Original Article

Investigating the relationship between dimensions of professional ethics and components of communication skills among faculty members at Alborz University of Medical Sciences in 2023: a cross-sectional study

Azadeh Babaei[1], Arezoo Aghakouchakzadeh[2], Morteza Motaharipour[3], Ali Lotfalian[4], Iman Rajaei[4*]

1. Assistant Professor, Community Oral Health Department, School of Dentistry, Alborz University of Medical Sciences, Karaj, Iran.
2. Assistant Professor, Department of Oral and Maxillofacial Pathology, School of Dentistry, Alborz University of Medical Science, Karaj, Iran.
3. Assistant Professor of Islamic Education, Department of Islamic Studies, School of Medicine, Alborz University of Medical Sciences, Karaj, Iran.
4. Student Research Committee, Alborz University of Medical Sciences, Karaj, Iran.

Abstract

Ethics is the systematic study of moral principles that guides conduct in complex social and professional contexts. In medical education, faculty members' professional ethics and communication skills are critical, since they influence student development and institutional success. This study examines the relationship between professional ethics and communication skills to inform faculty development programs.

This was a descriptive-analytical, cross-sectional study conducted in 2023–2024 at Alborz University of Medical Sciences. It investigated the relationship between professional ethics and communication skills among 178 faculty members using validated Cadozier & Brown and Queendom questionnaires. Pearson's correlation, t-tests, and ANOVA revealed significant associations ($P < 0.05$) between ethics, communication, and demographic variables.

Most participants were female (53.4%) and mid-career (35–45 years, 43.8%). The majority were assistant professors (78.7%) with medical specializations (60.1%) or PhDs (36.0%). Self-reported ethics (M = 65, SD = 5.7) and communication skills (M = 116, SD = 7.7) were high, with 85.4% and 96.6% rated "Good." A moderate positive correlation (r = 0.33, $P < 0.01$) was observed between the constructs, and listening skills were strongly associated with ethical dimensions such as honesty and empathy.

Gender, age, experience, employment status, and rank influenced sub-dimensions, showing patterns. The findings revealed a significant positive correlation between faculty professional ethics and communication skills, shaped by academic rank, teaching experience, and employment type. Integrated training and supportive policies are recommended to enhance faculty communication skills and ethics.

Keywords: *Professional ethics; Communication skills; Faculty.*

***Corresponding Author**
Iman Rajaei
Address: School of Dentistry, Alborz University of Medical Sciences, Karaj, Iran.
Postal Code: 3198684868
Tel:(+98) 26 33 53 16 14
Email: imanrajayee@abzums.ac.ir; imanrajayee@gmail.com

Received: 6 Oct 2025
Accepted: 27 Dec 2025
Published: 10 May 2026

Citation to this article:
Babaei A, Aghakouchakzadeh A, Motaharipour M, Lotfalian A, Rajaei I. Investigating the relationship between dimensions of professional ethics and components of communication skills among faculty members at Alborz University of Medical Sciences in 2023: a cross-sectional study. J Med Ethics Hist Med. 2026;19:1.

Introduction

Ethics represents a foundational dimension of human existence, profoundly influencing social and professional life. The discipline of ethics is broadly understood as the systematic study of moral principles, offering a framework for discerning right from wrong and guiding conduct in complex situations (1, 2). In contemporary society, the proliferation of intricate social and technological systems has rendered ethical decision-making increasingly challenging, demanding a more sophisticated application of these foundational principles (3). While ethics provides the moral compass for individual behavior, its principles are formally contextualized within specific occupations through the construct of professional ethics (4).

Professional ethics can be defined as a specialized set of moral norms, standards, and codes of conduct that are agreed upon by a professional community to navigate morally ambiguous situations and ensure accountability (5). Within an organizational context, a robust ethical framework is not merely an aspirational goal but a critical determinant of institutional success and effectiveness; adherence to professional ethics raises internal cohesion, enhances public trust, and can serve as a significant source of competitive advantage (6). Conversely, the absence of a strong ethical structure can precipitate significant challenges, undermining an organization's mission, profitability, and overall impact (7).

The domain of higher education, particularly medical education, presents a unique context in which professional ethics assumes paramount importance (6). Faculty members in medical universities bear a dual ethical responsibility. First, as educators, they are obligated to meet their students' pedagogical needs through diligent and effective instruction. Second, as role models, they have a profound influence on the moral and professional development of future healthcare practitioners (8). The values and behaviors demonstrated by faculty, such as integrity, fairness, respect, and responsibility, are implicitly transmitted to students, shaping their professional character and future clinical conduct (9). Therefore, the cultivation of professional ethics among faculty is not an ancillary concern but is central to the mission of producing competent and conscientious physicians.

Concurrent with this ethical mandate is the necessity for advanced communication competence. Effective communication is far more than the simple transmission of information; it is a complex, dynamic process involving the exchange of ideas, thoughts, and emotions through both verbal and non-verbal channels (10, 11). In the pedagogical setting, communication skills are not "soft skills" but are core professional competencies. These skills, which include verbal clarity, active listening, emotional regulation, and the ability to provide constructive feedback, are the primary medium through which knowledge is transferred, mentorship is enacted, and a supportive learning environment is cultivated (12, 13). Research has consistently shown that effective teacher-student communication enhances student motivation, self-confidence, and academic achievement (14). Conversely, deficiencies in these skills can create significant barriers to learning and contribute to adverse educational outcomes, such as student anxiety and disengagement (15).

While professional ethics and communication skills are often conceptualized and studied as distinct domains, a growing body of evidence suggests they are deeply and synergistically intertwined (16).

The justification for this study lies in the shift toward viewing communication not only as a technical skill, but also as the practical performing of ethical virtues. Understanding the relationship between the constituent dimensions of professional ethics and the discrete components of communication skills is essential for designing targeted, holistic faculty development programs that address these competencies not in isolation but as an integrated whole. Therefore, the primary objective of this study was to investigate the relationship between the dimensions of professional ethics and the components of communication skills among the faculty members of Alborz University of Medical Sciences.

Methods

Study Design and Setting

The research was conducted in 2023-2024 across all constituent faculties of Alborz University of Medical Sciences. It employed a descriptive-analytical, cross-sectional research design, adhering to the STROBE checklist (17), to investigate the relationship between professional ethics and communication skills among academic faculty. This design is well-suited for providing a snapshot of the prevailing

correlations between the constructs of interest, a methodological choice consistent with correlational research in health ethics and education.

Participants and Sampling Procedure

The target population for this research comprised all 309 faculty members employed at Alborz University of Medical Sciences at the time of the study. To ensure the sample was statistically representative of this finite population, the required sample size was calculated using the formula and corresponding table developed by Krejcie and Morgan (18). For a population of 309, this established method recommends a minimum sample size of 175 participants to achieve 95% confidence at a 5% margin of error. Stratified random sampling was conducted by faculty affiliation (School of Medicine, Dentistry, Health, etc.). The total number of faculty members in each school was determined, and participants were selected proportionately using a random number generator. Selected faculty members were contacted through in-person visits to their respective departments to ensure a high response rate. An initial cohort of 181 faculty members was recruited, but three participants were excluded for submitting incomplete questionnaires, resulting in a final sample of 178 for statistical analysis. This corresponds to a response rate of 98.3% from the recruited group and a final sample size that exceeds the minimum requirement, strengthening the study's statistical power.

Inclusion criteria for the study were holding a formal faculty position at Alborz University of Medical Sciences, having at least one year of teaching experience, and being actively engaged in teaching duties at the time of data collection. A critical exclusion criterion was applied with regard to faculty members who taught courses specifically on professional ethics or clinical communication skills, who were excluded from participation. This measure was instituted to mitigate the risk of response bias from individuals with specialized, pre-existing theoretical knowledge of the core constructs, which could skew their self-assessments.

Data Collection Instruments

Data were collected using a self-administered questionnaire. A purpose-designed questionnaire was administered to gather essential demographic and professional data from each participant. This included age, gender, marital status, faculty of affiliation, employment status (e.g., tenured, contract), and total years of teaching experience. This information was

utilized to describe the sample profile and to serve as independent variables in subsequent comparative analyses.

The Professional Ethics Questionnaire

The assessment of professional ethics was conducted using the Cadozier & Brown Ethics Questionnaire. This instrument is a 16-item scale designed to measure eight distinct dimensions of professional ethics: responsibility, honesty, justice, loyalty, competitiveness, respect for others, empathy, and adherence to social values and norms. Respondents rate each item on a 5-point Likert scale, with responses ranging from "never" (1) to "always" (5). The total score for an individual can range from 16 to 80, with higher scores indicating greater adherence to the principles of professional ethics. The psychometric soundness of this questionnaire within the Iranian context was previously assessed by Asadi et al. (19), who confirmed its validity and reliability with a Cronbach's alpha of 0.88.

The Communication Skills Questionnaire

Communication skills were evaluated using the Queendom Communication Skills Questionnaire, a 34-item instrument. This questionnaire assesses five core competencies of interpersonal communication: 1) the ability to send and receive messages effectively, 2) emotional control, 3) listening skills, 4) insight into the communication process, and 5) assertive communication. It utilizes a 5-point Likert scale ranging from "never" (1) to "always" (5). To mitigate the potential for acquiescence response bias, several items are reverse-scored. The total possible score ranges from 34 to 170, where higher scores reflect greater proficiency in communication skills. The validity and reliability of the Queendom Questionnaire have been documented by Zangeneh et al. (The Kaiser–Meyer–Olkin Measure of Sampling Adequacy and the $\chi 2$ index in the Bartlett's test measured 0.71 and 2318.01, respectively) (20).

Ethical Considerations

The study protocol received ethical approval from the Ethics Committee of Alborz University of Medical Sciences (ethics code: IR.ABZUMS.REC.1402.163). All procedures were performed in accordance with the ethical standards of the institutional research committee and the 1964 Helsinki Declaration (21). The informed consent form explicitly stated that participation was entirely voluntary and that the participants possessed the right to withdraw. The confidentiality of individual responses and the anonymity of participants were guaranteed.

Statistical Analysis

All collected data were coded, verified, and analyzed using SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, N.Y., USA). The analytical strategy proceeded in two stages. First, descriptive statistics, including means (M), standard deviations (SD), frequencies, and percentages, were calculated to summarize the demographic and professional characteristics of the sample and the overall scores for the primary variables of professional ethics and communication skills. Second, inferential statistical tests were employed to address the research hypotheses. The relationship between continuous scores in professional ethics and communication skills was examined using Pearson's product-moment correlation coefficient (r). To compare mean scores between two independent groups (e.g., based on gender), the independent samples t-test was used. For comparisons of mean scores across more than two independent groups, ANOVA was conducted. For all inferential statistical analyses, the alpha level for determining statistical significance was set a priori at $P < 0.05$.

Results

Participant Characteristics

The study cohort comprised 178 faculty members from Alborz University of Medical Sciences. The demographic and professional composition of the sample is detailed in Table 1. The sample consisted of a slight majority of female participants. The age distribution was concentrated in the mid-career range, with the largest group being those aged 35-45 (n = 78, 43.8%). The majority of respondents were married (n = 147, 82.6%).

From a professional standpoint, assistant professors formed the predominant group, representing 78.7% (n = 140) of the entire sample. Regarding educational attainment, most participants held either a medical specialization degree (n = 107, 60.1%) or a PhD (n = 64, 36.0%).

Participants' employment status varied. The most common form of employment was contractual, accounting for 36.0% (n = 64) of the sample. Participants' work experience was broadly distributed, with a plurality having more than 10 years (n = 65, 36.5%). Academic employment in Iranian Universities of Medical Sciences ranges from permanent tenure (Official) to fixed-term (Contractual). The structure also includes mandatory service (Coefficient K and Service Commitment) for medical specialists fulfilling

government-subsidized education bonds, as well as project-based and temporary roles. These classifications differ significantly in terms of long-term job security, benefits, and the degree of institutional commitment required.

Finally, participants were drawn from across the university's faculties, though the sample was dominated by the Faculty of Medicine, which contributed 64.6% (n = 115) of the respondents.

Table 1. Demographic and professional characteristics of participants

Characteristic	Category	Frequency (n)	Percentage (%)
Gender (n = 178)	Male	83	46.6
	Female	95	53.4
Age (years) (n = 172)	< 35	37	21.5
	35–45	78	45.4
	> 45	57	33.1
Marital Status (n = 177)	Single	26	14.7
	Married	147	83.1
	Not Stated	4	2.2
Educational Level (n = 178)	Master's Degree	4	2.2
	Specialization	107	60.1
	Fellowship-Specialization	3	1.7
	PhD	64	36.0
Academic Rank (n = 178)	Instructor	5	2.8
	Assistant Professor	140	78.7
	Associate Professor	27	15.2
	Professor	6	3.4
Employment Status (n = 176)	Contractual	64	36.4
	Official	42	23.9
	Service Commitment	49	27.8
	Project-Based	12	6.8
	Coefficient K	9	5.1
Work Experience (years) (n = 171)	< 5	60	35.1
	5–10	46	26.9
	> 10	65	38
Faculty Affiliation (n = 178)	Medicine	115	64.6
	Dentistry	22	12.4
	Health	15	8.4
	Nursing	11	6.2
	Pharmacy	10	5.6
	Paramedical Sciences	5	2.8

Descriptive Analysis of Professional Ethics and Communication Skills

Professional Ethics

Self-reported levels of professional ethics were very high. The mean raw score for professional ethics was 65 (SD = 5.7). When categorized based on predefined score ranges, a large

majority of faculty members (n = 152, 85.4%) were classified as having "Good" professional ethics (scores > 59). A further 14.0% (n = 25) ranked "Moderate" (scores 37–59), with only a single participant (0.6%) categorized as "Weak" (score < 37). This distribution is highly skewed, suggesting that participants perceive their adherence to professional ethics as strong.

Analysis of the eight distinct dimensions of professional ethics revealed a hierarchy of self-perceived strengths. The dimensions receiving the highest mean ratings were "Honesty" (M = 4.51, SD = 0.55) and "Empathy with others" (M = 4.42, SD = 0.58). Other highly-rated dimensions included "Responsibility" (M = 4.38, SD = 0.52), "Respect for social norms and values" (M = 4.27, SD = 0.60), "Respect for others" (M = 4.19, SD = 0.56), and "Loyalty" (M = 4.13, SD = 0.61). The dimension with the lowest mean score was "Justice and fairness" (M = 3.08, SD = 0.72), followed by "Competitiveness and excellence-seeking" (M = 3.52, SD = 1.06).

Communication Skills

The overall self-assessed communication skills among the faculty members were exceptionally high. Based on the instrument's scoring criteria (range: 34–170), the sample's mean score was 116 (SD = 7.7). When categorized, a majority of participants (n = 172, 96.6%) fell into the "Good" communication skills category (scores > 102). A small minority (n = 6, 3.4%) were classified as "Moderate" (scores 68–102), and no participants were rated as having "Weak" communication skills. This distribution of scores was heavily skewed toward the upper end of the measurement scale, suggesting a ceiling effect or social desirability bias in self-reporting.

A more granular analysis of the components of communication skills revealed notable variations in proficiency. The highest mean score was observed for the cognitive component "Insight into the communication process" (M = 3.68, SD = 0.37). In contrast, the lowest mean score pertained to the behavioral component "Assertive communication" (M = 3.04, SD = 0.45). Other components included "Ability to receive and send messages" (M = 3.63, SD = 0.36), "Listening skills" (M = 3.45, SD = 0.41), and "Emotional control" (M = 3.21, SD = 0.37).

Relationship Between Professional Ethics and Communication Skills

The Pearson correlation analysis revealed a significant, moderate positive relationship between the total scores of both constructs (r =

0.33, $P < 0.01$). This primary finding suggests that higher levels of self-reported communication skills are significantly associated with higher levels of self-reported professional ethics among the faculty members. A detailed correlational analysis was performed between the five components of communication skills and the eight dimensions of professional ethics. The results of this analysis are presented in Table 2. The findings disclose a complex network of interdependencies, where specific communication skills appear to be more fundamentally linked to ethical conduct than others.

The component of "Listening skills" emerged as the most pervasively correlated communication competency. It demonstrated significant positive associations with six of the eight dimensions of professional ethics: "Responsibility" (r = 0.32, $P < 0.01$), "Respect for others" (r = 0.23, $P < 0.01$), "Empathy with others" (r = 0.25, $P < 0.01$), "Justice and fairness" (r = 0.17, $P = 0.018$), "Honesty" (r = 0.16, $P = 0.028$), and "Competitiveness and excellence-seeking" (r = 0.16, $P = 0.031$).

"Emotional control" was also significantly linked to multiple ethical dimensions, showing positive correlations with "Honesty" (r = 0.22, $P < 0.01$), "Empathy with others" (r = 0.21, $P < 0.01$), and "Respect for social norms and values" (r = 0.18, $P = 0.017$). The "Ability to receive and send messages" was positively correlated with "Honesty" (r = 0.27, $P < 0.01$), "Responsibility" (r = 0.16, $P = 0.033$), and "Loyalty" (r = 0.15, $P = 0.035$). Similarly, "Insight into the communication process" was associated with "Loyalty" (r = 0.17, $P = 0.022$), "Responsibility" (r = 0.15, $P = 0.035$), and "Respect for others" (r = 0.15, $P = 0.039$).

In explicit contrast to the other components, "Assertive communication" showed no significant positive correlations with any of the eight dimensions of professional ethics, but displayed a non-significant negative trend with "Honesty" and "Empathy with others." This pattern of results strongly suggests that, in this professional sample, the ethical valence of communication is more closely tied to receptive and regulatory skills (i.e., listening, understanding, managing emotions) than to expressive skills related to self-assertion. The data indicate that the ability to listen attentively is a foundational skill that underpins a wide array of ethical behaviors, from responsibility to empathy.

Table 2. Pearson's correlation coefficients for the relationship between dimensions of professional ethics and components of communication skills

Communication Skills / Professional Ethics	Ability to Send/Receive Messages	Emotional Control	Listening Skills	Insight into the Communication Process	Assertive Communication
	r (P-value)	*r (P-value)*	*r (P-value)*	*r (P-value)*	*r (P-value)*
Responsibility	0.16 (0.03)*	0.14 (0.06)	0.32 (< 0.01) *	0.15 (0.04) *	0.12 (0.10)
Honesty	0.27(< 0.01) *	0.22 (< 0.01) *	0.16 (0.03) *	0.12 (0.10)	-0.10 (0.16)
Justice and Fairness	-0.03 (0.70)	0.10 (0.20)	0.17 (0.02) *	-0.11 (0.15)	0.11 (0.16)
Loyalty	0.15 (0.04)*	0.14 (0.05)	0.09 (0.24)	0.17 (0.02)*	-0.05 (0.49)
Competitiveness/Excellence-Seeking	0.13 (0.07)	0.04 (0.62)	0.16 (0.03)*	0.04 (0.56)	0.07 (0.34)
Respect for Others	0.05 (0.49)	0.10 (0.20)	0.23 (< 0.01)*	0.15 (0.04)*	-0.13 (0.08)
Empathy with Others	0.06 (0.46)	0.21 (< 0.01)*	0.25 (< 0.01)*	0.10 (0.20)	-0.10 (0.19)
Respect for Social Norms	0.08 (0.29)	0.18 (0.02)*	0.08 (0.31)	0.11 (0.12)	0.04 (0.57)

*Significance levels: *P < 0.05*

Association of Sociodemographic and Professional Factors with Study Variables

Influence of Gender

While the overall scores for communication skills (P = 0.57) and professional ethics (P = 0.50) did not show statistically significant differences between male and female faculty members, the study revealed intriguing disparities within specific sub-dimensions. Male faculty reported significantly higher scores on "Assertive communication" (M = 3.13, SD = 0.45 for men vs. M = 2.97, SD = 0.45 for women; P = 0.02) and on the ethical dimension of "Competitiveness and excellence-seeking" (M = 3.75, SD = 0.99 for men vs. M = 3.32, SD = 1.08 for women; P < 0.01).

Conversely, female faculty reported significantly higher scores on three ethical dimensions: "Honesty" (M = 4.61, SD = 0.51 for women vs. M = 4.40, SD = 0.59 for men; P < 0.01), "Empathy with others" (M = 4.53, SD = 0.47 for women vs. M = 4.30, SD = 0.67 for men; P = 0.01), and "Respect for social norms and values" (M = 4.37, SD = 0.53 for women vs. M = 4.16, SD = 0.66 for men; P = 0.02).

Influence of Age

Analysis of variance revealed no significant association between age group and the overall

scores for communication skills (P = 0.07) or professional ethics (P = 0.23). Nonetheless, age was significantly related to several specific competencies.

For communication skills, a significant effect of age was found for "Ability to receive and send messages" (P < 0.1), "Listening skills" (P = 0.03), and "Insight into the communication process" (P = 0.02). Post-hoc examination revealed that faculty in the 35–45 age group scored highest on "Ability to receive and send messages," while faculty in the >45 age group scored highest on both "Listening skills" and "Insight into the communication process."

Regarding professional ethics, a significant effect of age was observed only for the "Loyalty" dimension (P = 0.02), with the >45 age group reporting the highest scores. This pattern suggests a potential developmental path in which active, transactional communication skills peak in mid-career, while more reflective competencies, such as listening, cognitive insight, and institutional loyalty, continue to develop with increasing age and seniority.

Influence of Work Experience

Work experience showed no significant association with the overall communication skills score (P = 0.50). However, it was significantly associated with the overall professional ethics score (P = 0.02). A Tukey post hoc test revealed that faculty with 5 to 10 years of experience (M = 4.15, SD = 0.28) had significantly higher professional ethics scores than those with fewer than 5 years of experience (M = 3.98, SD = 0.34; P = 0.02).

At the sub-dimension level, work experience had a significant effect on "Insight into the communication process" (P < 0.01), with those with>10 years of experience scoring highest. For professional ethics, significant effects were found for "Loyalty" (P < 0.01), "Respect for others" (P = 0.02), and "Empathy with others" (P = 0.01). The 5–10-year experience group scored highest on "Loyalty" and "Empathy," while the >10-year group scored highest on "Respect for others."

Influence of Employment Status

The type of employment contract held by faculty members was not significantly related to their overall communication skills score (P =0.08), but it was significantly associated with their overall professional ethics score (P = 0.01). A Tukey post-hoc analysis indicated that faculty employed under the Coefficient K status had significantly lower professional ethics scores (M = 3.72, SD = 0.25) compared to those with contractual status

(M = 4.22, SD = 0.28; *P* = 0.02), official status (M = 4.12, SD = 0.32; *P* = 0.02), and project-based status (M = 4.18, SD = 0.28; *P* = 0.03).

Significant differences among employment groups were also found for "Listening skills" (*P* = 0.04), "Assertive communication" (*P* = 0.01), "Respect for others" (*P* = 0.03), and "Empathy with others" (*P* = 0.01). These results point to a "precarity penalty," in which faculty in the most insecure employment category (Coefficient K) report significantly lower levels of professional ethics.

Influence of Academic Rank

Academic rank demonstrated a significant association with the overall communication skills score, but not with the overall professional ethics score. A Tukey post-hoc test revealed that assistant professors had significantly higher communication skills scores than instructors (*P* = 0.05).

Further analysis showed that academic rank was significantly related to "Assertive communication" (*P* = 0.04), with assistant professors scoring highest. For professional ethics, rank was significantly associated with "Justice and fairness" (*P* = 0.04) and "Respect for others" (*P* = 0.03). Assistant professors reported the highest scores on "Justice and fairness," while associate professors scored highest on "Respect for others." The data highlight the assistant professor rank as a period of exceptionally high proficiency in communication and a focus on fairness.

Influence of Marital Status

There were no significant differences in overall communication skills (*P* = 0.21) or professional ethics (*P* = 0.52) by marital status. The only significant finding across all sub-dimensions pertained to "Insight into the communication process" (*P* < 0.01), in which single participants reported the highest mean score. Overall, marital status was not a strong predictor of the primary constructs in this sample.

No significant differences were found among faculty from different schools for overall communication skills (*P* = 0.49) or overall professional ethics (*P* = 0.17). A significant difference was found for one ethical dimension, "Justice and fairness" (*P* < 0.01), among faculty from the School of Medicine, reporting the highest scores. This isolated finding may hint at discipline-specific priorities but does not suggest broad differences across faculties.

No statistically significant differences were found in overall communication skills (*P* = 0.53), overall professional ethics (*P* = 0.62), or their

respective sub-dimensions, based on participants' educational level. This suggests that within this highly educated cohort, variations in the type of advanced degree (Master's, PhD, or Specialization) do not correspond to significant differences in self-reported communication or ethical competencies.

Discussion

The primary objective of this study was to investigate the complex relationship between professional ethics and communication skills among faculty members at Alborz University of Medical Sciences. The central finding reveals a significant, moderate positive correlation between the total scores of these two constructs. This suggests that, in the context of medical academia, ethical conduct and communicative competence are not isolated domains but are intertwined in a synergistic manner. This observation aligns with the findings of Malekshahi et al. (1), who reported a similar positive association between communication skills and professional ethics among clinical teachers. Furthermore, it supports the theoretical framework proposed by Sarangi and Rossi (22), who claim that in healthcare education, communication cannot be separate from the ethical landscape of expertise; rather, the two form a unified "ethical-interactional" competence. Similarly, Laksana and Nurhaliza (23) found that communication ethics significantly impacts the quality of interpersonal relationships.

The analysis of the eight distinct dimensions of professional ethics revealed a hierarchy of self-perceived strengths, with faculty demonstrating strong adherence to abstract virtues such as "Honesty" and "Empathy," yet reporting significantly lower scores in the application-oriented dimension of "Justice and fairness." Similarly, Ghosh and Bir (24), assessing competencies of "attitude ethics and communication (AETCOM)," claim that while medical educators often possess strong theoretical ethical attitudes, the translation of these attitudes into fair assessment and procedural practices remains a persistent challenge.

Regarding communication skills, the study indicated a conflict between cognitive understanding and behavioral expression. While faculty members achieved their highest scores on "Insight into the communication process," reflecting a strong theoretical grasp of communication dynamics, they scored lowest on

"Assertive communication." This suggests a competence-performance gap where faculty know how communication should work but struggle to express themselves assertively. Sarangi and Rossi (22) discuss this phenomenon, arguing that "communication expertise" does not automatically translate into performative competence, particularly when navigating ethical hierarchies.

The analysis indicates that "Listening skills" could be the most ethically potent communication component, demonstrating significant positive associations with six of eight ethical dimensions, including "Responsibility," "Respect for Others," and "Justice." This finding resonates with the "dialogic turn" described by Arnett et al. (25), who assume that ethical communication is fundamentally rooted in the capacity to listen and acknowledge the "other." The strong association between listening and the ethical dimensions of "Honesty" and "Empathy" suggests that, for faculty members, listening is an active validation of the student or colleague. Johannesen et al. (26) claim that ethical human communication requires a stance of openness that prevents deception.

The "Assertive communication" component displayed no significant positive correlations with any dimension of professional ethics and even showed non-significant negative trends with "Honesty" and "Empathy." Omura et al. (27) noted that while assertiveness improves clarity, its application in hierarchical healthcare settings can sometimes be misaligned with collaborative norms. In our sample, highly assertive behaviors may be prioritized by individuals who focus less on the relational aspects of ethics. However, high levels of insight significantly correlated with "Loyalty" and "Respect for others," indicating that faculty who understand communication dynamics are more likely to value interpersonal respect, even if they are not the most assertive speakers.

An outstanding finding in the ethical domain was the disparity between "Honesty" and "Justice," as participants rated themselves highest in "Honesty," but lowest in "Justice and fairness." This creates a "virtue gap" where faculty feel personally truthful but structurally or procedurally unfair. This may stem from the external pressures of the academic environment, where resource allocation and grading can be contentious. This finding aligns with Chesebro (28), who notes that while personal virtues like honesty are internally controlled, justice often involves navigating complex external systems,

making it a more challenging ethical standard to support in a university setting.

No significant positive correlations were found between the "Assertive communication" component and the dimensions of professional ethics, and there were even non-significant negative associations with "Honesty" and "Empathy." This divergence challenges the assumption that all communication skills contribute equally to ethical practice. According to Omura et al. (27), assertiveness improves clarity, but can be in conflict with collaborative norms when applied in hierarchical healthcare settings. In the present study, individuals who were less focused on the relational aspects of ethics were more likely to display highly assertive behavior. The above-mentioned lack of correlation suggests that in the Iranian academic context, assertiveness might be viewed as a technical skill rather than a moral virtue.

Regarding gender, the study revealed certain nuanced differences. While overall scores were comparable, female faculty scored significantly higher on communal ethical dimensions such as "Honesty," "Empathy," and "Respect for social norms." Conversely, male faculty scored significantly higher on "Assertive communication" and "Competitiveness." Despite these specific differences, the lack of a significant difference in the total professional ethics score is consistent with previous Iranian studies by Hojatoleslami et al. (29) and Jabarifar et al. (30), indicating that core ethical adherence in this context is largely gender-neutral.

The influence of age revealed a developmental trajectory in communication. Faculty over 45 years old scored significantly higher on "Listening skills" and "Insight into the communication process." This supports the concept of "sustainable communication" discussed by Ditlevsen and Johansen (31), where reflexivity requires time to cultivate. Younger faculty (<35), however, did not show this depth of insight. This finding contrasts partially with Malekshahi et al. (1), who observed a more general linear link between age and communication skills. Our study suggests a shift from transactional communication in early career to reflective communication in later career.

Interestingly, professional ethics scores did not improve linearly with work experience; rather, they peaked in the mid-career group (5–10 years) compared to novices. The mid-career group also scored highest on "Loyalty" and "Empathy." This finding is consistent with Ghosh and Bir (24), who noted that perception of ethics is

dynamic. The plateau after 10 years might indicate ethical fatigue or burnout, suggesting that institutions have a critical window in the mid-career phase to reinforce ethical identity before it potentially declines.

A highly significant and concerning finding is the relationship between employment status and professional ethics. Faculty on insecure Coefficient K contracts reported significantly lower ethics scores compared to those with stable contractual or official status. This "precarity penalty" suggests that job insecurity erodes the psychological contract required for high-level ethical commitment. Cheney et al. (32) argue that structural instability can cause professionals to view their work as "just a job," thereby weakening ethical mandates. Notably, this result contrasts with studies by Hojatoleslami et al. (29) and Rezaeian et al. (33), which found no such variation by employment type. This discrepancy highlights a unique vulnerability in our specific sample regarding the Coefficient K status.

Academic rank also played a distinct role in the context of professional ethics. Assistant professors scored significantly higher on communication skills than instructors and achieved the highest scores in "Justice and fairness." This aligns with Peyman et al. (34), who found similar aptitude among assistant professors, yet stands in contrast to Rezaeian et al. (33), who reported no significant variation across ranks. The focus on "Justice" among assistant professors likely reflects the intense demands of the tenure-track phase, where establishing authority and rigorous, fair evaluation of students is principal for their own promotion and professional survival.

Furthermore, we observed discipline-specific variance, with faculty from the School of Medicine scoring significantly higher on "Justice and fairness" than those from other schools. This isolated finding may reflect the high-stakes nature of medical education, where the ethical requirement for fairness is reinforced by the clinical consequences of graduating incompetent students. It suggests that the organizational culture within specific faculties can influence the prioritization of certain ethical values over others.

Conversely, no significant differences were found based on educational level (PhD vs. specialist) for either ethics or communication. This null result is critically important as it suggests that advanced degrees do not characteristically confer superior ethical or communicative skills.

To our knowledge, this is the first study to divide the sub-component correlations between the Cadozier & Brown ethics dimensions and Queendom communication factors within this specific demographic. However, this study was not without limitations. One limitation of this study is its cross-sectional design, which precludes causal inference. While we suggest that listening skills foster ethical behavior, it is equally reasonable to assume that ethical individuals are more motivated to listen. Additionally, the use of self-reported questionnaires subjects the findings to social desirability bias, particularly when sensitive ethical topics are involved. Future research should employ observational metrics or 360-degree evaluations to validate these self-assessments.

Conclusion

This study confirmed a close relationship between professional ethics and communication skills in medical education, while revealing a clear gap between faculty members' internal values and their actual practices. Active listening appeared as the strongest communication skill supporting ethical behavior, whereas assertiveness showed no significant association. In addition, job insecurity was linked to significantly lower ethical scores, suggesting that unstable employment undermines professional commitment. Overall, the findings indicate that developing high ethical and communicative standards requires institutional support beyond training alone, particularly through job stability and supportive policies that enable faculty to serve as effective professional role models.

Acknowledgments

This study was retrieved from a thesis conducted at Alborz University of Medical Sciences. The authors wish to thank the Clinical Research Development Center of Dental School, Alborz University of Medical Sciences, for their technical support.

Ethical Considerations

The ethics committee of Alborz University of Medical Sciences approved the study protocol (Approval ID: IR.ABZUMS.REC.1402.163).

Data Availability

Data is available from the corresponding author, who may provide the datasets and analysis on reasonable request.

Funding

No funding was received for this study.

Author Contributions

Conceptualization: A.B, A.A and M.M;

Data collection: A.B, A.A and A.L;

Methodology: A.B, A.A, I.R;

Formal analysis: A.B, A.A, A.L and I.R;

Writing– original draft: A.B, A.A, A.L and I.R;

Writing– review & editing: A.B, A.A, M.M and I.R;

Azadeh Babaei supervised the entire study and serves as the guarantor.

All authors read and approved the final manuscript.

Competing Interests

The authors declare no competing interests.

References

1. Malekshahi F, Ahsanzadeh A, Adinevand A, Darabian S. Evaluation of Relationship between Professional Ethics, Communication Skills and Job Performance of Clinical Teachers in Lorestan University of Medical Sciences in 2019-2020. Journal of Medical Education Development. 2021;14(43):40-7.

2. Singer P. Encyclopedia Britannica 2024 [cited 2024 Aug 5]. Available from: https://www.britannica.com/topic/ethics-philosophy.

3. Desai M, Kapadia J. Medical Professionalism and Ethics. Journal of Pharmacology and Pharmacotherapeutics. 2022;13:0976500X2211114.

4. Habibi H, Bigdeli S, Sohrabi Z, Ebadi A. Professionalism among academic educational leaders: A concept analysis. Journal of Advances in Medical Education & Professionalism. 2022;10(4):259-66.

5. Higgs-Kleyn N, Kapelianis D. The role of professional codes in regarding ethical conduct. Journal of Business Ethics. 1999;19(4):363-74.

6. Jenaabadi H, Nastiezaie N. Comparing the current and desired state of teaching professional ethics among faculty members; university of Sistan and Baluchestan. Education Strategies in Medical Sciences. 2015;8(5):317-22.

7. Nicholson N. Ethics in organizations: A framework for theory and research. Journal of Business Ethics. 1994;13(8):581-96.

8. Gheirati E, Shabanifar A, Akhlaghi M, Peyman N. Relationship between communication skills and mental health among the students of Mashhad University of Medical Sciences, Mashhad, Iran. 2016.

9. Asghari F, Fard NN, Atabaki A. Are we proper role models for students? Interns' perception of faculty and residents' professional behaviour. Postgraduate medical journal. 2011;87(1030):519-23.

10. Morris L, Wood G. A model of organizational ethics education. European Business Review. 2011;23(3):274-86.

11. Rotgans JI, Schmidt HG. The role of teachers in facilitating situational interest in an active-learning classroom. Teaching and teacher Education. 2011;27(1):37-42.

12. Keshtkaran A, Heidari A, Bastani P. Study of managers' communication skills based on the staff's view in Shiraz University of Medical Sciences. 2012.

13. Jeddi FR, Ghaffary F, Farrahi R. The relationship between communication skills and intellectual health in senior-year students of Paramedicine School at Kashan University of medical sciences 2019. The Open Public Health Journal. 2020;13(1).

14. Frymier AB, Houser ML. The teacher-student relationship as an interpersonal relationship. Communication education. 2000;49(3):207-19.

15. Saputra EB. The effect of teacher communication ability and learning motivation on student learning outcomes in Economic lessons for Class XI IPS SMA Ekasakti in Padang academic year 2015/2016. Journal International on Global Education. 2022;1(1):1-10.

16. Bonfield D, Hassan MG, Palmieri JM. Integration of Professional Skills (Communications, Teamwork, Etc.), Ethics, Empathy Lifelong Learning into the Student's Educational Experiences. Academic Leadership in Engineering Education: Learnings and Case Studies from Educational Leaders Around the Globe: Springer; 2024. p. 205-22.

17. Von Elm E, Altman D, Egger M, Pocock S, Gøtzsche P, Vandenbroucke J. STROBE checklist: cohort, case-control, and cross-sectional studies (combined). Lancet. 2007;370(9596):1453-7.

18. Chuan CL, Penyelidikan J. Sample size estimation using Krejcie and Morgan and Cohen statistical power analysis: A comparison. Jurnal Penyelidikan IPBL. 2006;7(1):78-86.

19. Asadi Y, Molazem Z, Mohebbi Z, Ghaemmaghami P. Investigating the relationship between resilience and professional ethics in nurses: a cross-sectional study in southern Iran. BMC nursing. 2023;22(1):409.

20. Zangeneh A, Lebni JY, Azar FEF, Sharma M, Kianipour N, Azizi SA, et al. A study of the communication skills in health care and the role of demographic variables (a case study of the nurses at the Educational, Therapeutic and Research Center of Imam Reza Hospital, Kermanshah, Iran in 2018). Journal of Public Health. 2021;29(2):361-7.

21. Ashcroft RE. The declaration of Helsinki. The Oxford textbook of clinical research ethics. 2008;21:141-8.

22. Sarangi S, Rossi MG. Communication skills, expertise and ethics in healthcare education and practice. Commun Med. 2024;19(2):162-75.

23. Laksana MO, Nurhaliza N. The impact of communication ethics on the communication quality in interpersonal relationships. Eduvest-Journal of Universal Studies. 2023;3(5):989-95.

24. Ghosh A, Bir A. Role of written examination in the assessment of attitude ethics and communication in medical students: Perceptions of medical faculties. Journal of Education and Health Promotion. 2021;10(1):23.

25. Arnett RC, Arneson P, Bell LM. Communication ethics: The dialogic turn. The Review of Communication. 2006;6(1-2):62-92.

26. Johannesen RL, Valde KS, Whedbee KE. Ethics in human communication: Waveland Press; 2008.

27. Omura M, Maguire J, Levett-Jones T, Stone TE. The effectiveness of assertiveness communication training programs for healthcare professionals and students: A systematic review. International journal of nursing studies. 2017;76:120-8.

28. Chesebro JW. A construct for assessing ethics in communication. Communication Studies. 1969;20(2):104-14.

29. Hojjatoleslami S, Khodaveisi M, Seif A, Payamani F, Maddineshat M, Sadeghian E. Correlation between communication skills and professional ethics of nurses in Farshchian Heart Hospital, Hamadan, Iran. Nursing And Midwifery Journal. 2022;20(8):677-87.

30. Jabarifar S, Hoseinpour K, Khalifesoltani F, Shamir H, Nilchian F. Evaluation of under-and post-graduate Dental students of Isfahan Faculty of Dentistry in relation to communication skills and professional ethics. J Isfahan Dent Sch. 2012;7(5):770-6.

31. Ditlevsen MG, Johansen TS. Conceptualising sustainable communication at the intersection of ethics, reflexivity and critique. Communication & Language at Work. 2024;10(1).

32. Cheney G, Lair DJ, Ritz D, Kendall BE. Just a job?: Communication, ethics, and professional life: Oxford University Press; 2009.

33. Rezaeian M, Zare-Bidaki M, Bakhtar M, Kargar S. A survey on communication skills of Rafsanjan University of Medical Sciences Faculty Members in 2013. Journal of Rafsanjan University of Medical Sciences. 2015;14(5):417-26.

34. Peyman H, Yaghoubi M, Sadeghifar J, Sayehmiri K, Alizadeh M, Yamani N, et al. Assessment of interpersonal communication skill levels in lecturers of Ilam University of medical sciences: A case study. 2012.