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ORIGINAL RESEARCH/SCHOLARSHIP

Bridging the Gap Between Ethical Theory and Practice in Medicine: A Constructivist Grounded Theory Study

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Abstract

Physicians try hard to alleviate mental and physical ailments of their patients. Thus, they are heavily burdened by observing ethics and staying well-informed while improving health of their patients. A major ethical concern or dilemma in medication is that some physicians know their behavior is unethical, yet act against their moral compass. This study develops models of theory–practice gap, offering optimal solutions for the gap. These solutions would enhance self-motivation or remove external obstacles to stimulate ethical practices in medicine. The Constructivist Grounded Theory Methodology is applied here where the participants and the main researcher mutually interacted with each other. Data collection was performed through qualitative methods including observation and semi-structured interviews with 21 physicians and medical students. Initial and focused coding was done, from which principal concepts were later extracted. MAXQDA software was used for analyzing data. Analysis of twelve major concepts in the study resulted in two factors and solution groups, from which four general notions influencing the ethical theory and practice gap in medicine were extracted: (1) providing effective education to change attitude and behavior; (2) considering motivational and emotional factors; (3) reconstructing regulations and processes to facilitate ethical practice; (4) conducting comprehensive and systematic studies. The existing medical educational system needs to be reconsidered to add to individual internal motivation, including optimizing persuasion strategies, maximizing participation of students, adhering to virtuous ethical theories, and fostering emotions. Additionally, regulations and processes can be reconstructed to remove practical obstacles and promote ethical practice with insignificant damages to individual self-motivation.

Keywords Theory–practice gap · Medical ethics · Internalization · Effective education of ethics

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Introduction

Medical science aims at promoting public health and this is possible only by developing medical ethics training courses to equip physicians with necessary ethical knowledge and conduct in their practices (English et al. 2004). Despite all emotional strains and professional restrictions (Dunbar 2005; Rushton and Thorstenson 1994), physicians try to alleviate mental and physical ailments of their patients; nevertheless, there are always cases of unethical conduct among them.

Though some of unethical practices occur out of ignorance, in most cases physicians are well aware of their dishonest practice and may even justify or typify it. Such a gap between belief and practice (*'akrasia'* in Aristotle's words), particularly from philosophical and psychological approach, is conceptualized and examined from different aspects.

Socrates (470–399 BC), Greek philosopher credited as one of the founders of Western philosophy, denied the possibility of this gap, holding that moral knowledge necessarily leads to moral practice, since he defined virtue as knowledge and claimed that nobody acts wrong willingly and knowingly. Likewise, His disciple, Aristotle (384–322 BC) asserted that true knowledge has features that makes the agent perform right action. But he, in contrast to Socrates, accepted the phenomenon of *akrasia*, believing that overwhelming moral weakness can cause a person to act against his belief (Khazaei 2007). Some later philosophers suggest psychological factors like desires, depression, stress, laziness, etc., as the reasons for weakness of will and abandoning right action. Although some of them argue that weakness of will and *akrasia* are two distinct phenomena (Holton 1999; Holton and May 2012)[1] and some others believe that they are identical (Mele 2010), individual capacities and abilities, socio-economic status (SES; Fishbein and Ajzen 1975), and social structure and institutions[2] are considered among the reasons for avoiding right action.

Voluntary human behavior arises from individual will and desire. However, there are a variety of factors that influence will and desire, and determine certain conducts. These factors are primarily intrinsic desires that drive the individual into committing acts that ultimately bring pleasure or relieve pain. Desires that meet basic needs of human are not negligible (Nolen-Hoeksema et al. 2009, pp. 2–31). Internal factors including individual preferences and value systems (Myyry 2003, pp. 27–34) may later expand and cover further social values (Nolen-Hoeksema et al. 2009, pp. 608–647; Giddens and Birdsall 2011).

Social considerations and external obligations also affect human desires and control behaviors. Law or custom, is an external factor that is found to be a powerful means for controlling human behavior but is costly and, essentially fails to control

[1] As Richard Holton, Professor of Philosophy at the University of Cambridge, explained, *akrasia*, as Aristotle does, is a gap between moral belief and action. However, he believes that a weak-willed person breaks his resolution readily and leaves right action. Thus, he explains weakness of will according to one's intention and *akrasia* according to one's bad desires.

[2] Structuralist sociologists and behavioral psychologists.

a majority of cases (Koller 2007). External obligations or imperatives may initially be internalized and embedded in individual value systems and finally lead to action, or may contradict one's personal desire (Nolen-Hoeksema et al. 2009, pp. 608–647). The role of internal factors such as character and emotion in human behaviors was particularly considered in 18th century in different disciplines such as philosophy (Hume 1998), psychology (Bryce et al. 2008), and was then introduced into professional ethics (Dunbar 2005; Mencl and Douglas 2009) including medical ethics and bioethics (Campion 2011).

The challenge in providing solutions to ethical problems is twofold: to focus on the agent and training ethically sensitive people, and to focus primarily on the environment and the system to foster ethics. As the role of organizations is found to be highly effective in developing the professional ethics, a great deal of effort is dedicated to studying individual, social and organizational factors on ethical decision-making (Loe et al. 2014; Bangun and Asri 2017), and ethical conduct (Marmat et al. 2016) in organizations.

This qualitative study is an endeavor to develop an explanatory model of the theory–practice gap in medical ethics from the perspective of physicians and medical students in context of Iran. It also offers practical solutions to facilitate the process of transforming knowledge to action in the field of medical ethics.

Methodology

This study methodologically employs a qualitative approach using the constructivist grounded theory methodology (CGTM). In this genre of grounded theory methodology, no external truth is assumed for the researcher to discover; rather, the researcher has a dynamic and mutual interaction with the participants and creates the truth (Charmaz 2014). Considering the fact that few studies have been carried out in this regard, taking this approach can pave the way for further studies in the medical ethics.

The Participants and Their Recruitment

Participants of this study were recruited by the maximum variation sampling from physicians and medical students (interns) who showed greater ethical sensitivity, to increase rigor of results. Participants included only physicians with clinical or educational experiences. Some committed professors were also consulted with in selection of participants. Then, with the formation of initial codes and categories, theoretical sampling was performed. Based on iterative analyses and revealing the importance of research and policy, those with administrative or research experiences in health system were also invited to participate in the study. Samples were initially limited to Tehran University of Medical Sciences (TUMS) but were later expanded to include six medical universities. Moreover, one physician from a poor and far area and one from rural area was also included. We have already explained all of these in the manuscript (the participants were from seven academic centers in four

Table 1 Demographic detail of the research participants

Participant	Sex	Age	Academic position	Work experience			Management experience	Research experi-ence
				Year	State	Private		
1	Male	40–50	Faculty member	19	+	+	+	+
2	Female	40–50	Faculty member	14	+	−	+	Unkn
3	Male	40–50	Faculty member	15	+	−	+	Unkn
4	Female	30–40	Faculty member	12	+	−	+	Unkn
5	Male	30–40	Faculty member	10	+	−	−	−
6	Male	40–50	Faculty member	15	+	−	+	Unkn
7	Female	30–40	Medical resident	10	+	+	Unkn	+
8	Female	40–50	Faculty member	18	+	−	+	+
9	Female	20–30	Medical student	−	−	−	−	−
10	Female	20–30	Medical student	−	−	−	−	−
11	Female	20–30	Medical student	−	−	−	−	−
12	Male	20–30	Medical student	−	−	−	−	−
13	Female	50–60	Medical resident	15	+	+	−	+
14	Female	40–50	Medical resident	15	+	−	−	+
15	Male	50–60	General physician	20	+	+	−	+
16	Female	50–60	Faculty member	25	+	−	+	+
17	Male	40–50	Specialist physician	16	+	+	−	+
18	Female	40–50	Specialist physician	10	+	+	−	−
19	Female	30–40	General physician	12	+	+	−	−
20	Female	40–50	General physician	18	+	+	−	−
21	Female	40–50	Specialist physician	16	+	+	−	+

main cities of the country). As shown in Table 1, the participants were from seven academic centers in four cities of the country.

Data Collection

The data collection was carried out using qualitative semi-structured interviews and observations. Interviews went on 45–120 min and included three types of questions, as suggested by Charmaz (2014): *the open-ended initial questions, the intermediate main questions,* and *the ending questions* to conclude or add something by the interviewees. To start with, participants were asked to talk or comment on the theory–practice gap in medical ethics and its reasons and outcomes. Ethical sensitivity, ethical reasoning, and emotional factors were mentioned during interviews. Then, participants were asked to offer solutions, having in mind the role of education, executive processes and regulations. All interviews were recorded and transcribed during or immediately after the interviews, ambiguous points were rechecked with the participants to prevent or clarify any

misunderstanding. Data collection continued to theoretically saturation point, the point at which no new information is gained from continued data collection.

Data Analysis

Data were collected from May 2015 to February 2017, and were analyzed parallel to the data collection, using MAXQDA software. The first step for conceptualizing objective phenomena is coding. The interview transcripts were coded line-by-line and event-to-event. As aforementioned, both initial coding and focused coding were performed based on guideline of Charmaz (2014). Initial coding was simple and brief, containing mostly lay concepts or in vivo. Codes with similar concepts or themes were combined to create more general concepts. Focused coding contained codes which explained a greater range of data. Initial codes and general concepts were constantly compared to ensure that the latter represented the former. Then, theoretical sorting was performed, where general concepts were categorized and compared to discover their relations and to find a logic for the analysis of concepts. This relationship was later represented through diagrams, charts and clusters. Memos that allow the researcher to actively comment on themes were written or recorded during interviews, since they allow the researcher to actively comment on concepts and contribute to defining data properties and their relationships (Charmaz 2014).

The criteria suggested by Lincoln et al. (2011) and Janice Morse (Morse 2015) were used to make sure rigor and validity of the research results: Prolonged engagement of the main researcher (first author) with research setting and persistent observations, in which the researcher has been involved in this study for about four years. Triangulation was also considered. First of all, a group of researchers and informants from different disciplines (i.e. sociology, anthropology, philosophy, medical ethics, and clinical medicine) were engaged in this study. Second, data were collected using multiple methods including interviews, observations, field notes, and as aforementioned, both. Moreover, the collected data were recorded. Negative case analysis was also considered, particularly in the ethical reasoning. Any ambiguity in recorded data was re-checked or confirmed by the participants.

Ethical Considerations

Permission from the Ethics Committee of the Tehran University of Medical Sciences was obtained on 27 February 2015 (*Ref:* 8921435004). All the participants were informed about the objective and nature of the study and their consent was rightfully obtained. They were also informed about recording the interviews and were assured about the confidentiality of all information. Socio-demographic details of participants were coded to maintain their confidentiality, even in the final released report.

Findings

Our analysis has yielded twelve general themes that are categorized into factors and solutions, as shown in Table 2.

A. Factors

1. Personal Characteristics of Physicians

Needless to say, the weaker social systems are in a community, the stronger desires and wishes govern individual conduct. In such cases, commitment, self-control or weakness of will detrmine human conducts. Participants provided examples of an inconsiderate physician in this way:

> He was known as being carefree. Nurses did his orders carefully and warned each other in his shifts (P11).

2. Emotion and Motivation

Motivation is the driving force behind human action. Individual subjective images have strong effects on human mind and can trigger unconscious acts (Nolen-Hoeksema et al. 2009, pp. 394–431), such as business outlook toward medication and holding superior view towards patients.

Perceived injustice is another cause of unethical manners among physicians, as a number of participants declared:

> When you see injustice, you try any way to gain your rights, or to avoid working for low payments (P8).

Physical and mental pressures are factors closely related to basic needs and may be the source of reactions, as participants from public hospitals expressed:

> You can't be kind to patients because of long working hours and fatigue (P 10).
> Socio-cultural pressure in the form of social media, social networking, and social culture strongly affect individuals and can also demotivate ethical conducts, "I resist what patients demand in the office. But they go to other doctors and my revenue falls" (P17).

3. Poor and Inadequate Education in Medical Schools

Education is a central means for changing knowledge, attitude, and practice of students. Ethical education for medical students in Iranian universities is limited to a single course that is mostly presented as a lecture to them. This is inefficient because learning occurs mainly through observing (in)direct contents on how to behave with professors and other senior learners, as all of our participants also expressed:

> This course has no practical content and is not designed for practical use, and has no effects on our actions. It is mostly philosophical and theoretical, with no objective suggestions (P12).

As a number of participants indicated, ethics is not a theoretical discipline but rather a practical discipline:

Table 2 Effective factors and solutions in theory–practice gap in medical ethics

	Focused code	Initial code samples
	A: Factors	
1	Personal characteristics of physicians	Self-control and weakness of will, lack of commitment, selfishness
2	Emotion and motivation	Sense of victimization, subjective images, stress, others' expectations, fear of conflict
3	Poor education	Lack of practical education, inefficient education, garrison like educational system, hidden curriculum, poor reasoning and convincing
4	Cognitive obstacles	Poor reasoning, self-deception, quality and amount of information providing
5	Insufficient ethical sensitivity	Routine functions, lack of empathy
6	Regulations and processes	High costs of ethical conduct, lack of job security and support, inefficiency of insurance system, referral system and rewards, financial relationship between patients and physicians, lack of instructions
7	Practical obstacles	Impossibility, being theoretical and abstract
	B: Solutions	
1	Research	Evaluating the existing status, determining reasonable standards, offering optimal solutions
2	Reforming the medical education system	Reasoning, convincing, practical education, enhancing religious beliefs
3	Reconsidering regulations and processes	Revising the referral and insurance system, supporting physician and providing job security, establishing efficient laws, minimum law intervention, effective supervision
4	Evaluation and reward system	Rewarding ethical physicians, considering ethics in evaluating systems
5	Internalization and institutionalization of ethics and considering unconsciousness of some conducts in medical setting and practice	Enculturation and use of media for encouraging or reflecting patients' pains

> Ethics is a practical discipline (P6).
> "It doesn't matter what beliefs you try to teach me. What matters is the actions you exercise me. Our actions are unconscious." (P3).

4. Cognitive Obstacles

Cognitive obstacles are factors that affect individual beliefs and it can no longer be expected that those beliefs will lead to action.[3] However, sometimes, the way of representing knowledge is problematic. One is more likely to abandon beliefs that are not convincing enough and not imparted with strong reasoning. When doing something, depending on the situation, one relies on some predefined reasons unless he is sufficiently convinced to drop it. In this regard, two participants said:

> A deep belief is a part of you. You can't act against it particularly when it is internalized' (P5).
> "It is no good telling patients about their condition. They won't understand and become confused or stressed (P4).

Of course, there is no general agreement between participants as some noted that ethical reasoning has no significant effects and people intuitively know their ethical duties. Some even believed that ethical reasoning may have adverse effects if not presented with care, leading people to justify their acts.

In simple words, ethical reasoning can turn into a means of self-deception which is unconsciously applied and is a major factor in topics about gap between knowledge and practice. Almost all participants agreed that deception and justification lie behind most unethical acts, as they expressed:

> I did the abortion to save the mother (P9).
> I sent her to the private hospital to have better services (P2).

5. Insufficient Ethical Sensitivity

Most participants stated that when they face an ethical dilemma, they do not know that their decisions may have adverse effects on patients' life. They often do not empathize with patients (lack of sensitivity). As a number of participants expressed;

> Doctors need to be informed about the real outcome of their decisions (P4).
> We often cannot put our feet in the shoes of the patient (P6).
> Some doctors are not concerned with ethics and see nothing wrong with what they do. They openly discuss it among people (P9).

6. Executive Processes and Regulations

All participants argued that ethical considerations are mostly neglected in developing regulations and processes in healthcare system. Thus, the cost of ethical conduct is relatively high compared to unethical conduct. This factor was the most important factor for most participants.

[3] Ethical ignorance is important and reflects poor education, but is not in the realm of the present study.

> You realize that you lose many things if you stick to ethics. It is troublesome when others don't pay attention to it. But when an ethical system is established, people unconsciously abide. It is better to improve systems than individuals. Then, even bad people will comply (P7).

Participants also said that lack of support and job security adds to the severity of the problem.

> Nothing changes unless job security from legal, civil and material aspects is guaranteed (P19).
> Patients with serious diseases are legally problematic. The law doesn't support me. Why should I take the responsibility of such patients (P20)?

7. Practical Obstacles
There are times when people find some tasks impossible or very hard to do against their beliefs. Only when practical obstacles are removed we can expect people to do logical things. As two participants said,

> Students are challenged with tension and stress, lots of work at little time, and paperwork. They have no other choice than outbursts of aggressive behavior (P12).
> Ethics hinders our practice. It is out of question. Authorities need to see that by themselves. Regulations of the ethics committee are really demanding as they are passed as a result of human disaster and are mostly emotional (P1).

B. Solutions
1. Research
Most participants agree that a systematic and comprehensive inquiry is the first interventional step in identifying the status quo and providing information for optimizing it. Main determinants of this need to be defined and prioritized. As some participants declared:

> A theoretical concept like ethical dignity is far from being applied in ICU. All stages need to be carefully studied. Research is a continuum, including curiosity, applied studies and some others that lead to instructions, coding and regulations (P7).
> Sociological, behavioral and psychological studies are rare and, if there are any, they are papers and theses that collect dust (P12).

2. Reforming the Medical Education System
Reforming the educational system is one of the most effective interventions. As indicated by a number of participants, ethical education needs to be a part of curriculum along with clinical training. Some of their suggestions are:

> In the medical reading, we see ethical notes and medical notes are given along with together (P6).
> Theoretical education should be given in ways other than lectures and involve students. Contents should be realistic and reasonable to convince students and

> change their attitudes. The students should be convinced that physicians benefit from kindness to patients (, P14).

It is noteworthy that ethical education needs to be mostly practical. The major part of student education is observing professors' behaviors. Models are unconsciously internalized and applied as most of participant expressed:

> Ethical conduct is a skill that we do unconsciously. We focus too much on speaking and the conscious. We tend to care about education and believe that lectures make big differences. We need to see not merely hear. It matters not what you give but how you do it. We shouldn't expect physicians to understand those on the other side of the boat. He needs to experiment. Students need to be with the patient and even take drugs by himself (P3).
> Enculturation is an essential part of ethical education, though in ethics, it is much harder than other areas like traffic or cultural issues. Different methods can be used for enculturation, as using symbol in the formal education, media and the internet (P8).

Moreover, educational structures and policies need to be reformulated to attract public participation and to receive possible suggestions and criticisms.

3. Reconsidering Regulations and Processes
In an ethical arrangement, even the unethical person is obliged to follow. This is affirmed by all participants:

> The first step is to establish accurate and relevant standards, i.e., to set relatively accessible objectives. We have to set standards easy to reach. The existing standards are too high as our system is perfectionist. This is hard to achieve and people give in. Next, we have to revise regulations and processes to solve legal gaps. Supervision is necessary to ensure that regulations are carefully observed (P7).

Two things are important while establishing the regulations. First, they should only cover minimum standards. Second, executive mechanisms of ethical structures should not be legally binding. These were expressed specially by the same participant:

> For minimal level of practice, regulations are needed but for higher levels we need more ethical and rewarding solutions such that ethical conducts be desirable and rewarding. Punishment should be avoided as much as possible; instead infrastructures need to be renovated instead. So, ethics is sacrificed and turns to laws (P7).

In fact, most cases like referral and insurance systems are solved by reforming the mechanisms. We need professional and specialized organizations that work on regulations and processes and give expert ideas. Responsibilities need to be carefully defined and assigned; for example, a participant said:

> There is no time to get written consent. Items are not clearly defined. Consent is obtained in cases where the patient has no other alternative (P1).

4. Evaluation and Reward System

Employing an efficient evaluating system was asserted by all participants. A number of accounts are as follows:

> We all need to be sensitive. There should be public evaluation to obtain effective feedback. For example, in the promoting process for the faculty members (P1).
> Timely feedback is needed, for example when talking with a patient. Ethical role models are effective. Ethical people should be introduced and rewarded (P8).

5. Internalization and Institutionalization of Ethics in Medical Settings and Practices

A good number of participants stressed on the significance of enculturation and internalization of ethics. Ethical conduct is usually unconscious and stems from internalized models, as most of participants stressed:

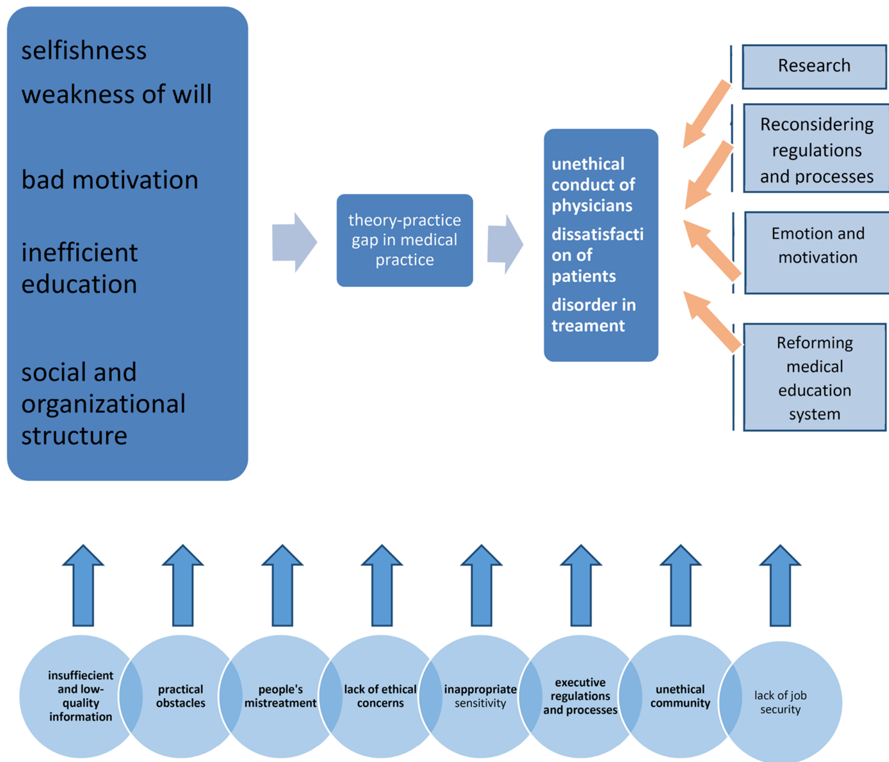
> Ethics is internalized and institutionalized through constant education, feedback, rewarding and punishment systems. The police are not constantly present (P6).
> We can work on personal development by embedding some lessons in the curriculum. Self-knowledge helps individuals see their shortcomings, such as weakness of will, and seek remedies, or enhance abilities such as empathy. Use of committed professors contributes significantly to internalization of ethics among students. We have to find ways to employ art and media to induce and educate ethics. For example, media can be used to show pains of people inflicted by unethical conduct. This way, decision-makers will grow more sensitive about ethics (P7).

Internalization is also achieved through symbolization of some ethical models, and putting emphasis on organization slogans by visualizing strategies, including billboards, social networking, and photo fairs.

Before concluding and summarizing factors and solutions proposed by participants, key concepts were depicted in Fig. 1 to demonstrate their relationship with the gap in ethical theory and practice.

Out of all factors and solutions collectively mentioned by participants, those with high frequency were selected and put into four major categories: (1) medical education system; (2) emotions and motivations; (3) executive regulations and processes; (4) research. Results are compatible and comparable with other studies on ethical conduct.

One of the models presented to explain the process by which a theory turns into practice is a simple model based on desire and intention *(Knowledge-Desire-Intention-Practice)*. Knowledge, desire and intention precede and determine human practice and may widen the gap between theory and practice. This model explains three points of the present study (Fig. 2). This model is discussed in both philosophy and psychology.



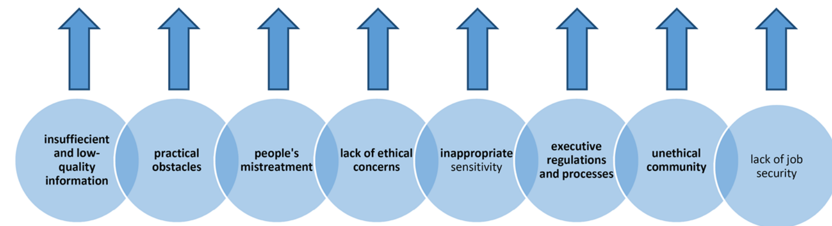


Fig. 1 Determinants of the gap between theory and practice in medical ethics

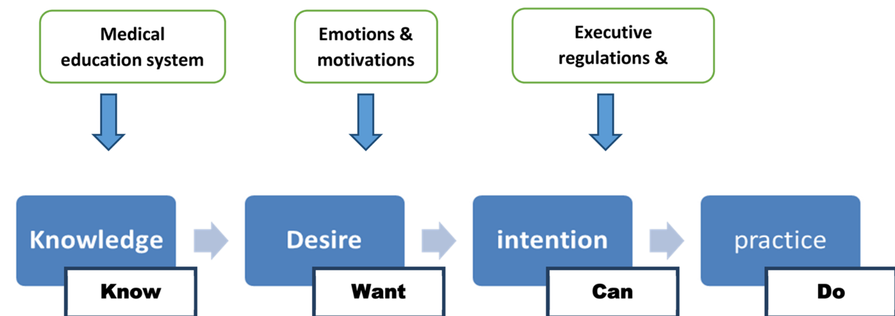


Fig. 2 The process of turning theory to practice and its relevance to the content of the study

The fourth point, i.e. research, emphasizes on scientific, intentional, and comprehensive encounter with the problem and is parallel to other points.

Three key factors were identified. The first is education that determines awareness. The second is emotional and motivational forces related to individual

desires. The third is executive processes and regulations that facilitate the process and remove obstacles, indirectly driving individual will.

Discussion

Most theories and accounts in philosophy and social psychology hold that a theory has to undergo a certain process before it leads to practice. For Aristotle, human desire was the medium between ethical theory and practice, and the gap between them occurred when desire failed to follow reason. It was moral weakness in his conception. Recently, it is conceived that practice does not follow a certain desire or belief but the subject voluntarily decides on an action and performs it (Khazaei 2007). Alfred Mele, American philosopher who has developed the idea of autonomous agents, and Richard Holton argue that the gap between theory and practice arises from lack of moral will in the subject, what they call weakness of will (Holton 1999; Holton 2012; Mele 2010).

It was long recognized in psychology that individual attitude bridged theory and practice. This was the basis for the KAP model (i.e., *Knowledge, Attitude,* and *Practice*). However, it was challenged in the last decades because human behavior was found to be determined by many factors other than attitude, like situational constraints (Nolen-Hoeksema et al. 2009, pp. 648–681; Bohner and Wanke 2011).

The Theory of Reasoned Action (Fishbein and Ajzen 1975, pp. 55–60), and its subsequent theories such as the Theory of Planned Behavior, were proposed as alternative to the KAP model. It adds another factor, will. This is when an individual is convinced and has desire to do something but avoids it until a drive motivates him to. Theory of Reasoned Action is verified by studies in different fields including dieting (Heena et al. 2015) and has applications in ethical behavior (Hardinga et al. 2007) and medical ethics (Randall and Gibson 1991).

Overall, desire and will are found in these theories as two key mediating factors in the relationship between theory and practice. Thus, knowledge, desire and will are preliminary factors for human practices and anything that influences them may increase or decrease the gap between theory and practice.

The present study seeks to offer mechanisms to promote ethical behavior in medicine. To do so, medical students, professors and physicians from both public and private sectors were interviewed to identify factors and solutions. They were selected from different fields (educational, research, and management), from a number of academic centers in several cities in the country. While some participants put the utmost assertion on characteristics of the system by saying that an ethical system fosters ethical staff, others gave voice to personality and ethical motivation of individual by encouraging people who naturally abide in ethics.

Psychological evidence, in contrast to popular belief, shows that the environment is more influential than personality and nature (Nolen-Hoeksema et al. 2009, pp. 608–647) The society imposes roles and norms on people (Giddens and Birdsall 2011; Klineberg 1954). A social system can turn ordinary men to evil ones (Nolen-Hoeksema et al. 2009, pp. 608–647; Tsang 2002). Attachment to a

group significantly affects human behavior. Most beliefs and attitudes are formed and internalized in a group and sustain for a long time (Nolen-Hoeksema et al. 2009, pp. 608–647).

Nevertheless, the subject is responsible to what he does willingly. Even social imperatives have to be enacted by individual will and desire. Therefore, it is important to check the individual's mindset before committing ethical or unethical behavior (Myyry 2003, pp. 12–19). Nearly all people think of themselves as an ethical person and want to preserve that self-image. Accordingly, when they want to do something unethical, they try to justify it (Tsang 2002). Though all these things are emotional processes and do not follow logic (Rogerson et al. 2011). In other words, self-deception is among the most important mental processes before committing an unethical action (Tenbrunsel and Messick 2004) and all the participants asserted that.

Physicians' self-images are great motivational sources (Faramarz and Nasekhian 2016) that grow in social background and culture and cannot be easily uprooted. However, they greatly influence human practice and need to be taken into account for changing attitude and enculturation.

Emotional factors, which are in fact people's desires and priority (Myyry 2003, pp. 27–34). (Rest et al. 1999), create powerful forces that lead an individual to extremes and unwillingness (Nolen-Hoeksema et al. 2009, pp. 394–431). When some strong emotional factors are involved, people do not care if the action they are doing is ethical or not.

Emotional factors, that motivate immoral practice, can play an effective and even necessary role in ethical practice (Greene 2007). When knowledge becomes part of one's value system, there is more willingness to enact it. In other words, one is likely to indulge social ideas and values (Matsumoto 2009; Statt 1998). This is called internalization, which significantly affects human behavior. When something is internalized, no external supervision is needed and the individual willingly performs what is due, even when on his own, and feels sorry if he fails to do it. Thus, beliefs, attitudes, and behaviors may persist for long without any external control (Bohner and Wanke 2011). On the contrary, when something is performed for rewards or fear of being punished, it is abandoned when the external control factor no longer exists. Internalization of ethics is the most optimal level of ethical development (Nolen-Hoeksema et al. 2009, pp. 648–681; Ranjbar et al. 2017).

Regulations and processes should promote internalization too. As this study revealed, decision-makers and politicians may not be able to include demands of physicians in their agenda, but at least can care for their concerns and justify rules for them by explaining the existing limitations. This is not costly and relatively alleviates the problem.

The participants mentioned two main solutions: reforming the educational system and reforming regulations and executive processes. Scientific findings also support these two solutions, particularly focusing on the educational system as a critical means of promoting medical ethics. In addition, few people mentioned the student selection.

1. Medical Education System

An educational system is devised to change behavior. The chief objective of learning is permanent change of behavior. Knowledge with certain qualifications is more likely to lead to practice and finding these characteristics can decrease the gap between ethical theory and practice.

Great philosophers such as Socrates, Plato,[4] Aristotle, Mulla Sadra,[5] and Mohaghegh Sabzevari[6] asserted the fact that true knowledge (as the best and highest level of knowledge) leads to action necessarily (Berenjkar 2003).

To the knowledge of the author, basics of educational psychology are not systematically studied. Participants mentioned some characteristics as follows:

Reasoning and convincing: a sound and logical educational system is more likely to convince people and lead to ethical conduct (Bohner and Wanke 2011), when objective problems that block ways to ethical conduct are identified and justified, e.g. advantages or disadvantages of doing certain acts are anticipated and analyzed, moral action is achieved.

One should be convinced of productivity of his practice; otherwise, he would never bend himself to do something that is against his personal interests, even if there is strong logic behind it. In such cases, even those with high ethical standards will unconsciously avoid doing what is demanded, using different methods of self-deception, (Lu and Chang 2011).

Active education: Numerous studies (Birnbacher 1999; Heidari et al. 2013), in accordance with our study, show that greater participation of students in education leads to better educational performance and creates higher levels of self-motivation. Involving students in education and respecting them is really encouraging. Educational systems that are demanding and fail to justify or engage students demotivate them (Kuczynski and Navara 2005), and then rules are more likely to be ignored.

Practical education: In line with findings of Eckles et al. (2005; Eckles et al. 2005), we found that ethical education needs to be practical and continuous to be acquired and remembered. It has also proved helpful in developing traits which have attracted attention in the last two centuries in the world, particularly in field of education of ethics (Salman Mahini et al. 2014).

Hidden curriculum: Hidden curriculum is another important factor that can enhance education and entail some considerations including assessment of professors, creating ethical atmosphere, and development of virtuous character (Pellegrino and Thomasma 1993), etc.

Attitude: attitude significantly affects ethical behavior and studies stress the importance of training appropriate attitude in promoting professional ethics. (Jha et al. 2007)

[4] A philosopher of Greece and the founder of the Academy (the first institution of higher learning in the Western world.).

[5] An Iranian Shia philosopher (1571–1636), and the most significant Islamic philosopher after Avicenna, who attempted to transcend the simple dichotomy between a discursive, ratiocinative mode of reasoning and knowing, and a more intuitive, poetic and mystical mode of knowledge (https://plato.stanford.edu/entries/mulla-sadra/).

[6] One of the Iranian philosophers, renowned scholars, and thinkers of the eleventh century.

Passi et al. (2010) systematically reviewed 134 papers and introduced five main themes for supporting the development of professionalism in medical students: curriculum design, student selection, teaching and learning methods, role modelling, and assessment methods (Passi et al. 2010).

2. Regulations and Processes
When an individual grows aware of something, then accepts and wills to do that, he tries to weight various factors and intends to perform it. Intention precedes action, one intends to do something when he has positive attitude towards that and finds it compliant with social norms, and is able to perform it (Ajzen 1991). In fact, the individual learns an ethical behavior, confirms it, then considers his socio-economic status and capability and decides to do that only when it is appropriate.

That is to say, ethical conduct is enacted when the individual finds it appropriate, and supported by law and culture. Ethics-based regulations and processes create an atmosphere where the cost of ethical conduct is minimized while the cost of unethical conduct is maximized (Koller 2007).

Legal institutes and regulations should provide a framework to establish social balance in which people feel safe in acting out ethical behavior and nurture ethics.

Participants emphasized the importance of legal support of practitioners, reviewing and reforming regulations and processes, and enhancing systems of evaluation and supervision. Nevertheless, they all agreed that laws should never replace ethics. Of course, communities have different approaches to embedding ethics in laws but considering psychological factors in any structure may help ease the process. There are sporadic studies on the role of regulations and processes in development of ethics and, as far as we know, no subtle psychological analysis has independently studied the issue.

However, regulations need to be delicately applied in ethics:

Regulations need to be compatible with individual beliefs, mental and physical needs, as much as possible.

People need to be convinced that regulations are for public welfare.

Enforcement of laws and regulations without psychological consideration and providing the social background is doomed to failure (Santrock 2003).

Beneficiaries should be involved in regulating the laws to make them more practical (Salge et al. 2014).

Strict laws may prove efficient in controlling behavior but never guarantee internalizing behavior. On the contrary, people voluntarily commit themselves to laws even when there is no observer (Nolen-Hoeksema et al. 2009, pp. 608–647; Kuczynski and Navara 2005). Many participants of this study asserted this.

Student Selection

Another factor that is sometimes mentioned in the literature is student selection, especially to Medical Specialized Courses (Knights and Kennedy 2006; Lumsden et al. 2005). Some non-professional behaviors such irresponsibility can be

recognized early in the faculty (Teherani et al. 2005). However, measures to evaluate human behavior are insufficient (Passi et al. 2010). As one of the participants asserted, we may have to discard only cases of serious and destructive personality disorders and mental problems (Knights and Kennedy 2006). On the other hand, this was not confirmed by others.

Research

According to this study, research attempts to discover the status quo, to define the optimal status, and to find ways to achieve the optimal status, are essential intervention steps. Systematic and comprehensive studies take into account priorities and limitations, and offer solutions. However, far-fetched and hard-to-achieve goals need to be avoided.

Use of knowledge-brokers and gatekeepers is also helpful as they bind studies with needs of agents and create a common language. On one hand, they explain needs of executive agents and turn them to knowledge to be examined by researchers, and on the other hand, they transform expert knowledge into a simple language easy to be understood by practitioners.

Limitations of the Study

Participants may, consciously or unconsciously, avoid talking about unethical conduct. To filter that, they were convinced about confidentiality of information. Moreover, questions were general and indirect and participants could answer at ease.

Conclusion

A practice is determined by either internal motives or external obligations, leaving us two intervention schemes: promoting internal motives (internalization) and removing obstacles and facilitating ethical conducts.

Regardless of studies that always contribute to gaining a better understanding of issues, the present study suggests the following. (1) To promote internal motives, we need to focus on educational contents and policies that encourage inner motivation including attention to persuading learners, eliciting maximum student participation, use of virtuous theories and fostering emotions. Moreover, regulations and processes need to contain maximum inner motivations. It is also necessary to use measures for regulations and processes to be developed with maximum internal motivation. Enculturation is highly suggested in this regard. Yet, we need to be careful about immature use of force because though it may be necessary in some cases, it overpowers internal motives and damages ethics. (2) Regulations and processes shall focus on creating ethical systems such that practical obstacles are removed and

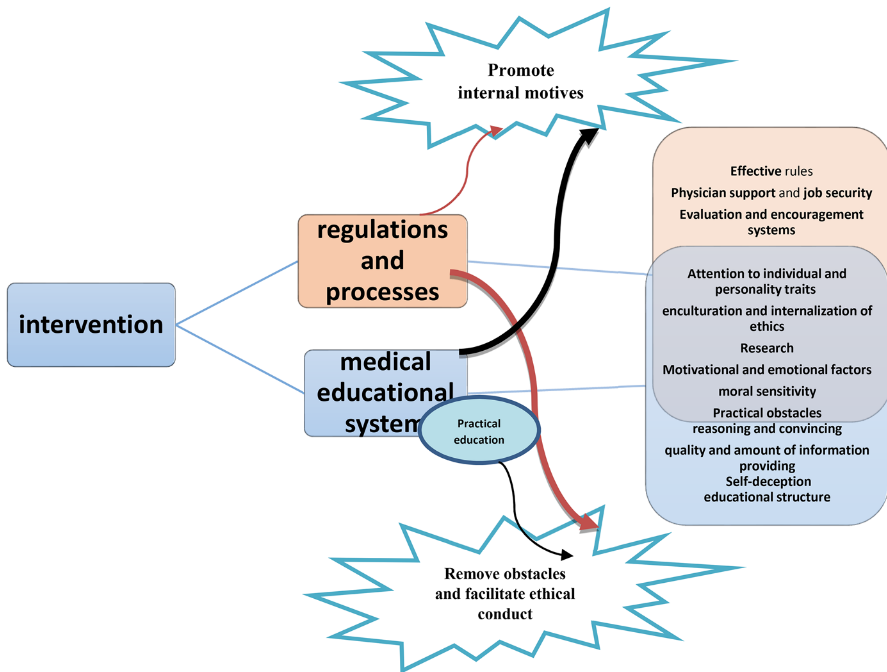


Fig. 3 The developed model (solutions and interventions) for bridging the gap between ethical theory and practice in medicine

ethical conduct is facilitated. Practical ethical education can develop ethical conducts among students (see Fig. 3).

This study was an attempt to examine different aspects of the gap between theory and practice in medical ethics. A systematic and comprehensive analysis in terms of effective education, reconstructing mechanisms and developing psychological-sociological basis is in demand. It is recommended that organizations develop a plan to promote ethics because it is a time-consuming process.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Bangun, Y. K., & Asri, M. (2017). Auditor ethical decision making. *Scientific Research Journal, 5*(6), 1.

Berenjkar, R. (2003). Aristotle's criticism of platonic socratic theory "unity of virtue and knowledge. *Quarterly Bulletin Nameh Mofid., 8*(34), 49.

Birnbacher, D. (1999). The socratic method in teaching medical ethics: Potentials and limitations. *Medicine, Health Care and Philosophy, 2*(3), 219–224.

Bohner, G., & Wanke, M. (2011). Attitudes and attitude change. *Annual Review of Psychology, 1,* 391–417.

Bryce, H., Susan, D., & Marc, H. (2008). The role of emotion in moral psychology. *Trends in Cognitive Sciences., 13*(1), 1–6.

Campion, B. (2011). Vrtue ethics and health care ethics: Part 1: The good doctor. Christian Virtue ethics and catholic health care practitioners. *Bioethics Matters, 9*(2), 1.
Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Thousand Oaks: SAGE Publications.
Dunbar, W. S. (2005). *Emotional engagement in professional ethics, Science and Engineering Ethics*. Vancouver, BC: University of British Columbia.
Eckles, R. E., Meslin, E. M., Gaffney, M., & Helft, P. R. (2005). Medical ethics education: Where are we? Where should we be going? A Review. *Academic Medicine., 80*(12), 1143–1152.
English, V., Romano-Critchley, G., Sheather, J., & Sommerville, A. (2004). Medical ethics today: The BMA's handbook of ethics and law. *BMJ Publishing Group, 1,* 660–674.
Faramarz, Gharamaleki A., & Nasekhian, A. A. (2016). *Power of Idea* (pp. 19–28). Tehran: Majnoon.
Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Massachusetts: Addison-Wesley Publishing Company.
Giddens, A., & Birdsall, K. (2011). *Sociology*. Cambridge: Polity Press.
Greene, J. D. (2007). Why are VMPFC patients more utilitarian?: A dual-process theory of moral judgment explains. *Trends Cognition Science, 11,* 322–323.
Hardinga, T. S., Mayhewb, M. J., Finellic, C. J., & Carpenterd, D. D. (2007). The theory of planned behavior as a model of academic dishonesty in engineering and humanities undergraduates. *Ethics and Behavior, 17*(3), 255–279.
Heena, A., Debra, A., & Danielle, G. (2015). Predicting intentions and behaviours in populations with or at-risk of diabetes: A systematic review. *Prev Med Rep., 2,* 270–282.
Heidari, A., Adeli, S. H., Taziki, S. A., Akbari, V., Ghadir, M. R., Moosavi-Movahhed, et al. (2013). Teaching medical ethics: Problem-based learning or small group discussion. *Journal of Medical Ethics and History of Medicine., 6*(1), 1.
Holton, R. (1999). Intention and weakness of will. *Journal of Philosophy., 96*(5), 241.
Holton, J., & May, R. (2012). What in the world is weakness of will. *Philosophical Studies, 157,* 341–360.
Hume, D. (1998). *An enquiry concerning the principles of moral* (p. 28). New York: Oxford University Press.
Jha, V., Bekker, H. L., Duffy, S. R. G., & Roberts, T. E. (2007). A systematic review of studies assessing and facilitating attitudes towards professionalism in medicine. *Medical Education, 41,* 822–829.
Jo-Ann, Tsang. (2002). Moral rationalization and the integration of situational factors and psychological processes in immoral behavior. *Review of General Psychology, 6*(1), 25–50.
Khazaei, Z. (2007). Moral weakness or weakness of will? *Qom Association for Islamic Thought, 3*(3), 155–177.
Klineberg, O. (1954). *Social psychology*. Oxford: Holt. **(Chapter 5)**.
Knights, J. A., & Kennedy, B. J. (2006). Medical school selection: Screening for dysfunctional tendencies. *Medical Education, 40*(11), 1058–1064.
Koller, P. (2007). Law, Morality, and Virtue. In R. L. Walker & P. J. Ivanhoe (Eds.), *Working virtue: Virtue ethics and contemporary moral problems*. Oxford: Oxford University Press.
Kuczynski, L., & Navara, G. S. (2005). *Handbook of Moral Development* (pp. 299–330). USA: Psychology Press.
Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (4th ed.). Washington DC: Sage.
Loe, T. W., Ferrell, L., & Mansfield, P. (2014). Phylis mansfield, a review of empirical studies assessing ethical decision making in business. *Journal of Business Ethics, 25*(3), 185–204. **(Revised)**.
Lu, H. J., & Chang, L. (2011). The association between self-deception and moral self-concept as functions of self-consciousness. *Personality and Individual Differences, 51*(7), 845–849.
Lumsden, M. A., Bore, M., Millar, K., Jack, R., & Powis, D. (2005). Assessment of personal qualities in relation to admission to medical school. *Medical Education, 39,* 258–265.
Marmat, G., Jain, P., & Mishra, P. N. (2016). Ethical Behaviour in Organizations: A Literature Review. *Journal of Research in Business and Management., 4*(1), 1–6.
Matsumoto, D. (2009). *The Cambridge dictionary of psychology* (p. 262). New York: Cambridge University Press.
Mele, A. (2010). Akrasia and weakness of will. *Philosophical Studies, 150*(3), 391–404.
Mencl, J., & Douglas, R. M. (2009). The effects of proximity and empathy, on ethical decision-making, an exploratory investigation. *Journal of Business Ethics, 85*(2), 201–226.
Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research, 25*(9), 1212–1222.

Myyry, L. (2003). *Components of Morality, Social psychological studies* (Vol. 9). Helsinki: University of Helsinki.

Nolen-Hoeksema, S., Fredrickson, B. L., Loftus, G. R., & Wagenaar, W. A. (2009). *Atkinson & Hilgard's Introduction to Psychology* (15th ed.). UK: Wadsworth Pub Co.

Passi, V., Doug, M., Peile, E., Thistlethwaite, J., & Johnson, N. (2010). Developing medical professionalism in future doctors: A systematic review. *International Journal of Medical Education., 1,* 19–29.

Pellegrino, E. D., & Thomasma, D. C. (1993). *The virtues in medical practice* (pp. 176–180). New York: Oxford University Press.

Randall, D. M., & Gibson, A. M. (1991). Ethical decision making in the medical profession: An application of the theory of planned behavior. *Journal of Business Ethics, 10*(2), 111–122.

Ranjbar, H., Joolaee, S., Vedadhir, A., Abbaszadeh, A., & Bernstein, C. (2017). Becoming a nurse as a moral journey: A constructivist grounded theory. *Nurs Ethics., 24*(5), 583–597.

Rest, J., Narvaez, D., Bebeau, M. J., & Thoma, S. J. (1999). *Postconventional moral thinking, a Neo-Kohlbergian approach*. London: Lawrence Erlbaum Associates inc. Mahwah.

Rogerson, M. D., Michael, C., Handelsman, M. M., Knapp, S., & Younggren, J. (2011). Nonrational processes in ethical decision making. *American Psychologist, 66*(7), 614–623.

Rushton, C. H. D., & Thorstenson, T. A. (1994). Caregiver distress, If it is so ethicsl, why dose it feel so bad? *Advanced Practice in Acute & Critical Care Nursing, 5*(3), 346–352.

Salge, C., Glackin, C., & Polani, D. (2014). Changing the environment based on empowerment as intrinsic motivation. *Entropy, 16*(5), 2789–2819.

Salman Mahini, S., Sajadi, S. M., Fardanesh, H., & Faramarz, Gharamaleki A. (2014). *Professional ethics education component of the formulation according to the teachings of the islamic educational, PhD thesis [Book Section]* (pp. 57–67). Tarbiat: School of Humanities, Tarbiat Modares University.

Santrock, J. W. (2003). *Psychology* (pp. 5–80). New York: McGraw-Hill.

Statt, D. A. (1998). *The concise dictionary of psychology* (3rd ed., p. 74). London: Routledge.

Teherani, A., Hodgson, C. S., Banach, M., & Papadakis, M. A. (2005). Domains of unprofessional behavior during medical school associated with future disciplinary action by a state medical board. *Academic Medicine, 80,* S17–S20.

Tenbrunsel, A. E., & Messick, D. M. (2004). Ethical fading: The role of self-deception in unethical behavior. *Social Justice Research, 17*(2), 223–236.

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