

Original Article

A model for ethical universities in medical sciences universities: A qualitative study

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Article info

**Article history:**

Received 3 Aug. 2024

Accepted 5 Feb. 2025

Published 14 Apr. 2025

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Zanjan, Iran.**Email:** Rasoul.davoodi@iauz.ac.ir**How to cite this article:**Eliasi K, Davoodi R, Zakaryaei M. A
model for ethical universities in
medical sciences universities: A
qualitative study. J Med Edu Dev.
2025; 18(1): 10–22.

Abstract

Background & Objective: Ethics in academia is key to creating a quality assurance system in higher education. It reflects progress in society. In simpler terms, building an ethics-focused university requires a clear approach to ethics. This study aims to present a model for an ethics-oriented university within medical schools.

Materials & Methods: This study used a grounded theory design and the data theory approach from Strauss and Corbin (1997). It involved 26 professors and experts from medical schools and universities in the 6th macro-region. Semi-structured interviews were conducted to gather data until theoretical saturation was reached. The analysis was done using open, axial, and selective coding methods.

Results: The ethics-oriented university model in medical schools was structured with 168 primary codes, 34 subcategories, and six main categories. The findings identified causal conditions such as social and cultural roles, healthy competition, ethical standardization, and value-driven transformation; contextual conditions including fundamental values, ethical environment, culture, and vision; and intervening conditions like trust, spirituality, responsibility, commitment, leadership, and ethical intelligence. The main categories encompass education, research, knowledge, interaction, training, and ethical awareness. Strategies involved institutionalizing ethics, development of professional ethics, ethical planning, developing ethical charters, focusing on ethical community, ethical role modeling, development of ethical capacities, and ensuring ethical sustainability. The outcomes highlighted organizational health, moral growth in society, environmental ethics, individual and organizational development, and social capital.

Conclusion: Based on the factors identified in the ethics-oriented university model, recommendations were made for its development and implementation.

Keywords: ethics, ethics-oriented organization, ethics-oriented university, medical sciences universities

Introduction

Higher education serves as a hub for science, ideas, and innovation. It has essential duties, like advancing science and education and training the specialized workforce that society needs [1]. Moreover, the societal context and cultural developments have significantly changed the role of universities, which are key to the higher education system [2]. Recently, a notable shift has occurred in the intellectual role of universities regarding ethical principles. Changes in societal behavior and needs have

prompted universities to adopt a dynamic approach, focusing on ethics [3]. In today's world, especially in organizations, professional and organizational ethics are crucial and play a vital role [4]. Additionally, the swift advancement of science and new technologies, combined with the decline of traditional ethical standards in modern societies, highlights the importance of development of professional ethics in universities [5]. Ethics within academia is vital for establishing a system



that ensures higher education quality and fosters a thriving society [6]. Therefore, promoting and developing university ethics is essential for societal growth and reducing the costs associated with unethical behavior. Universities aiming to define, formulate, and implement ethical values in their daily activities are known as 'ethical universities' [3]. An ethical university is one that, like an ethical organization, follows ethical principles and standards as a framework to guide the behavior of its staff and faculty [2].

In such institutions, prioritizing ethics brings many functional and ethical benefits to employees and managers. This is especially important today, as organizations face various values, and paying attention to ethics can lead to significant costs [7].

In an ethical university, shared understanding and ongoing perceptions of functions, actions, and procedures are established, all with ethical implications. This environment creates ways to describe, explain, and predict behaviors based on ethical principles, aligning with organizational policies and methods that promote positive ethical outcomes [3].

Developing an ethical university can serve several important functions, such as ethical modeling, moral mental imagery, and fostering an ethical climate. One key aspect is the universities' ethical modeling role for their students. Professors, staff, and administrators can effectively institutionalize ethics by interacting with students and serving as role models. Another significant part of ethical modeling involves providing individual and social counseling and guidance recognized by university personnel in the community [8].

Mental imagery, or cognitive simulation, is the process where individuals create a mental representation of an action using various senses. Ethical universities can use tangible and visible tools in organizational and social contexts to create a positive mental imagery of ethics [9]. Ultimately, ethical universities promote an ethical climate in their environments, reducing the likelihood of issues like political bias and conflicts [10]. While an ethics-based university is vital for promoting ethical values in society, reviews of existing research show that only a few dimensions of this idea have been empirically studied. More comprehensive research needs to be conducted to provide a systematic framework for ethics-based universities in areas like culture, strategy, human resource management, and operational processes [11].

Study from Ehrich et al. [12] highlight that attention to ethics should be viewed as an interconnected chain within educational systems, needing examination at all

levels and in various aspects. Additionally, Gurgu and Tonis [3] pointed out that institutionalizing university ethics is a new reality for which managers must be adequately prepared. Over recent decades, the significance of focusing on the ethical dimension of university life has become increasingly recognized through public awareness. Managing ethics in the academic setting involves coordinating all elements related to the ethical life of the university.

Creating an ethics-based university is essential, as our country's foundational documents highlight. The vision for the higher education system by 1404 states that the Islamic Republic aims to lead in producing civilizational knowledge and in promoting and developing global Islamic culture. It envisions pioneering universities and research institutes that expand the frontier of practical and effective knowledge and sciences, rooted in a vibrant mindset that seeks to attain cultural and practical authority in the region and the Islamic world.

These institutions will have learned, justice-loving, and free-thinking professors trained in Islamic and revolutionary values. These educators will be responsible in political, social, and economic areas, capable of training committed specialists and excellent scientists [13]. With this perspective, it's clear that for the country's growth and the realization of higher education goals, simply adopting Western or foreign models won't address Iranian society's cultural and value needs. Instead, developing a model tailored to Iran's social, cultural, scientific, economic, and political conditions is crucial, aligning with its Islamic values for creating an ethics-based university. Given today's complex challenges, especially in medical universities, traditional management and administrative methods are no longer effective. Thus, by understanding the fundamental changes needed in the principles and values guiding medical universities, leadership should focus on fostering a long-term development process and establishing an ethics-centered approach by grounding practices in cultural values.

To achieve this, a comprehensive model should be designed, addressing various university aspects, drawing from indigenous values and strategies of the country. This need has motivated the researcher to conduct the current study aimed at presenting an ethics-oriented university model specifically for medical universities. The study will focus on 'identifying and developing an ethics-oriented university model in medical universities.' This model must encompass principles, criteria, and operational methods to enhance professional and human

ethics in educational and medical settings. Thus, the core question of this study is: How can we create an effective and practical model for medical universities that enhances ethics in education, research, and medical services? Ultimately, the goal is to present an ethics-oriented university model in medical universities that aligns with Iran's cultural and social context.

Materials & Methods

Design and setting(s)

In this study, the Strauss and Corbin [14] grounded theory approach was used to develop a model of an ethical university in Iranian medical universities. This method helps researchers gather theories from the real experiences of individuals in academic settings who emphasize ethics by collecting and analyzing data. The study took place at the medical science faculties of Khomein, Saveh, Zanjan, Qom, Alborz, Qazvin, and Arak. These universities are part of the 6th macro-region. Data was collected from experts and specialists in ethics at these institutions.

Participants and sampling

The participants included several experts and specialists in ethics from the medical science faculties and universities in the 6th macro-region. This included the universities of Zanjan, Qom, Alborz, Qazvin, and Arak, as well as the faculties of Khomein and Saveh. These members studied and analyzed many facets of scientific ethics and ethical behavior in universities, and they possessed both theoretical knowledge and real-world experience in academic ethics.

Participants needed sufficient theoretical knowledge and experience in ethics to take part in the study. Before conducting interviews, verbal consent was obtained to ensure that the content would be rich and useful and to allow for additional or longer interviews if necessary.

This approach helps deepen the understanding of the research topic since the interviews need to provide meaningful content and responsible responses. Purposive sampling was used to select participants, identifying experts and specialists who could provide valuable information on the research topic. Theoretical sampling was also employed to reach the theoretical saturation of the research concepts. Theoretical saturation occurs when analyzing new data, which no longer reveals new concepts or issues [15].

Data were collected from 26 participants to better understand ethical principles and values in medical universities. The interviewees were sorted into different

categories based on their academic rank. Three participants held the rank of professor, including experts in internal medicine, parasitology, and anatomical sciences who played a key role in universities and educational centers. Nine participants were assistant professors with expertise in dentistry, medical education, health economics, psychology, human resources, and pharmacy.

Two associate professors specialized in dentistry and hospital studies. Finally, three participants were doctoral students. The remaining participants were employees with theoretical knowledge and practical experience in ethics. This diversity in academic rank highlights the range of specializations and experiences among the interviewees, enhancing the richness of the collected data (Table 1).

Data collection methods

Data were collected between September 2023 and August 2024. A total of 33 interviews were conducted, with 28 being in person and five by telephone (one was an interview). To gain deeper insights, some participants were interviewed multiple times. Specifically, of the 28 in-person interviews, 3 participants had two interviews each, while 16 had only one. Additionally, 2 participants were interviewed three times.

The interviews were conducted by one of the researchers who had conducted in-depth studies in ethics and had gained sufficient theoretical knowledge before the research.

The face-to-face interviews occurred at various locations, including Zanjan University of Medical Sciences, the Ministry of Health and Medical Education, the dental office, the city health network, Ayatollah Mousavi Hospital of Zanjan, and Qazvin University of Medical Sciences.

The interview timeframe varied: 3 interviews were long (over 100 minutes), including 150 minutes and another 100 minutes. There were also nine interviews of average duration (40 to 60 minutes). Finally, 14 interviews had short durations (less than 40 minutes), including face-to-face and phone conversations lasting between 17 and 35 minutes. The average length of the interviews was about 50 minutes.

Tools/Instruments

The research was conducted using semi-structured interviews. At the beginning of each session, the researcher introduced himself and explained the study's objectives. Next, interviewees were asked to read and

sign a consent form. Each interview started with the open-ended question: 'Please introduce yourself and explain your current role in the university or health organization.'

Probing questions followed to gather more information. For instance, the researcher asked, "What is your view on the role of ethics in the academic environment, especially in medical universities?"

The interviewee responded, "Ethics in the academic environment is crucial, as we educate students and need to be good role models for them. This builds trust and mutual respect."

The researcher then asked about the elements that could help create an ethical environment: "In your opinion, what factors in a university can foster an ethical environment?" The interviewee replied, "Key elements include transparency in decision-making, ongoing education on professional ethics, and encouraging open dialogue between faculty and students."

Next, questions addressed personal experiences and ethical challenges. The researcher inquired, "Have you faced any ethical challenges in your workplace that you can share?" The interviewee answered, "Yes, I once encountered a situation where a colleague provided incorrect information to students. I decided to talk to him and encourage him to share correct information."

The researcher also asked, "How can a culture of ethics be reinforced among faculty and students?" The interviewee suggested, "Holding workshops on professional ethics and creating a space for discussion and exchanging ideas can be very effective."

In the final part of the interview, the researcher posed closing questions. She asked, "Do you have any suggestions for enhancing the ethical climate in medical universities?" The interviewee responded, "Yes, we should establish specific programs to monitor ethical behavior and create a secure reporting system for ethical violations."

The researcher also asked, "What resources or tools could help you and your colleagues improve ethical behavior?" The interviewee noted, "Reliable educational resources and expert advice can help us better handle ethical challenges." Finally, the researcher encouraged interviewees to mention any overlooked points or issues. One interviewee added, "Attention to the mental health of faculty and students should be a priority since

psychological stress can impact ethical decision-making."

Data analysis

The Corbin and Strauss approach [14] was used for data analysis. This process involved techniques like questioning, continuous comparison, and a paradigmatic model to extract concepts, context, and processes from the data. Theory developed through writing notes during this process. These notes were reviewed to find interrelationships between concepts and categories [14]. Storylines and a framework were also created to generate theory and identify main categories. The first author (K. A) carried out data collection and analysis under the supervision of the corresponding author (R. D) and the third author (M. Z).

The research team supervised the data collection process in periodic meetings. The research team also did Data analysis and interpretation, with coding, classification, and data retrieval performed manually using Microsoft Word. Lincoln and Guba's criteria were applied to ensure the research's validity, reliability, confirmability, and transferability [16]. For validity, semi-structured interview questions were reviewed multiple times to ensure clarity.

A summary of the research design was also sent to interviewees to help them prepare for the interview. The researcher carefully reviewed the codes from the interviews several times to ensure accuracy and precision. For transferability, theoretical sampling focused on timely and accurate analysis. High-quality information about the phenomenon was collected, and necessary theoretical concepts were extracted from the interview data.

The researcher's interpretations were assessed by others, and the interviews were examined for confirmability. Accurate and timely interviews were conducted, and the results were connected to theoretical underpinnings and existing literature.

Every interview took place in a welcoming setting, with professionalism and anonymity. Lastly, the organization and application of structured techniques for data collection, writing, and interpretation guaranteed the reliability of the study. To judge the caliber of the interviews, a steering committee comprising advisors and supervisors was also formed

Table 1. Characteristics of the participants

No	Gender	Interview duration (Minutes)	Age	Faculty or university	Interview location	Specialty	Education level	Academic rank	Position	Work experience	Number of interviews
1	Female	150	36	Zanjan	University headquarters	Occupational engineering	Master's	-	Senior expert	10 years	2
2	Female	150	49	Zanjan	University headquarters	Occupational engineering	Master's	-	Head of department	20 years	2
3	Male	30	50	Zanjan	Hospital	Anesthesia	General physician	Student	Manager	28 years	1
4	Male	30	55	Zanjan	Health network headquarters	Medicine	General physician	-	Dean	25 years	1
5	Male	30	45	Zanjan	Health network headquarters	Medicine	General physician	-	Dean	15 years	1
6	Male	30	53	Zanjan	University headquarters	Budget	PhD in public administration	-	Manager	23 years	1
7	Male	20	49	Saveh,	Parasitology	PhD in parasitology	Professor	Head of laboratory department	Group leader	26 years	1 (Phone interview)
8	Male	20	45	Saveh	Ministry of health	Health sector	PhD in medical education	Assistant professor	Dean	19 years	1
9	Male	20	49	Zanjan	University headquarters	Organizational structure	PhD in public administration	-	Manager	24 years	3
10	Male	42	42	Khomein	Qazvin university of medical sciences	Human resources	PhD in human resource management	Assistant professor	Manager	20 years	1
11	Male	45	47	Khomein	Qazvin university of medical sciences	Diseases	PhD in psychology	Assistant professor	Group leader	25 years	1
12	Male	40	41	Zanjan	Clinic	Restorative dentistry	PhD in restorative dentistry	Assistant professor	Faculty member	18 years	2
13	Female	40	40	Zanjan	Clinic	Radiology	Oral and maxillofacial radiology specialist	Assistant professor	Faculty member	18 years	1
14	Female	45	46	Alborz	Ministry of health	Medicine	General physician	-	Group leader	14 years	1
15	Female	45	46	Alborz	Ministry of health	Medicine	General physician	-	Dean	12 years	1
16	Male	35	41	Arak	Zanjan	Hospital management	PhD in health services management	Associate professor	Dean	20 years	1 (Phone interview)
17	Male	17	45	Qom	Zanjan	Internal diseases	PhD in internal diseases	Professor	Dean	9 years	1 (Phone interview)
18	Male	60	40	Qom	Qazvin university of medical sciences	Budget	PhD in economic sciences	-	Manager	17 years	1
19	Male	35	41	Qom	Qazvin university of medical sciences	Organizational behavior	PhD in human resources management	Student	Manager	18 years	1
20	Female	35	56	Qom	Qazvin university of medical sciences	Anatomy	PhD in anatomy	Professor	Dean	20 years	1

21	Male	100	58	Zanjan	University headquarters	Nursing	PhD student in health services management	Student	Manager	25 years	3
22	Male	20	55	Ministry of health	Zanjan	Dentistry	PhD in dentistry	Associate professor	Dean	29 years	1 (Phone interview)
23	Male	60	52	Qazvin	Qazvin university of medical sciences	Economics	PhD in health economics	Assistant professor	Manager	27 years	1
24	Female	25	41	Alborz	Zanjan	Pharmacy	Pharmacist	Assistant professor	Group leader	10 years	1 (Phone interview)
25	Female	25	43	Alborz	Ministry of health	Pharmacy	Pharmacist	Assistant professor	Group leader	8 years	1
26	Male	45	58	Zanjan	International affairs, university	Pharmacy	Pharmacist	Assistant professor	Manager	25 years	1

Results

In the first stage of open coding, 168 concepts were identified. Then, the data from the second stage were sorted into 34 first level sub-categories. Next, in the axial coding stage, 6 second level sub-categories were recognized. Finally, in selective coding, these 6 main categories were raised to higher levels of abstraction and

grouped based on contextual, intervening conditions, interactions/strategies, and outcomes characteristics. The analysis process and shown in **Table 2**. The analysis process revealed that there are complex interactions involved in creating a culture and ethical climate in universities. These interactions are described below.

Table 2. Open codes, sub-categories and categories of the ethical university model in medical sciences universities

Open codes	Categories	Sub-categories
Social role of the university	Role of the university in social and cultural development with emphasis on ethical principles	Causal conditions
Cultural role of the university		
Advantage of healthy competition		
Ethical standardization		
Value-driven transformation	Development of culture and ethical environment	Contextual conditions
Fundamental values		
Ethical culture		
Ethical environment		
Ethical vision	Strengthening ethical principles and responsible leadership	Intervening conditions
Ethical responsibility		
Trusting environment		
Ethical commitment		
Ethical leadership	Development of ethics-based education and research	Pivotal phenomenon
Spirituality		
Ethical intelligence		
Ethical education		
Ethical research	Institutionalization and development of ethics in the university	Interactions/Strategies
Ethical knowledge		
Ethical interaction		
Ethical training		
Ethical insight	Development of health and ethical growth in the organization and society	Outcomes
Ethical planning		
Institutionalizing ethics		
Development of professional ethics		
Developing an ethical charter	Development of health and ethical growth in the organization and society	Outcomes
Community-centered ethics		
Ethical role modeling		
Development of ethical capacities		
Ensuring ethical sustainability	Development of health and ethical growth in the organization and society	Outcomes
Organizational health		
Moral growth in society		
Environmental ethics		
Individual and organizational flourishing	Development of health and ethical growth in the organization and society	Outcomes
Social capital		

Causal conditions or role of the university in social and cultural development with emphasis on ethical principles

Causal conditions in this study refer to factors that directly impact the development and implementation of the ethical university model. The role of the university in social and cultural development with emphasis on ethical principles, is seen as a key factor in shaping social behaviors and values. Interviewee 12 states: *“Universities should function as social institutions, not only providing education and research but also actively addressing social issues.”* This highlights the importance of universities as centers for cultural and social change. Universities can enhance public culture by organizing workshops and social programs. Interviewee 5 also underscores the cultural role of the university: *“It is very important for universities to play a cultural role. We need to support different cultures and make sure that all of our students feel at ease.”* This suggests cultural diversity can enrich the academic setting and strengthen students' sense of belonging. In this context, interviewee 19 notes the advantage of healthy competition: *“Science can move forward with the help of healthy competition in universities... Students will be more motivated to learn and come up with new ideas if they are in a competitive but positive setting.”* This statement shows that fostering a healthy competitive atmosphere can enhance the quality of education and research.

Ethical standardization is also a crucial part of this model. Interviewee 3 notes: *“Ethical standards at colleges are critical. We must follow ethical ideals at all levels of education and administration.”* This emphasizes the importance of establishing clear ethical guidelines to direct behaviors and decision-making in universities. Value-driven transformation is another key aspect.

Interviewee 22 explains: *“Value-oriented transformation entails making beneficial changes in society. Universities should be transformational centers.”* The connection between ‘the role of the university in social and cultural development with emphasis on ethical principles’ and ‘the development of a ethical culture and atmosphere’ is intertwined. Universities, as educational and cultural institutions, are responsible for educating students and promoting moral and social values. By fostering an ethical environment, these institutions can help strengthen the overall culture of society and, in turn, aid in social and cultural

development. By embedding ethical principles into their educational and research processes, universities create a space where students can grow into responsible and ethical citizens. Therefore, the role of universities in social and cultural development with a focus on ethical principles is essential and unavoidable for achieving social and cultural objectives.

Contextual conditions or development of culture and ethical environment

Contextual conditions refer to the factors that influence the formation and development of an ethical culture and climate in universities. These factors can help strengthen ethical principles and play an important role in creating an educational environment that is supportive and committed to ethical values. Developing an ethical culture and climate in universities requires focusing on fundamental values.

Interviewee 16 states, *“Fundamental values such as honesty, respect, and responsibility must be included in all our educational programs.”* This highlights the necessity of teaching ethical principles from the early stages of education.

Interviewee 8 emphasizes the importance of an ethical culture: *“Creating an ethical culture requires the cooperation of all university members. We must create an environment where students and professors adhere to ethical principles.”* This underscores the need for participation from all university community members to build a strong culture. Interviewee 25 also refers to the ethical climate: *“An ethical environment at the university allows students to express their opinions and learn from their mistakes freely.”* Creating a supportive environment is vital for learning from experiences. An ethical vision is also crucial for the university's future. Interviewee 14 says, *“An ethical vision is very important for the university's future. We need to have long-term goals that are based on ethical principles.”* This statement emphasizes the importance of long-term planning that respects ethical values. The relationship between ‘developing an ethical culture and climate’ and ‘strengthening ethical principles and responsible leadership’ is closely intertwined. Creating an ethical culture and climate in an organization or university establishes a conducive platform for strengthening ethical principles and enhancing responsible leadership. When an ethical culture exists in an educational or organizational setting, its members are naturally encouraged to uphold ethical principles and act

responsibly. Conversely, responsible leadership rooted in ethical principles fosters and sustains this culture. In other words, ethical leadership enhances the ethical climate. It promotes ethical behavior at all levels of the organization by serving as a model for others. Therefore, these two concepts mutually influence each other and are vital for achieving a healthy and dynamic educational or organizational environment.

Intervening conditions or strengthening ethical principles and responsible leadership

Intervening conditions refer to actions that can help strengthen ethics and responsible leadership in universities. These factors influence the behaviors and decision-making of university members and contribute to creating an ethically-driven educational and research environment. Strengthening ethics and responsible leadership is a key aspect of the ethical university model. Interviewee 6 states: *“Ethical responsibility entails taking responsibility for one’s own acts. Universities should encourage students to take their societal obligations seriously.”* This emphasizes the importance of instilling a sense of responsibility among students.

A climate of trust is another vital factor in fostering a positive educational environment. Interviewee 1 notes, *“A trusting environment at a university may foster collaboration and beneficial interactions between students and professors.”* Ethical commitment should exist at all levels of the organization. Interviewee 18 mentions, *“Commitment to ethics should exist at all levels of the organization to achieve our goals.”* Ethical leadership is also crucial. Interviewee 10 states, *“Ethical leadership is important because leaders should be role models for others.”* Spirituality is another component of this model. Interviewee 21 says, *“Spirituality in education can help students become familiar with human values.”* This highlights the significance of the spiritual dimension in educating and shaping the next generation. Lastly, moral intelligence plays a vital role. Interviewee 4 states, *“Moral intelligence helps us make the right decisions and face moral challenges.”* The link between ‘strengthening ethical principles and responsible leadership’ and ‘development of ethics-based education and research’ is closely connected. Responsible leadership leads by example, acting on ethical principles and incorporating them into educational and research practices. By creating a supportive and trusting environment, ethical leaders can encourage students and researchers to embrace and apply ethical principles in their work. This way, strengthening ethical principles in

leadership enhances ethical education and research. Conversely, a strong educational and research environment can support the growth of responsible leadership. This interaction will improve the quality of education and help build a lasting culture of responsibility and ethics in society.

The pivotal phenomenon or development of ethics-based education and research

The pivotal phenomenon discussed is creating and institutionalizing an ethical culture in medical universities founded on human and ethical principles. Developing ethical education and research calls for a comprehensive approach. Interviewee 26 states, *“Education should be based on human principles so that students can make the right decisions in the future.”* This highlights that effective education must reflect human values. Ethical principles are also crucial in research. Interviewee 9 says, *“Our research should be conducted based on ethical principles for reliable results.”* This underscores the need to uphold ethical standards throughout the research process. Students must learn to apply their knowledge ethically. Interviewee 15 emphasizes, *“Students should learn how to apply their knowledge by ethical principles.”* Positive interactions among university members are vital as well. Interviewee 2 notes, *“Positive interactions between university members can help create a healthy learning environment.”* This highlights the role of effective communication in enhancing educational quality. Educating the next generation with ethical approaches is critical. Interviewee 11 mentions, *“Educating the next generation with ethical approaches is essential because they will shape the future of society.”*

Moreover, having ethical insight is beneficial. Interviewee 20 states, *“Ethical insight helps us to understand better how we can make the right decisions.”* The connection between ‘development of ethics-based education and research’ and ‘institutionalizing and developing ethics in universities’ is closely linked. To develop ethical education and research, universities must embed ethical principles into their structure. When universities effectively integrate ethical values into their educational and research programs and make them part of their culture, they create an environment where students and researchers follow ethical principles. Conversely, institutionalizing ethics in universities creates a foundation for enhancing ethical education and research. This mutual relationship will elevate the quality of education and research and foster a lasting culture of

responsibility and ethics in society. Therefore, both concepts influence each other and are vital for nurturing a healthy and dynamic educational environment.

Interactions/strategies or institutionalization and development of ethics in the university

To achieve the ethics-based university model, it's crucial to identify and analyze the factors influencing the institutionalization and development of ethics in universities. This process requires careful planning, the development of ethics charters, and focusing on community needs. Interviewee 17 emphasizes, *"Careful planning is essential for institutionalizing ethical principles; without it, no progress will be made."*

Developing official charters to address ethical matters is also vital. Interviewee 24 notes, *"Institutionalizing ethical standards in the organization's structure is very important so everyone knows what is expected of them."*

Fostering professional behavior rooted in ethical models can enhance service quality. Interviewee 13 states, *"Developing professional behavior based on ethical principles can increase the quality of services provided."*

A Community-centered ethics is another key element of institutionalizing ethical principles. Interviewee 7 points out, *"The community focus and social responsibilities of the university are very important because universities must respond to the needs of society."*

Additionally, modeling behaviors based on ethical principles can significantly influence student behavior. Interviewee 23 mentions, *"Creating behavioral models based on ethical standards can greatly impact student behavior."* The connection between 'institutionalization and development of ethics in the university' and 'development of health and ethical growth in the organization and society' is deep and reciprocal. The institutionalization of ethics in universities creates a foundation where students and faculty adhere to ethical principles in their daily activities. When universities promote ethical values, they foster a healthier educational environment and contribute to society's social and cultural well-being. Conversely, developing health and moral growth in organizations and society relies on strong educational institutions that can introduce future generations to ethical principles. In this context, universities act as centers for social transformation, crucial in shaping ethical behaviors and values that lead to a healthier and more responsible society. Thus, these two concepts influence each other and are vital for building a moral and thriving community.

Outcomes or development of health and ethical growth in the organization and society

The development of health and ethical growth in the organization and society, stemming from the ethics-based university model in medical universities, is crucial for improving the quality of social and organizational life. Organizational health can only be achieved by adhering to ethical principles. Interviewee 16 states, *"Organizational health is only possible by observing ethical principles; healthier employees will be healthier organizations."* University activities also significantly impact the moral growth of society. Interviewee 25 notes, *"The role of the university in the growth and development of society from the perspective of ethical principles is vital because they will educate the future generation."* Environmental ethics is another important area. Interviewee 3 mentions, *"Promoting environmental behaviors with ethical approaches is one of our main tasks because preserving the environment is a shared responsibility."*

Moreover, both individual and organizational development are influenced by adhering to ethical principles. Interviewee 15 states, *"Enhancing individual and organizational growth through ethical considerations can lead to sustainable success."*

Finally, social capital plays a key role. Interviewee 9 emphasizes, *"Enhancing social capital by relying on shared values and human principles is one of the keys to the success of any organization."* The interviews showcased the participants' various perspectives and experiences, each highlighting different aspects of the ethics-based university model. Creating an educational environment grounded in ethical values will facilitate individual growth and contribute to societal advancement. During the development of the theory, the most abstract category was identified. This category, termed the final core category or central code, represents the highest level of abstraction. As a result, the 'ethical and social development' category was chosen as the most fundamental and final core category. This category is sufficiently abstract and can encompass other categories. It is also conceptually aligned with the qualitative findings. In essence, the primary goal of the ethics-based university model is to foster moral and social development in the country's medical universities. Therefore, ethical and social development is the core category or central code. **Figure 1** illustrates the paradigmatic model of an ethics-oriented university in medical universities.

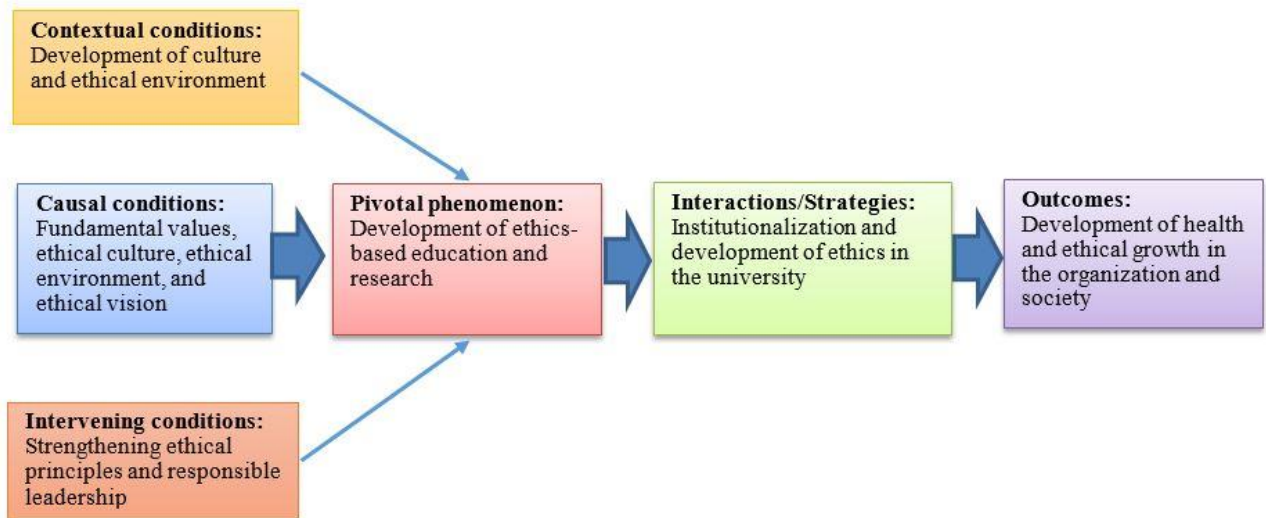


Figure 1. Paradigmatic model of an ethical university in medical universities as 'ethical and social development'

This model's causal conditions include 'fundamental values, ethical culture, ethical environment, and ethical vision.' These act as key drivers in shaping moral behaviors and values within society. Such conditions create an environment where moral principles are effectively established. Contextual conditions pertain to 'the development of a ethical culture and environment,' essential for achieving moral goals in universities. This culture influences not only students' attitudes and performance but also impacts society. It can help enhance social responsibility.

Intervening conditions involve 'strengthening moral principles and responsible leadership,' which facilitate the implementation of moral strategies. Responsible university leadership can serve as a role model for students, encouraging them to uphold ethical principles. This model focuses on the pivotal phenomenon, 'development of ethics-based education and research.' It reflects universities' efforts to enhance the quality of education and research while adhering to ethical standards. This phenomenon is vital for shaping ethical behaviors as the core element of educational and research activities.

Interactions/strategies include 'institutionalization and development of ethics in the university' as practical approaches to achieving ethical goals. These interactions illustrate how universities tackle the challenges of embedding ethical principles.

Finally, the outcomes focus on the 'development of health and ethical growth in the organization and society,' resulting directly from implementing ethics institutionalization strategies in universities. These

outcomes highlight the long-term positive effects of these actions, fostering a healthier and more responsible society. This model outlines a clear framework for universities to institutionalize ethical principles, strengthening themselves while promoting social health, individual student growth, and positive societal changes.

Discussion

This study designed and developed an ethics-based university model for medical universities using grounded theory. Analyzing the semi-structured interview data revealed 168 initial codes organized into 34 sub-categories and six categories. In this model, the causal conditions for establishing ethics-based universities in medical settings include the social role of the university, the cultural role of the university, the advantage of healthy competition, ethical standardization, and value-driven transformation. Essentially, cultivating ethics in universities, often achieved through healthy behaviors, relies on effectively nurturing the social and cultural roles of the institution. This involves distinguishing right from wrong and encouraging voluntary actions that promote value-driven transformation.

In this context, Ahmed et al. [10] suggested that the reasons for implementing ethics codes in universities relate to various issues. One reason for developing ethical principles is to regulate cultural practices and set ethical standards for disclosing and addressing unethical actions. Additionally, Tesar et al. [17] argue that fostering ethical organizations by prioritizing high-level motivational drivers for employees and adhering to

ethical standards can offer a competitive advantage that surpasses individual expectations.”

The contextual conditions for establishing an ethical university in medical institutions include fundamental values, ethical culture, ethical environment, and ethical vision. Developing a culture grounded in ethical codes and values, which fosters coherence and integrity within the university, is seen as the dominant ethical environment and shared perspective among university elements, guiding planning efforts. In such a culture, values are communicated effectively through strong interactions among all university personnel. Ahmed et al. [10] suggested that changes in ethical codes and standards have created various contexts within organizational ethics. Arefeen et al. [18] noted that universities can be viewed as evolving networks of ethical systems that grow from fundamental values. Finally, Richardson and Healy [2] emphasized that universities can provide essential training for creating and maintaining an ethical climate. Awareness of the ethical landscape is critical in building ethical capacity among academic stakeholders.

Based on the results of this study, the intervening conditions for establishing an ethical university in medical schools include moral responsibility, an atmosphere of trust, moral commitment, moral leadership, spirituality, and moral intelligence. Adhering to these ethical principles is crucial for forming an ethical university.

A culture of trust and moral commitment reinforces this issue. Educational organizations, including ethical universities, serve as centers for science thought, and innovation, carrying significant responsibilities for developing ethical codes and standards. Yan et al. [8] suggested that for an ethical university to progress toward new goals, it must foster moral development and clarify spiritual standards that guide the actions of employees and managers.

As an educational and research center, the university must maintain ethical interactions with students, professors, staff, and the external environment. This study's results highlight the core categories of an ethical university, which include ethical education, ethical research, ethical knowledge, ethical interaction, ethical training, and ethical insight.

To institutionalize ethics within its organizational culture, the university must continually and effectively promote ethical practices across all aspects of the organization, including professors, managers, staff, job descriptions, regulations, and structure. By generalizing

and expanding the values that govern scientific and professional behavior at all university levels, the university can enhance professors' and students' social commitment, increase community trust in academia, and improve the quality of scientific communication and research activities. Gurgu and Tonis [3] suggested that developing a specific framework of knowledge and new skills for university staff and professors requires creating an ethical environment in education and research, which is founded on an ethical university. Additionally, Jankalová et al. [6] stated that the emergence of development-oriented trends, such as ethical education, ethical research, and constructive interaction, is characteristic of members of an ethical university.

Organizations employ various strategies to develop ethics in the workplace and encourage employees to adopt and institutionalize these values and standards. The results of this study indicate that the strategies for establishing an ethics-based university in medical settings include ethical planning, institutionalizing ethics, developing professional ethics, creating a code of ethics, fostering ethical community orientation, modeling ethical behavior, enhancing ethical capacities, and ensuring ethical sustainability. Promoting university ethics relies on specific principles and strategies explored in educational professional ethics. This area of ethics emphasizes ethical planning, establishing a clear framework of professional ethical principles within the university environment, and developing platforms for realizing these principles.

In this context, Szigeti [9] suggested that ethics-based universities, utilizing tangible and visible tools in both organizational and social settings, can create a favorable mental image of ethics that has positive effects. Tesar et al. [17] showed that universities have developed comprehensive regulations and policies addressing human, environmental, and social ethics, all aimed at promoting ethical sustainability. Additionally, MirzaTabatabai and MohammadDavoodi [5] noted that universities, as the heart of society, play a crucial role in articulating social values and norms across various domains, particularly in cultural fields.

Finally, it's important to note that all organizations benefit directly or indirectly from ethics. Therefore, they should promote their environment's dominant social and moral values by regulating behavior. The current study identified the outcomes of creating an ethics-focused university in medical schools: organizational health, moral development in society, environmental ethics, individual and organizational growth, and social capital.

One effective approach for universities is to see themselves as institutions that promote ethics in society. This perspective fosters an ethical connection between management, employees, instructors, and students, helping them focus on high ethical standards. Ahmed et al. [10] suggested that ethics, as part of the education and management strategy of universities, significantly impacts the moral development of society. Amălăncei et al. [7] demonstrated that recognizing the role of ethics in the environment and social order and enhancing social capital are ethical outcomes that improve the quality of an ethics-oriented culture.

Based on the results of this study, the following suggestions are made for the managers and officials of medical universities to establish an ethical university:

- Managers and officials should apply the model presented in this study for policy-making and organizational operations to promote ethical orientation. They should also clarify the standards and performance metrics needed to achieve the desired outcomes.
- When selecting and appointing individuals for educational and cultural roles at the university, assign a high weight to ethical criteria. Additionally, support those who uphold ethical principles and encourage them to maintain ethical behaviors.
- The environment in medical universities needs the introduction of ethical models and examples of desirable behaviors. Therefore, managers should observe professional ethics to serve as role models for others at the university and influence the development of ethical standards.

This study has some limitations. One major limitation is the issue of external validity, as the conditions and atmosphere of medical universities differ. Caution is needed when generalizing the findings to other universities. Hence, future researchers are encouraged to conduct comparative studies across various fields to identify new components and dimensions, which will help build a comprehensive understanding of the topic.

Conclusion

This study underscores that universities, as social institutions, should actively promote cultural and social advancement. Identifying and institutionalizing ethical principles in education and research is especially important in this context. The study highlights six key categories, including “strengthening ethical principles,” “responsible leadership,” and “developing an ethical culture.” These categories influence each other and are vital for creating a healthy and dynamic educational

environment. As a result, “ethical and social development” has been chosen as the main category to enhance the quality of social and organizational life by following ethical principles. The findings suggest universities can help build a healthier and more responsible society by promoting ethical values.

Ethical considerations

In this study, all research stages were carried out with ethical considerations. Informed consent was obtained from all interviewees, and their right to withdraw from the study at any time was fully protected. All data were collected anonymously, with a pseudonym assigned to each interviewee. Additionally, the interviews were transcribed accurately and verbatim. This study involved interviews with 26 individuals from various fields related to medical sciences.

Artificial intelligence utilization for article writing

Artificial intelligence was not utilized in this study.

Acknowledgment

Finally, the authors of this study would like to express their gratitude to the professors and experts at the medical schools and universities in the 6th macro-region (Khomein, Saveh, Zanjan, Qom, Alborz, Qazvin, and Arak) and to everyone who supported the researchers during this study.

Conflict of interest statement

The authors of this study declare that they have no conflicts of interest.

Author contributions

All authors contributed equally to the work.

Funding

The article was written without any financial support.

Data availability statement

The data behind this study's research results can be obtained upon request. Interested researchers can access the data (in Persian) by emailing the corresponding author. This dataset contains all relevant information supporting the study's results, ensuring transparency and the chance for further analysis. Please note that any sensitive or confidential information has been removed to protect participants' privacy and comply with ethical guidelines.

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