that Percival's work generated no effect on the general perspective of medical ethics and the patient-physician relationship. For instance, Veatch defines Percival's contribution as the replacement of "[t]he religious virtues of purity and holiness of the Hippocratic Oath" with "the virtues of the gentleman" (p. 10) (7).

Thomas Percival's work formulated medical ethics, which can also be called the professional ethics of physicians, through portraying the physician's character, demonstrating the relationship among physicians, and defining the physician's behavior toward patients and the public (19). Percival's ethics generated a tremendous effect, especially in the United States. In 1808, the Boston Medical Society adopted Percival's professional ethics to forge a medical policy (20). Similarly, in 1847, the American Medical Association (AMA) "establish[ed] uniform standards for professional education, training and conduct" by introducing *The Code of Medical Ethics* (p. 8) (21). According to Veatch, the influence of Percival's ethics on the AMA's code of 1847 was unquestionable (7). However, the AMA's Code of Medical Ethics encompassed some additional features. Percival's *Medical Ethics* consisted of four chapters on the following topics: professional conduct related to hospitals or other medical charities; professional conduct in private or general practice; the conduct of physicians to apothecaries; and professional duties in certain cases which require a knowledge of the law (22). As the chapter titles indicate, *Medical Ethics* reveals the physician's professional conduct and duties without explicitly imposing any responsibility on patients. However, AMA's *Code of Medical Ethics* also highlighted certain obligations of patients and the public to physicians. The introduction of the Code explained the components of medical ethics as "not only the duties, but, also, the rights of a physician" (p. 83) (23). Replacing duties with duties plus rights indicates that medicine was no longer considered a unilateral duty but a bilateral relationship. In other words, medicine has transformed from a physician-responsibilities-oriented reading into a physician- and patient-responsibilities-based understanding. This approach also helped develop patient rights in light of the rationale of the balance between duties and rights.

From its establishment in 1847 to today, AMA's *Code of Medical Ethics* has had several revisions based on prevailing medical and technological developments. The AMA considers the *Code* "a living document" to address the need to adapt to changes in medicine and society (para 2) (24). The most recent revision was adopted in 2016, and the AMA explained the reason for the revision: to "ensure physicians have useful and effective ethical direction that keeps pace with emerging demands, new technologies, changing patient expectations and shifting health care priorities (n.p)." (25). Medicine is a dynamic field with continuous changes that force the AMA to reshape its ethical standards consistent with current medical and legal necessities. An example of this situation is the revision in 1980, which carries some changes to the Principles "to balance the dynamic tension between professional standards and legal requirements (p. 6)." (26). At that point, it is possible to claim that Percival's ethics launched a new era, which created a medical professionalism-driven ethics, and continued with the AMA's *Code of 1847* and its subsequent revisions. In this context, if the deontological Hippocratic Oath is counted as the first period and the virtue-based Galen ethics is regarded as the second period, medical professionalism can be accepted as the third period in medical ethics. Even though this third period's professional standards brought about certain changes and

improvements, in the 20th century, many factors forced the emergence of a new period in medical ethics: bioethics.

Bioethics Era

The Hippocratic Oath and Galen ethics draw a framework to describe how a physician should perform his profession without specifying a particular word or phrase to address the general structure they portray. However, Thomas Percival used the term *medical ethics* for the first time to illustrate physicians' and surgeons' professional conduct, even though he personally had preferred the term *medical jurisprudence* but was convinced of *ethics* rather than *jurisprudence* by his friends (22,1). The AMA's *Code of Medical Ethics* completely internalizes this term and describes it "as a branch of general ethics ... [and] identical with Medical Deontology," which indicates physicians' duties and rights (p. 83) (23). As of the 19th century, medical ethics was utilized to display moral conduct in medical practices. However, at the beginning of the 1970s, some scholars began using a new concept, *bioethics*, instead of *medical ethics*. This change was not merely a conceptual modification but also a contextual paradigm shift.

Three common points are encountered when examining the literature to explore the concept and content of bioethics: bioethics is a new discipline; bioethics is a multidisciplinary field; and technological, social, political, and cultural changes in the post-World War II period urged the emergence of bioethics (27,28). To investigate the accuracy of these statements, a sturdy definition of bioethics must be provided. Bioethics consists of the prefix *bio* whose dictionary meaning refers to all living beings and the noun *ethics*, which is the study of morality illustrating what is morally right and wrong (29). In this view, bioethics can be understood as a study looking at the morality of human actions towards all living beings. Fritz Jahr chiefly used bioethics in such a meaning (30). Van Rensselaer Potter showed a similar approach to explaining bioethics; he counted "biological knowledge," which covers knowledge about human beings, animals, plants, and the physical environment, and "human values" as two components of bioethics in order to merge the science and humanities (p. 1, 3) (31).

In the preface of the Hastings Center's report, *The Teaching of Bioethics*, Robert M. Veatch partly reflects Potter's "biological knowledge" view and delineates bioethics in a more specific manner as the combination of "biological ethics" and "medical ethics" (p. vi, vii) (27). In light of Veatch's position, bioethics can be assessed as an evolutionary version of medical ethics. Both Jahr's and Potter's views were encompassing broad frameworks overly transcending the scope of the medical field. Thus, in his new book, entitled *Global Bioethics*, Potter highlights his dissatisfaction with the new way of bioethics, which is diverted into a medicine-oriented direction, contrary to his intention and expectations (32). To some extent, Potter holds Georgetown University responsible for the new track of bioethics and named this de facto situation as *medical bioethics* (33). Potter implies the Kennedy Institute of Ethics by Georgetown University, but it was not only the Kennedy Institute interpreting bioethics in a healthcare context. For instance, in 1973, Daniel Callahan, from the Hastings Center, stated that "[w]hen we ask what the place of bioethics might be, we of course need to know just what the problems are in medicine and biology which raise ethical questions and need ethical answers" (p. 68) (34). In *Encyclopedia Bioethics*, in 1995, Callahan examines bioethics through a broader outlook, mainly in light of Potter's wording, but also by regarding medicine and healthcare as the central point of bioethics with a scope containing many disciplines including biology, environmental studies, public policy, and social sciences (35). Additionally, in the introduction of the encyclopedia, Warren Thomas Reich defines bioethics as "the systematic study of the moral dimensions—including moral vision, decisions, conduct, and policies—of the life sciences and healthcare, employing a variety of ethical methodologies in an interdisciplinary setting" (p. xxi) (36). As a result, even though the interdisciplinary characteristic of bioethics is unanimously acknowledged, the contemporary reading of bioethics places this multidisciplinary feature within the sphere of medicine and health sciences.

In this view, considering bioethics a new discipline is meaningful but also an inadequate approach; it is meaningful because bioethics denotes the study of morality not only in medicine but also in all health-related areas, including public health, health research, and environmental sciences. However, this approach is also inadequate because bioethics is not a completely newly-discovered discipline but an evolution of medical ethics. The scope and philosophical aspects of bioethics are much broader than those of medical ethics. Either explaining the scope of bioethics by Potter's words as "biological knowledge" (p. 2) (31) or by Reich's words as "life sciences" (p. xxi), (36) it is doubtless that bioethics indicates the relationship between ethics and all

health-related sciences, which overly transcend the scope of medical ethics. Furthermore, bioethics is also grounded on individual autonomy and justice rather than merely the physician's benevolence- and professionalism-driven stance of medical ethics (2). Nevertheless, none of these considerations exempts the heritage of medical ethics and its influence on bioethics. From this perspective, it can be said that bioethics is a new discipline evolving from medical ethics.

The issue of being an interdisciplinary field also creates a connection between medical ethics and bioethics. Of course, bioethics is associated with more academic fields, but medical ethics has been a multidisciplinary study since the time of Hippocrates. For example, Galen asked physicians also to be philosophers, which did not mean merely learning philosophy but also referred to acquiring the knowledge of all relevant disciplines, including astronomy, biology, and psychology, by expressing the necessity of knowing "the logical, the physical, and the ethical" parts of philosophy (11). In this view, the interdisciplinary characteristic of medical ethics and bioethics stems from the nature of the field. However, as Warren Thomas Reich accentuates in his definition, bioethics has linked a systematic analysis of morality in medicine with the relationship among all pertinent disciplines(36). Moreover, the relationship between medicine and other fields may have been desirable in the past, whereas this multidisciplinary relationship can be deemed an obligation in the era of bioethics.

The third matter is related to the circumstances that urged the emergence of bioethics. The earliest use of the term *bioethics* (excluding Jahr's utilization) appeared at the beginning of the 1970s, started by Potter's work and continued by the Kennedy Institute of Ethics and other institutions and scholars (1). However, the factors requesting a paradigm shift in medical ethics go back to far before the 1970s. The medical, technological, legal, social, and political problems and changes, particularly in the post-World War II period, brought about the need for a new freedom-, justice-, and equity-based approach in medicine, research, and public health (37). The invention of penicillin in 1928, the introduction of cancer chemotherapy in 1947, the discovery of the polio vaccine in 1949, the development of cardiovascular resuscitation in 1958, and similar improvements in medicine and medical technology allowed healthcare professionals to have a greater role in life-sustaining and general medical interventions (3). Atrocious medical research studies, such as the Nazi medical experiments, the Jewish Chronic Disease Hospital experiment, and the Tuskegee Syphilis Study, and their revelations, provoked international and domestic outcry and demand to regulate research ethics (38). The formulation of the Nuremberg Code and the Declaration of Helsinki, as well as the establishment of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (the National Commission) and the President's Commission for the Study of Ethical Problems in Medicine and Bioethical and Behavioral Research (the President's Commission) in the United States, resulted from these scandalous instances of research with human subjects (39). Moreover, human rights movements, gender equality-based social appeals, and individuality-oriented political developments raised the demand for personal autonomy (35). Additionally, legal cases in the United States like *Roe v. Wade*, *Karen Ann Quinlan*, and *Baby Doe* significantly directed the public's attention to bioethical issues (1).

As the result of the abovementioned medical, technological, social, political, and legal issues, bioethics has flourished as a new multidisciplinary field. However, like the other two points, the matter of the reasons for which bioethics emerged should not be evaluated without the history of medical ethics. All these developments are parts of the evolution of medical ethics. It is obvious that post-World War II incidents, discoveries, and challenges accelerated the pace of this evolution, but without the ethics of Hippocrates, the contribution of Galen ethics, and Percival's professionalism-centered aspect, bioethics would not have bloomed in a five-decade period. Furthermore, in the evolutionary development of medical ethics, the bioethics period denotes the most substantial change. Hence this last transformation can be labeled as a paradigm shift rather than a simple change. The Cambridge Online Dictionary defines paradigm as "a model of something, or a very clear and typical example of something" and paradigm shift as "a situation in which the usual and accepted way of doing or thinking about something changes completely." (40). Pamela Maykut and Richard Morehouse define a paradigm as "a set of overarching and interconnected assumptions about the nature of reality" (p. 4) (41). In this context, paradigm is a typical example demonstrating the nature of reality or situation, and paradigm shift is a phenomenon indicating a complete change between an old paradigm and a new paradigm. The standards mentioned by the Hippocratic Oath represent the old paradigm, which focuses on the physician's benevolence; whereas, the ethical values accepted in the bioethics period, which concentrates on the patient's autonomy and a fair distribution of resources indicate

the new paradigm. From this perspective, since the change between these two periods transcends a regular alteration, the magnitude of change can be acknowledged as a paradigm shift.

Conclusion

As a new academic discipline, bioethics is an interdisciplinary field representing an evolutionary change in the history of medical ethics. From the Hippocratic Oath to the time of Galen, Thomas Percival, and the bioethics period, medical ethics has continued developing and transforming. The paternalistic and religious characteristics of the Hippocratic Oath, the virtuous physician-centered stance of Galen ethics, and the physician's duties and rights-based professional view of Percival's ethics evolved into an autonomy- and justice-oriented ethical perspective in the bioethics period. The merit of each period should be acknowledged. However, the final phase of this transformation and evolution, bioethics, represents a paradigm shift rather than a simple change due to the new period's scope, which encompasses moral conduct in a wide range of disciplines, its focus, which requires respect for autonomy and justice, and its leverage on professional standards and legal regulations.

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