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Cheating on academic assignments and remote electronic examinations Perspectives of teachers and students

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Απάτη σε ακαδημαϊκές εργασίες και απομακρυσμένες ηλεκτρονικές εξετάσεις: Προοπτικές δασκάλων και φοιτητών

Περίληψη στο τέλος του άρθρου

OBJECTIVE **To compare the perspectives of teachers and medical sciences students regarding cheating on remote electronic assignments and exams.** METHOD **This descriptive analytical cross-sectional study, conducted in 2022, involved 163 teachers and 245 medical sciences students from five departments at Bushehr University of Medical Sciences: Medicine, Paramedicine, Nursing and Midwifery, Health, and Dentistry. Students were selected through stratified sampling, while teachers were recruited via census sampling. Data were collected using a researcher-developed questionnaire covering six domains: Acceptance, reasons for facilitating cheating, motivations for cheating, the role of the teacher, justification, and punishment. The Mann-Whitney U test and independent samples t-test were used to compare perceptions of cheating between teachers and students. Data analysis was performed using the Statistical Package for Social Sciences (SPSS) software, version 19.0.** RESULTS **The findings revealed significant differences in the domain of "reasons for facilitating cheating". For teachers, a notable mean difference was found for item 6 (receiving cash). In contrast, students showed significant mean differences for items 7 (sense of responsibility toward classmates), 10 (unreasonable expectations of the educational program), and 11 (compensating for previous assistance). In the "motivations for cheating" domain, teachers showed a significant mean difference for item 14 (availability of opportunities to cheat), while students showed significant differences in items 12 (time constraints), 13 (excessive difficulty), and 19 (unreasonable expectations). Both teachers and students reported the highest mean scores in the "role of the teacher" domain, with the lowest scores in "acceptance" and "justification". Overall, teachers had a significantly lower mean score than students ($p<0.001$).** CONCLUSIONS **The perspectives of teachers and students revealed both similarities and differences. Notably, cheating in electronic academic assignments and examinations was more readily accepted by students than by teachers.**

Key words

Academic assignment
Cheating remote e-exams
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Medical sciences

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Education is a multifaceted process, and reductionist approaches can lead to inefficient resource allocation, missed opportunities, and ultimately ineffective outcomes. In medical sciences, education is particularly critical, aiming to cultivate skilled professionals equipped with the knowledge, attitudes, and skills necessary for advancing public health.[1] In the development of education, numerous criteria and factors play a significant role, with one of the most important being the evaluation system.[2] Student assessment is a fundamental aspect of higher education, playing a crucial role in evaluating learners. It enhances motivation for learning and offers educators valuable insights into their teaching practices.[3] Assessment constitutes a fundamental component of any educational program and plays a critical role in verifying the proficiency of graduates.[4]

Globally, educational systems use assignments, examinations, and essays to assess learners' knowledge, competencies, and skills, measuring their academic performance.[5] Therefore, since assignments and assessments are forms of evaluation, they should be structured to align with the intellectual content and educational objectives, focusing on developing skill competencies.[6] Over the past few decades, student evaluation has undergone significant transformations, shifting towards a more learner-centered approach in education, instruction, and assessment across

various academic and clinical settings. While the internet has introduced certain challenges,[7] it has also enabled the development of innovative assessment methods. Additionally, some research indicates that the effectiveness of online learning is comparable to, or even exceeds, that of traditional face-to-face instruction.[8] Nonetheless, the adoption of online education and assessment methods was not extensively prevalent in numerous countries prior to the emergence of the unprecedented global pandemic in early 2020.[9] The COVID-19 pandemic precipitated substantial transformations in the daily lives of individuals globally, prompting a widespread transition of various activities, including student education and evaluation, to digital platforms.[10] Consequently, numerous universities and schools responded to this emerging shift in March 2020 by transitioning from traditional face-to-face education and evaluation methods to remote electronic teaching, assignments, and assessments.[11]

Two primary challenges faced by teachers and medical students involve effectively attaining learning objectives within an electronic learning environment and accurately evaluating that learning.[12] Moreover, the shift to online student assessments has led to numerous reports from universities about widespread academic dishonesty during online examinations in the spring of 2020. Scholars argue that the rising incidence of cheating in virtual settings presents a significant ethical issue, raising concerns about the potential devaluation of degrees and credentials obtained under these conditions.[11] Academic cheating is characterized by the possession of unauthorized materials during examinations, the act of copying from such materials, or permitting another student to duplicate answers through diverse means, including verbal, symbolic, written, or electronic methods.[13] It involves using information, tools, or resources in prohibited ways to achieve desired outcomes in educational or research settings. This behavior, particularly in medical and health science institutions, deserves unequivocal condemnation due to its serious implications for human lives, societal values, and economic stability. Academic dishonesty has become a critical concern in higher education worldwide,[14] with numerous studies showing its widespread nature and a notable increase in certain forms of cheating over recent decades.[15,16]

The advancement of technology has further intensified this issue, rendering academic dishonesty more prevalent and increasingly difficult to combat.[16] Existing research reveals that the incidence of academic dishonesty among students is reported to be 56% in the United States, 40% in the United Kingdom, 56% in Australia, 71% in China, 51% in Ireland, and 72% in Japan.[17]

Research on academic dishonesty in remote electronic examinations is still limited. Existing literature indicates that the internet has broadened the potential avenues for student cheating.[18] Additionally, one study highlights that the quarantine measures during the COVID-19 pandemic increased anxiety and stress levels among graduate students, which, in turn, contributed to a rise in instances of electronic cheating.[19] In light of these considerations and the importance of this issue in shaping students' professional ethics within the university context, this study was conducted to compare the perspectives of teachers and medical students regarding academic dishonesty in assignments and remote electronic examinations during the COVID-19 pandemic.

MATERIAL AND METHOD

Study design and participants

This descriptive-analytical cross-sectional study was undertaken on teachers and students from Bushehr University of Medical Sciences in Iran to compare their perspectives regarding cheating on remote electronic assignments and exams in the academic year 2022–2023. Participants were recruited from the departments of Medicine, Paramedicine, Nursing and Midwifery, Health, and Dentistry, as well as internship and clinical training settings, clinics, and hospitals.

Inclusion and exclusion criteria

The inclusion criteria for teachers required them to possess at least a master's degree and to be actively engaged as instructors in one of the medical sciences departments. They also needed to have experience in assigning and receiving a minimum of one electronic assignment and conducting at least one remote electronic examination. For students, the criteria mandated enrollment in their respective programs and the completion of at least one electronic assignment, as well as participation in one remote electronic exam during the COVID-19 pandemic. Furthermore, willingness to participate in the study was a prerequisite for inclusion, while incomplete responses to the questionnaire were grounds for exclusion for both groups.

Sampling

The sampling method for teachers was conducted through the census technique, whereas a stratified sampling approach was applied for students. The five faculties/schools (Medicine, Dentistry, Nursing and Midwifery, Paramedicine, and Health) were considered as strata. The total number of students in each faculty was obtained from the education deputy records. The sample size in each stratum was determined proportionally to the size of the student population in that faculty (proportional allocation). For example, if the Medical School had 40% of all medical sciences

students, approximately 40% of the 245-student sample (98 students approximately) was allocated to this stratum. Within each stratum, students were selected using convenience sampling until the required number for that stratum was reached.

Data collection

The data collection tools included a demographic information form and a researcher-developed questionnaire on academic dishonesty. The academic dishonesty questionnaire contains similar items for both teachers and students. The questionnaire consists of 44 items across six domains: Acceptance (5 items); reasons for facilitating cheating (6 items); motivations for cheating (8 items); the role of the teacher (4 items); justification (15 items); and punishment (6 items). Some example items are shown below: (a) Acceptance domain: "Cheating in online exams is acceptable if no one gets hurt". (b) Reasons for facilitating cheating: "I would help a classmate cheat because I feel responsible for my friends". (c) Motivations for cheating: "I cheat because the exam questions are too difficult." (d) Role of the teacher: "Teachers who do not monitor online exams properly make cheating easier". (e) Justification: "Cheating is justified when the course load is unreasonably heavy". (f) Punishment: "Students caught cheating in online exams should be expelled".

Validity and reliability

Content validity was assessed by a panel of eight experts (four PhDs in medical education, two educational psychologists, two senior clinical faculty members). The content validity ratio (CVR) and content validity index (CVI) were calculated; all retained items had CVR values >0.78 and item-CVI >0.80. Face validity was confirmed through think-aloud interviews with 10 students and 5 teachers. Reliability was evaluated in a pilot study (n=30; 15 students and 15 teachers). Internal consistency (Cronbach's α) ranged from 0.79 (punishment) to 0.92 (justification), with overall α=0.89. Test-retest reliability over two weeks showed intraclass correlation coefficients (ICCs) from 0.83 to 0.94 across domains.

Scoring and total score

Items are scored on a 5-point Likert scale (1=strongly disagree to 5=strongly agree). Items 2, 3, 4, and 39–44 are reverse-scored. Domains "reasons for facilitating cheating" and "motivations for cheating" were descriptive only and were not included in total scoring. The scoring system and interpretation of the researcher-developed academic dishonesty questionnaire is presented in table 1.

The total score is calculated by summing the four scored domains after reverse scoring applicable items.

Statistical analysis

Descriptive statistics, including mean, standard deviation (SD), frequency, percentage, and median, were used to summarize the data. The normality of the quantitative variables was evaluated using the Kolmogorov-Smirnov test. Variables such as age, GPA, on a 0–20 scale, which is the standard grading system in Iranian universities, and cumulative scores related to cheating attitudes were normally distributed. To compare perceptions of cheating in domains without cumulative scores, the mean ranks of the items were analyzed between teachers and students using the Mann-Whitney U test. For domains with cumulative cheating scores, an independent samples t-test was employed to assess differences between teacher and student responses.

Additionally, multiple linear regression was performed to examine the independent effect of participant group (teacher versus student) on the total attitude score while controlling for age, sex, academic rank/degree level (assistant professor and above versus lower; bachelor/associate versus higher), and faculty. The model showed that being a student remained significantly associated with a higher (more tolerant) total score (β=18.6, 95% confidence interval [CI]:15.3–21.9, p<0.001) after adjustment.

Ethics approval

This study was approved by the Research Council of Bushehr University of Medical Sciences and has been approved and registered by the Ethics Committee of the Research Department of Bushehr University of Medical Sciences with the ethical code (IR.BPUMS.REC.1401.079). All participants in the study provided their informed verbal consent to participate. The research was in keeping with the Declaration of Helsinki (1975).

RESULTS

Among the 163 teachers surveyed, 81 were male and 82

Table 1. Scoring system and interpretation of the researcher-developed academic dishonesty questionnaire.

Domain	Items	Possible score range	Interpretation of higher score
Acceptance	5	5–25	Greater acceptance of cheating
Role of the teacher	4	4–20	Greater perceived teacher responsibility
Justification	15	15–75	Greater justification of cheating
Punishment	6	6–30	Lesser perceived need for punishment (higher=more lenient)
Total scorable	30	30–150	More positive/more tolerant attitude toward cheating

were female. A predominant proportion of the participants were married (69.30%) and did not have children who were students (73.0%). The average age of the teachers was 43.11±8.44 years. The majority held a doctoral degree (72.40%), and nearly half were in the academic rank of assistant professor (49.70%). Furthermore, most teachers were engaged in the basic sciences (69.30%), with the largest segment affiliated with the medical school (38.70%).

Among the 245 students who participated in the study, the majority were female (63.30%), single (87.80%), and residing in dormitory accommodations (69.0%). The mean age of the participants was 22.50±2.44 years. Overall, the students demonstrated a strong interest in their respective fields of study. The data further revealed that most students were typically the second child in families with three siblings. The average academic GPA was 16.80 (SD=1.16), with 53.90% of the students were enrolled in associate or bachelor's degree programs, and the largest proportion (31.80%) were studying in the medical school.

Concerning parental education, the majority of fathers held a bachelor's degree (27.80%) and were employed (36.70%), while most mothers also possessed a bachelor's degree (27.30%) and were homemakers (69.80%). Furthermore, a substantial proportion of the students (58.80%) originated from families with an average economic status.

The findings revealed that, in relation to the "reasons for facilitating cheating", teachers exhibited a significantly higher mean rank for item 6 across both assignments and examinations compared to students, with this difference reaching statistical significance. In contrast, students demonstrated significantly higher mean ranks for items 7, 10, and 11 in both assignments and exams relative to teachers ($p<0.001$). Additionally, regarding the "motivations for cheating", teachers showed a significantly higher mean rank for item 14 across both assessment types compared to students ($p<0.001$). Conversely, students attained significantly higher mean ranks for items 12, 13, and 19 in both assignments and examinations when compared to teachers ($p<0.001$). These results are detailed in table 2.

More data analysis revealed that the mean scores across all domains for teachers fell below the average threshold, with the exception of the teachers' role, which approximates the average level for both assignments and examinations. Conversely, students exhibited mean scores that were at or slightly above average across all domains for both assignments and exams. Notably, the highest mean scores for both teachers and students pertained to the teachers' role in both assessment types. Conversely, acceptance and justification consistently received the lowest mean scores within both cohorts. Comparative analysis indicated that, across all domains and in aggregate, teachers' mean scores were significantly lower than those of students ($p<0.001$) (tab. 3). Results of multivariable analysis showed that after controlling for age, sex, academic rank/degree level, and faculty, the difference in total attitude score between teachers and students remained highly significant ($p<0.001$).

DISCUSSION

This study examined and compared the perspectives of teachers and medical science students concerning academic dishonesty in assignments and electronic examinations amid the COVID-19 pandemic. The findings reveal that while there are both convergences and divergences in the attitudes of teachers and students toward cheating in these contexts, students demonstrated a greater acceptance of cheating in electronic assignments and examinations compared to their teachers.

In examining the factors that contribute to the facilitation of cheating in both assignments and examinations, a notable cause identified from the teachers' perspective, as compared to that of students, is the acceptance of monetary payments. Specifically, the study conducted by Haghighi and Farajollahi highlights that opportunistic behavior and the pursuit of financial gain through the completion of various academic tasks, such as essays and theses on behalf of other students, are regarded by teachers as a significant contributor to cheating in electronic assignments.[20] The findings in this domain further revealed a divergence in perspectives between teachers and students regarding the motivations for facilitating academic dishonesty. While teachers attribute the facilitation of cheating to the receipt of monetary incentives, students instead identify a sense of responsibility towards their peers, perceived unreasonable demands of the educational curriculum, and the desire to reciprocate prior assistance from classmates as primary factors contributing to cheating in assignments and examinations. Notably, the students' attribution of unreasonable curricular expectations as a catalyst for aiding peers in dishonest practices corroborates the conclusions of Kazemian, who highlighted the substantial academic workload as a significant factor influencing students' engagement in cheating behaviors.[21] Conversely, the investigations conducted by Kazemian[21] and Dogas et al[22] revealed that, in contrast to our findings, students identified earning income and requesting cash payments as contributing factors to academic dishonesty. In our study, however, this perception was predominantly held by teachers. Notably, no existing research has explicitly compared the viewpoints

Table 2. Comparative analysis of mean rank scores for assisting cheating and committing cheating among teachers and students.

Cheating in exams			Cheating in assignments			Groups	items	Domain
p-value	Z	Mean	p-value	Z	Mean			
<0.001	-3.619	187.66 229.81	0.005	-2.788	191.54 223.98	Students Teachers	6. Receiving cash	
0.014	-2.455	215.87 187.41	0.008	-2.640	216.17 185.59	Students Teachers	7. Sense of responsibility towards classmates	
0.393	-0.854	200.06 209.90	0.093	-1.680	196.77 216.12	Students Teachers	8. Fear of classmates	Reasons for assisting cheating
0.064	-1.850	213.01 191.71	0.066	-1.838	212.92 191.84	Students Teachers	9. Expressing protest to the teacher	
<0.001	-4.932	227.06 170.59	<0.001	-5.311	228.74 168.06	Students Teachers	10. Unreasonable expectations of the educational program	
0.013	-2.494	215.64 187.75	<0.001	-5.311	217.20 185.41	Students Teachers	11. Compensating for previous assistance from classmates	
<0.001	-7.362	237.48 154.94	<0.001	-7.516	237.90 153.26	Students Teachers	12. Time constraints for completing assignment/exam	
<0.001	-6.044	231.45 163.99	<0.001	-6.672	234.08 160.04	Students Teachers	13. Excessive difficulty of assignment/exam	
<0.001	-3.780	187.71 229.74	0.008	-2.638	192.75 222.16	Students Teachers	14. Availability of ways for cheating	
0.212	-1.247	198.78 213.10	0.199	-1.284	198.62 213.34	Students Teachers	15. Lack of willingness to learn	Reasons for committing cheating
0.402	-0.839	208.33 198.74	0.169	-1.374	210.76 195.09	Students Teachers	16. Feeling of falling behind classmates	
0.146	-1.455	197.83 214.53	0.085	-1.724	196.61 216.37	Students Teachers	17. External pressure from classmates' requests	
0.384	-0.871	200.45 210.59	0.523	-0.639	201.53 208.96	Students Teachers	18. Mental/emotional pressure from classmates	
<0.001	-6.916	236.02 157.12	<0.001	-6.557	223.73 159.03	Students Teachers	19. Unreasonable expectations of the training course	

of teachers and students concerning remote electronic assignments and examinations. Nonetheless, a meta-analytic study by Zhao et al, which synthesized data from 38 studies, explored learners' perceptions of peer-related academic cheating. The results of this analysis underscored peer influence as one of the most significant factors associated with student cheating in both assignments and examinations.[23] Hammoudi and Benzerroug identified students' sense of responsibility towards their peers as a contributing factor to the facilitation of cheating during examinations. Additionally, the authors note that students occasionally justify such behavior by attributing it to the perceived unfairness or excessive difficulty of the exams, as well as to the actions or attitudes of the teachers.[24]

Within the field investigating the causes of academic dishonesty, encompassing both assignments and examinations, one prominent factor identified from the teachers' perspective is the presence of opportunities and the ease of access to methods that enable cheating. Notably, there appears to be an absence of studies that concurrently explore this issue from both teachers' and students' viewpoints. Nevertheless, research by Haghighi and Farajollahi reveals that, according to teachers, inadequate supervision and insufficient attention to cheating during assignments, alongside the limited competencies of administrative personnel in administering secure examinations, create conditions conducive to dishonest behavior.[20] Moreover, research in this domain suggests that students attribute academic dishonesty in assignments and examinations to factors such as limited time for task completion, the excessive difficulty of these tasks, and the unrealistic demands of the educational curriculum. Specifically, the study conducted by Khamsan

Table 3. Comparison of mean scores between teachers and students.

Domain	Groups				Group comparison			
	Students		Teachers		t** (df)	p-value**	95% CI	
	M	SD	M	SD			Low	High
Acceptance (assignment)	3.12	0.70	1.99	0.62	16.858 (406)	<0.001	1.003	1.267
Acceptance (exam)	3.05	0.70	1.93	0.63	16.440 (406)	<0.001	0.987	1.255
t* (df)	3.936 (244)		2.822 (162)		–	–	–	–
p-value*	<0.001		0.005		–	–	–	–
Teachers' role (assignment)	3.98	0.62	3.49	0.87	6.600 (406)	<0.001	0.341	0.630
Teachers' role (exam)	3.99	0.60	3.51	0.87	6.609 (405)	<0.001	0.338	0.624
t* (df)	-0.478 (243)		-0.736 (162)		–	–	–	–
p-value*	0.633		0.463		–	–	–	–
Justification (assignment)	3.13	0.86	1.82	0.71	16.052 (401)	<0.001	1.152	1.473
Justification (exam)	3.09	0.78	1.80	0.72	16.825 (404)	<0.001	1.152	1.473
t* (df)	2.794 (238)		1.371 (162)		–	–	–	–
p-value*	0.006		0.172		–	–	–	–
Punishment (assignment)	3.71	0.71	2.63	0.67	15.272 (405)	<0.001	0.938	1.216
Punishment (exam)	3.73	0.72	2.59	0.68	16.086 (404)	<0.001	1.004	1.283
t* (df)	-1.271 (242)		2.112 (162)		–	–	–	–
p-value*	0.124		0.036		–	–	–	–
Overall (assignment)	3.49	0.48	2.48	0.40	22.098 (404)	<0.001	0.915	1.094
Overall (exam)	3.47	0.47	2.46	0.40	22.330 (401)	<0.001	0.923	1.101
t* (df)	3.042 (236)		2.712		–	–	–	–
p-value*	0.003		0.007		–	–	–	–

*Paired t-test **Independent samples t-test

SD: Standard deviation, 95% CI: 95% confidence interval

and Amiri emphasizes that, from the students' viewpoint, internal factors, particularly inadequate time, are perceived as more influential contributors to cheating than external factors, including the complexity of assignments and elevated expectations imposed on students.[25] In their study, Elsalem et al observe that, from the students' perspective, factors including inadequate preparation time for examinations and the discrepancy between exam questions and the course material contribute to the occurrence of cheating in remote electronic assessments.[26] Furthermore, Hammoudi and Benzerroug provide an alternative interpretation of unrealistic expectations in the educational curriculum, characterizing them as an excessive academic workload. Their research suggests that, from the students' viewpoint, this heightened burden contributes to the incidence of cheating during examinations.[24]

In the domains of acceptance, the role of the teacher, justification, and punishment, students demonstrate a higher level of acceptance toward cheating in remote electronic assignments and examinations than teachers do. Students attribute a more substantial role to the teacher in enabling cheating and view such dishonest behavior in these contexts as more justifiable. Conversely, students are less likely than teachers to endorse punitive actions as a response to cheating. Overall, students exhibit a more favorable attitude toward cheating, encompassing both assignments and remote electronic examinations, in comparison to teachers. McCabe's study identified students' acceptance and recognition of cheating in both traditional and electronic assessment contexts, a conclusion that corroborates the present findings regarding students' perspectives on the acceptability of such behavior. Furthermore, the same study revealed that students perceive certain teacher behaviors –such as indifference toward blatant cheating or the imposition of excessively harsh penalties without due consideration of students' rights– as significant factors contributing to the prevalence of cheating. This observation was consistent with the current research outcomes concerning the influence of teachers' conduct

from the students' standpoint. Moreover, this study reveals that students perceive cheating as a justifiable behavior, despite the presence of outdated and inaccurate regulations concerning academic dishonesty and various other contributing factors. This observation corresponds with the students' own rationalizations identified in the research. Additionally, the study finds that many educators consider university policies to be excessively bureaucratic and legalistic, frequently regarding students accused of cheating as innocent, which contrasts with the teachers' intended stance. This viewpoint diverges from that of the students in the present study, who opposed punitive measures for cheating, thereby aligning more closely with the teachers' perspective.[27] Furthermore, Ebaid's research identifies cheating in online examinations as a prevalent phenomenon from the students' perspective,[28] a finding that corresponds with our own students' attitudes toward the acceptance of dishonest practices in remote electronic assessments. Hammoudi and Benzerroug highlight several factors contributing to exam cheating, including the perception among students that cheating is widespread, an affinity for the act itself, and a lack of teacher vigilance. Additionally, their study reveals that cheating is occasionally perceived as a clever and justifiable behavior,[24] which aligns with our findings concerning students' acceptance, the influence of the teacher, and the rationalization of cheating. Similarly, Diekhoff et al report that many students attempt to rationalize their cheating behavior; nevertheless, the fear of punitive consequences remains the most effective deterrent.[29] This may account for why teachers in the present study emphasize the importance of punishment more strongly than students do.

The greater tolerance for cheating in electronic assignments and examinations observed among students may be attributed to their insufficient awareness of the detrimental effects of academic dishonesty or to variations in their value systems and priorities. Students often prioritize short-term academic success over long-term professional integrity, whereas faculty focus on producing competent healthcare professionals.[30] In contrast to teachers, whose principal objective is to develop proficient individuals possessing the highest standards of knowledge and skills, certain students may prioritize merely passing assessments by any means, potentially at the expense of acquiring essential competencies. Evidence shows that extrinsic motivation (grades, degree attainment) dominates over intrinsic learning motivation in students who engage in or tolerate cheating.[31] For many, the primary goal may be the attainment of a degree itself, which may indicate a lack of genuine motivation and engagement with their academic discipline.

Concerning the heightened emphasis students place on the teacher's role in academic dishonesty during electronic assignments and examinations, it seems that students, as service recipients and external observers, possess a greater capacity to critically assess teacher behavior. This "consumer" perspective leads students to attribute more responsibility to instructors for preventing cheating than faculty attribute to themselves.[32] Conversely, teachers may become deeply engrossed in their professional roles, potentially limiting their ability to objectively evaluate their own conduct in the manner that students can. This dynamic may account for the significantly higher average scores attributed to this aspect by students compared to those assigned by teachers.

The elevated average score observed among students, relative to teachers, in the justification domain concerning cheating on electronic assignments and examinations may be explained by the students' self-interest. As students bear the responsibility for their academic success, when they perceive themselves as unable to complete assignments or exams for various reasons and consequently engage in cheating, they may employ justification as a psychological defense mechanism. Neutralization techniques (excuses and justifications) are commonly used by cheating students to reduce cognitive dissonance and maintain self-concept.[33,34] This process enables them to rationalize their conduct and mitigate the cognitive dissonance arising from their behavior.

The higher average score observed in the punishment domain concerning cheating in electronic assignments and examinations among students, as compared to teachers, may suggest that students are less convinced of the necessity of punitive measures when cheating occurs. This finding aligns with previous observations indicating a greater acceptance of cheating and a more favorable attitude toward it among students. Students generally prefer restorative or educational sanctions over severe punishment, while faculty favor stronger deterrents.[35] Consequently, students tend to perceive the importance of punishment for cheating as less critical than do teachers. This divergence in perspective is understandable given the distinct educational roles of teachers, who are more inclined to emphasize the significance of upholding integrity in virtual learning environments and preventing any form of academic misconduct in electronic assessments. Therefore, teachers are more likely to advocate for the implementation of punitive measures to maintain academic standards and promote appropriate educational conduct.

The limitations of the present study encompass restricted access to the entire population of teachers, the

reluctance of certain participants to engage owing to their demanding schedules, the employment of researcher-developed instruments that necessitate validation of construct validity and subsequent reliability evaluation in future research, as well as the scarcity of existing studies addressing this particular issue.

In conclusion, the findings of the current study revealed that students exhibited a greater acceptance of cheating in electronic assignments and examinations compared to teachers. Both groups acknowledged that reciprocating prior assistance from peers serves as a motivating factor for engaging in dishonest behavior. However, while students attribute cheating to the excessive difficulty of assignments and exams, teachers predominantly associate it with external pressures stemming from requests made by classmates. Furthermore, students perceived the teacher's role in facilitating cheating as more substantial than teachers themselves did, and they tended to consider cheating more justifiable. Conversely, teachers demonstrated a stronger endorsement of punitive measures against cheating than students. Overall, the results indicated that students maintained a more favorable attitude toward cheating in both assignments and electronic examinations relative to teachers.

Given the importance of academic integrity in education, especially in medical sciences, which play a crucial role in the health of society, it is recommended that educational authorities become more familiar with various perspectives on cheating and its related factors. This includes paying attention to modern approaches to electronic technologies and their application in education and learning.

Since students' perspectives and behaviors regarding cheating develop over time, it is recommended to conduct a longitudinal study on a broader scale. This study should not only examine the influencing factors on students' views and behaviors related to cheating but also explore other factors affecting academic dishonesty in remote electronic settings. Additionally, it could compare these factors with cheating in traditional assignments and exams to analyze any factors that contribute to the formation of this behavior from the moment students enter the educational environment.

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ΠΕΡΙΛΗΨΗ

Απάτη σε ακαδημαϊκές εργασίες και απομακρυσμένες ηλεκτρονικές εξετάσεις: Προοπτικές δασκάλων και φοιτητών

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ΣΚΟΠΟΣ Σύγκριση των προοπτικών των δασκάλων και των φοιτητών ιατρικών επιστημών σχετικά με την απάτη σε απομακρυσμένες ηλεκτρονικές εργασίες και εξετάσεις. **ΥΛΙΚΟ-ΜΕΘΟΔΟΣ** Αυτή η περιγραφική αναλυτική διατομική μελέτη, που διεξήχθη το 2022, περιλάμβανε 163 δασκάλους και 245 φοιτητές ιατρικών επιστημών από πέντε τμήματα του Πανεπιστημίου Ιατρικών Επιστημών του Bushehr: Ιατρική, Παραϊατρική, Νοσηλευτική και Μαιευτική, Υγειονομική περίθαλψη και Οδοντιατρική. Οι φοιτητές επιλέχθηκαν μέσω στρωματοποιημένης δειγματοληψίας, ενώ οι δάσκαλοι στρατολογήθηκαν μέσω απογραφικής δειγματοληψίας. Τα δεδομένα συλλέχθηκαν χρησιμοποιώντας ένα ερωτηματολόγιο που αναπτύχθηκε από τους ερευνητές και κάλυπτε έξι τομείς: αποδοχή, λόγοι διευκόλυνσης της απάτης, κίνητρα για απάτη, ο ρόλος του δασκάλου, δικαιολόγηση και τιμωρία. Για τη σύγκριση των αντιλήψεων σχετικά με την απάτη μεταξύ δασκάλων και φοιτητών χρησιμοποιήθηκε η δοκιμασία Mann-Whitney U και το t-test ανεξάρτητων δειγμάτων. Η ανάλυση των δεδομένων πραγματοποιήθηκε χρησιμοποιώντας το λογισμικό πρόγραμμα Statistical Package for Social Sciences (SPSS), έκδοση 19.0. **ΑΠΟΤΕΛΕΣΜΑΤΑ** Τα ευρήματα αποκάλυψαν σημαντικές διαφορές στον τομέα των «λόγων διευκόλυνσης της απάτης». Για τους δασκάλους, βρέθηκε μια αξιοσημείωτη μέση

διαφορά για το στοιχείο 6 (λήψη χρημάτων). Αντίθετα, οι φοιτητές παρουσίασαν σημαντικές μέσες διαφορές για τα στοιχεία 7 (αίσθημα ευθύνης προς τους συμμαθητές), 10 (μη ρεαλιστικές προσδοκίες από το εκπαιδευτικό πρόγραμμα) και 11 (αντιστάθμιση προηγούμενης βοήθειας). Στον τομέα των «κινήτρων για απάτη», οι δάσκαλοι είχαν μια σημαντική μέση διαφορά για το στοιχείο 14 (διαθεσιμότητα ευκαιριών για απάτη), ενώ οι φοιτητές παρουσίασαν σημαντικές διαφορές στα στοιχεία 12 (περιορισμοί χρόνου), 13 (υπερβολική δυσκολία) και 19 (μη ρεαλιστικές προσδοκίες). Τόσο οι δάσκαλοι όσο και οι φοιτητές ανέφεραν τις υψηλότερες μέσες βαθμολογίες στον τομέα του «ρόλου του δασκάλου», με τις χαμηλότερες βαθμολογίες στους τομείς της «αποδοχής» και της «δικαιολόγησης». Συνολικά, οι δάσκαλοι είχαν σημαντικά χαμηλότερη μέση βαθμολογία από τους φοιτητές ($p<0,001$). **ΣΥΜΠΕΡΑΣΜΑΤΑ** Οι προοπτικές των δασκάλων και των φοιτητών αποκάλυψαν τόσο ομοιότητες όσο και διαφορές. Ιδιαίτερα, το φαινόμενο της απάτης σε ηλεκτρονικές ακαδημαϊκές εργασίες και εξετάσεις γινόταν πιο εύκολα αποδεκτό από τους φοιτητές σε σύγκριση με τους δασκάλους.

Λέξεις ευρετηρίου: Ακαδημαϊκή εργασία, Ανώτατη εκπαίδευση, Απάτη, Απομακρυσμένες ηλεκτρονικές εξετάσεις, Ιατρικές επιστήμες

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