



Analyzing the Factors Affecting Students' Absenteeism in University Classrooms; A Systematic Review

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Abstract

Background: Absenteeism among university students is a common phenomenon that has not received much attention. This study aimed to determine the factors influencing students' absenteeism in Iranian University classrooms.

Materials and Methods: In this systematic review, a systemic search of online databases (Medline, EMBASE, Scopus, Web of Science, Cochrane Library, CIVILICA, SID, Magiran, and Google Scholar search engine) was conducted for related Iranian studies with no time limit up to June 2022, using the related Mesh keywords. Two reviewers evaluated the quality of eligible studies and carried out the selection procedure.

Results: Finally, 16 related articles were selected (n=3666). The results showed that various factors, such as the professors' performance, teaching method, communication skills, evaluation system, educational curriculum, low efficiency of classes, the distance between the class buildings and the dormitory, class schedules, and fatigue from the previous class sessions, affect the attendance of students in the classroom. There was a significant relationship between students' age and their timely attendance at the classes ($p < 0.05$). The faculty members believed that class attendance was a criterion of student professionalism, while students generally did not agree with it ($p = 0.001$).

Conclusion: The results showed that various factors such as professors' performance, teaching method, evaluation system, and educational curriculum affect the attendance of students in the classroom. Therefore, it is necessary to investigate these factors causing student absenteeism and take concrete measures to reduce this phenomenon.

Key Words: Absenteeism, Factors Affecting, Iran, Solutions, University students.

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1- INTRODUCTION

The classroom is the primary place for teaching, especially for difficult scientific subjects. In classrooms, information is exchanged and disseminated, and ideas are presented, analyzed, or criticized. Without receiving the ideas presented in the classroom, the necessary changes will not appear in the students (1). One of the challenges in university education today is the absence of students from classes. This problem has spread widely, and many professors express concerns in this regard and believe that students do not have the interest and motivation to participate in the classroom (2). Absenteeism means the failure of people to be present in places such as school, workplace, or meetings where they should be. Student absenteeism is being absent from school (3, 4).

Sleigh et al. (2001) believe that the students who are present in the class listen to the discussion and description of important concepts such as the teacher's point of view on the course material, questions and suggestions of other students, and exchange their information with other students. This increases the personal interaction of students and teachers (5). A study by Gump in 2004 on 220 students showed that the emphasis of professors on attendance and the attractiveness of course materials were the most important motivating factors for students to participate in classes (6).

Soleimani Asal et al. investigated the opinions of students of the Faculty of Medicine of Tehran University of Medical Sciences regarding attendance and absence and the reasons for not attending classes. They found factors such as inappropriate teaching methods, unhelpfulness of class materials, and overcrowding of classrooms that contributed to students' non-participation (absenteeism) in classes (7). In a study on pharmacy students, Fjortoft et al. (2005) showed that students attended classes where professors provided new

materials in addition to textbooks, materials in the context of real life, and practical examples in their teaching (8). Deane and Murphy showed that the continuous presence of fourth-year medical students in classes and activities determined by the professor significantly increased their final grades (9). This study was conducted considering the complexity of the subject and the many influencing factors in this field, and that the absence of students from classes harms their performance in assigned activities. The aim was to determine the factors influencing students' absenteeism from Iranian University classrooms.

2- MATERIALS AND METHODS

2-1. Study Design

The Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) checklist was used as the template for this review (10).

2-2. Eligibility criteria

The participants, interventions, comparators, and outcomes (PICO) was used to formulate the objective and inclusion criteria.

2-2-1. Participants: Iranian students attending universities.

2-2-2. Interventions: The included studies were non-interventional, so a comparison group did not exist.

2-2-3. Comparators: We did not have a comparison group and intervention.

2-2-4. Outcomes: University attendance or absence.

2-3. Included studies: The following criteria were used to determine whether a study would be included in the review.

2-3-1. Types of studies: Theses, studies with a longitudinal research design (where subjects were followed over time), and cross-sectional studies, case-control

studies, qualitative, descriptive, and analytical studies were included. Only studies published in peer-reviewed scientific journals or dissertations accessible to the authors were included.

2-3-2. Geographical context: Due to significant differences in educational and legal systems around the world, this review included studies conducted in Iran. Only Persian or English-language articles were included in the review.

2-3-3. Timeframe of field trials: Studies published up to June 2022.

2-4. Exclusion criteria: The exclusion criteria were abstracts without the full article, studies on primary/high school students, articles not written in English or Persian, review articles, meta-analyses, letters to the editor, editorials, short reports, case reports, and briefs.

2-5. Information sources

A systemic search of electronic databases (Medline, ERIC, EMBASE, Scopus, Web of Science, Cochrane Library, CIVILICA, SID, and Magiran) was conducted. To avoid missing out on recently published research, the search was conducted using the exact keywords in Google Scholar for research published up to June 2022. In the last step, the reference lists were manually searched, and forward citations were performed with all articles that remained in the sample after the title and abstract review.

2-6. Search

Search words were a combination of (University attendance OR University non-attendance OR class-cutting OR University refuse OR University absent OR University absenteeism OR Attendance OR Absent, OR Miss OR Late OR Suspen) AND (Students OR University students OR Academic students). The search was done independently and in duplication by two reviewers, and any

disagreement between the reviews was resolved by the supervisor.

2-7. Study selection

Database search was done for possible studies, abstracts were screened for eligible studies, full-text articles were obtained and assessed, and a final list of included studies was made. This process was done independently and in duplication by two reviewers, and any disagreement was resolved by the third reviewer. References were organized and managed using EndNote software (version X8). **Figure 1** shows the selection process of journal articles.

2-8. Data collection process

The data from the included studies were studied and extracted using an author-developed data extraction instrument. The instrument consisted of the following sections: authors' name, participants, year of publication, city, sample size, the form of absenteeism, the period of absenteeism, the measurement of absenteeism (e.g., binary vs. continuous), and whether the study mentioned or tested any mechanisms (**Table 1**). Two reviewers collected the data independently. The collected data were combined and compared for accuracy, and a third reviewer solved any discrepancies.

2-9. Risk of bias in individual studies

The risk of bias was assessed using the standard STROBE (STrengthening the Reporting of Observational Studies in Epidemiology) tool positioning guidelines (11). STROBE is a valuable tool for evaluating the quality of observational studies. This checklist has 22 items, scored based on the importance of each item according to the present study. The final score of the checklist was 30, and the minimum score was 15. The assessment was done by two reviewers independently and in duplication, and any discrepancies were resolved by the third reviewer.

2-10. Synthesis of results

Due to the vast heterogeneity of studies regarding students, sample size, university absenteeism measures, design, and statistical methodology, no meta-analytic

techniques were used, as this may lead to misleading conclusions (12). Instead, a narrative synthesis was adopted for summarizing the findings.

Table-1: General characteristics of included studies (n=16).

Author, Year, Reference	Participants	Sample size	University	Measurement of absenteeism Binary/ Continuous	Has the study mentioned or tested any mechanisms? Yes/ No	The main results
Fasihi Harandi et al., 2008, (13)	Nursing and midwifery students	217	Kerman University of Medical Sciences	Binary	No	The professors' scientific mastery of the subject, appropriate teaching methods, and the importance of attending class for a better understanding of the discussed material were the main factors affecting attendance in classes.
Azmodeh et al., 2013, (14)	Medical students	288	Sabzevar University of Medical Sciences	Binary	No	Among the factors affecting attendance in classrooms, the highest average score was related to the teacher's characteristics, course characteristics and physical environment.
Torabi et al., 2014, (15)	Dental students	150	Kerman University of Medical Sciences	Binary	No	Among the factors affecting attendance in classrooms, the highest score was related to the appropriate teaching method, mastery of the teacher's subject and interest in the lesson.
Syedmajidi et al., 2017, (16)	Dental students	171	Babol University of Medical Sciences	Binary	No	From the students' viewpoint, the professor's field was the most effective factor and the physical environment field had the least effect on the students' attendance in theoretical classes.
Tirgar et al., 2020, (17)	Medical students	Students' attended the first classes=218, missed the classes=130	Babol, Shahid Beheshti and Iran University of Medical Sciences	Binary	No	The main reason for students' attendance at the beginning of the semester was the importance of specialized courses and then the professors' emphasis on attending class meetings.
Khakpour et al. 2018, (18)	Medical students	306	Hamadan University of Medical Sciences	Binary	No	There was a negative relationship between university absenteeism and variables of content usefulness perception, teacher's teaching method, fair evaluation, human relationships in the educational environment, staffing and welfare services provided to students.
Khakpour et al., 2020, (19)	Dental, medical and pharmacology students	277	Tabriz University of Medical Sciences	Binary	No	Two main categories in students' absenteeism were instructor's academic ability and teaching method, and student's personal conditions.

Bahadori et al., 2020, (20)	Basic science students	127	Guilan University of Medical Sciences	Binary	No	The professors' performance had the most significant effect and students' personal and family issues had the least significant effect on absenteeism.
Nabavi et al., 2011, (21)	Medical students in the basic sciences	378	Islamic Azad University, Tehran Medical Branch	Binary	No	The professors' performance had the highest and greatest impact on student absenteeism from the class.
Mirzazadeh et al., 2018, (22)	Medical students	medical students=183, and faculty members=74	Tehran University of Medical Sciences	Binary	No	The most important factor affecting students' attendance was faculty members' scientific expertise, their mastery of the content and power of expression.
Habibipour et al., 2015, (23)	Nursing students	152	Islamic Azad University of Hamedan	Binary	No	The various factors such as part-time jobs, the loss of instructors control in holding the classes, the instructors inability in conveying course content, the unsuitable time of classes, etc., were associated with the students' presence in the classes.
Mokhtari et al. 2021, (24)	Dental students	70	Tehran University of Medical Sciences	Binary	No	The various factors such as professor empowerment, evaluation system, audiovisual equipment of the classes, educational curriculum, and class schedules, were associated with the students' attendance in the classes.
Meraji et al., 2019, (25)	Paramedical students	447	Mashhad University of Medical Sciences	Binary	No	The factors affecting students' attendance included moral characteristics, the professor's scientific ability, appropriate teaching methods, and the professor's communication skills.
Karami et al., 2013, (26)	Medical sciences	181	Jahrom University of Medical Sciences	Binary	No	Inappropriate teaching method by professors, low efficiency of classes and fatigue from the previous classroom were important factors that encourage student absenteeism in classrooms.
Vahabi et al., 2017, (27)	Medical students	381	Kurdistan University of Medical Sciences	Binary	No	The fields of professor, student and educational environment have a significant relationship with the degree of attendance of students in the classroom.
Nazari vanani et al., 2014, (28)	Medical students	120	Shahrekord University of Medical Sciences	Binary	No	The inappropriateness of the class time, the uniformity of the class and the professor's teaching style were the main factors in the absence of students in the classroom.

3- RESULTS

Finally, 16 related articles were selected (n=3,666). **Table 1** provides summary statistics for the 16 comparable studies from Iran. There is no single reason for student absenteeism. Student absenteeism may be a reflection of the

students' negative feelings toward the university. Many factors play a role in the emergence of the absenteeism problem and its continuation. **Figure 1** presents a flow chart of the search of studies, and the main characteristics of the selected studies are summarized as follows:

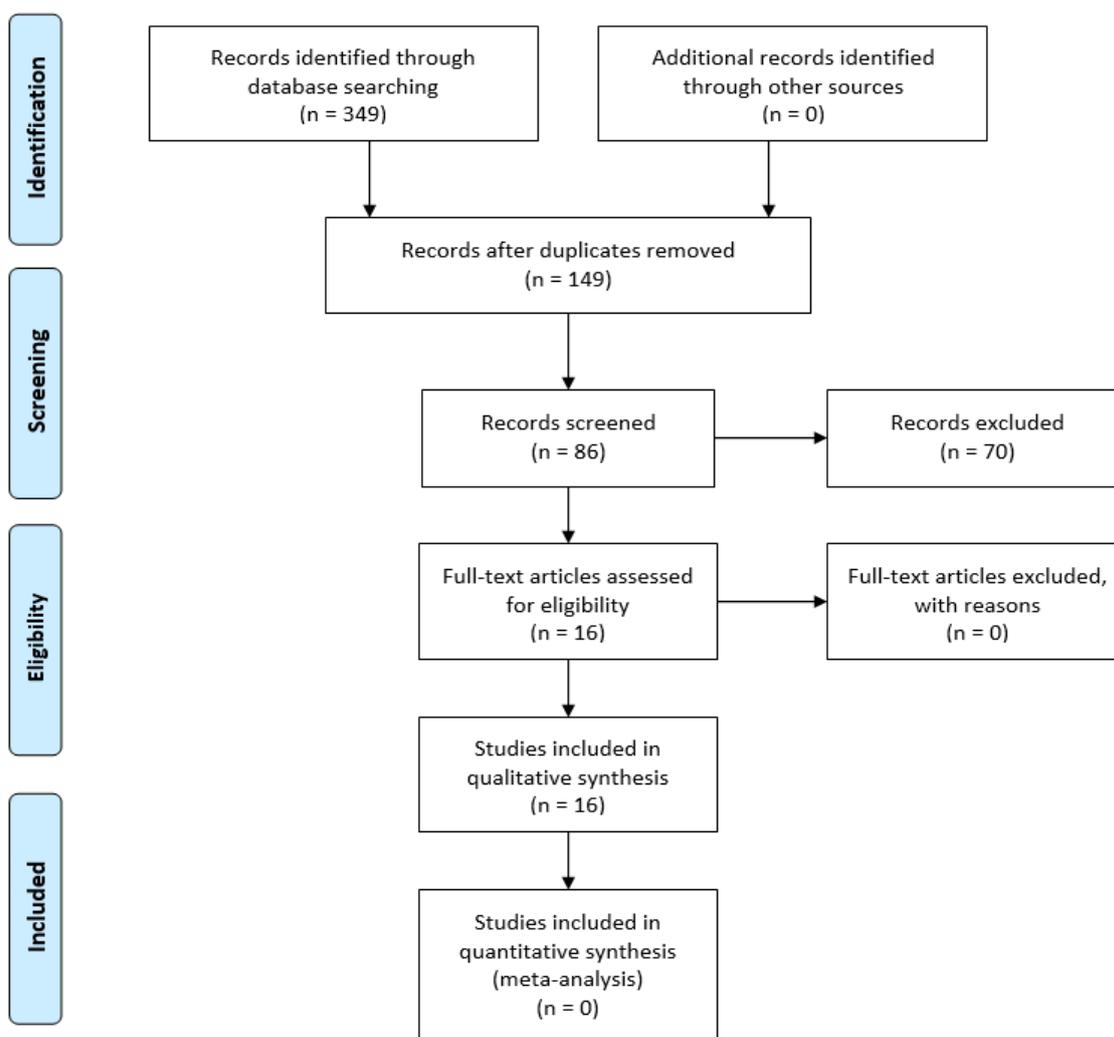


Fig.1: PRISMA Flowchart.

1. A descriptive-analytical study on 217 nursing and midwifery students of Kerman University of Medical Sciences investigated the factors affecting attendance in theory classes from the perspective of students. The results showed that the highest mean score (4.7) was for the professors' scientific mastery of the subject, followed by 4.66 for

appropriate teaching methods and 4.58 for the importance of attending class for a better understanding of the discussed material. The lowest mean score was 3.85 for the physical conditions of the class, 3.88 for no participation required in the class, and 3.95 for the use of audio-visual and educational devices (13).

2. A descriptive-analytical study on 288 medical students of Sabzevar University of Medical Sciences investigated the students' opinions on the factors affecting their presence in theoretical classrooms. The results showed that the highest average scores were related to the professor's characteristics, course characteristics, physical environment, and student characteristics (14).

3. A descriptive cross-sectional study on 150 students of the Faculty of Dentistry of Kerman University of Medical Sciences investigated the factors affecting attendance in theoretical classes from the perspective of the students. The results showed that the highest scoring factors were the appropriate teaching method, mastery of the professors, and interest in the course. Participating in class as a duty and active involvement of the student were among the least important factors for attending class from students' point of view (15).

4. A descriptive-analytical study on 171 dentistry students of Babol University of Medical Sciences investigated the factors influencing the students' attendance in theoretical classes from the perspective of students. The results showed that the teacher factor was mentioned as the most effective, and the physical environment had the least impact on the attendance of students in theoretical classes. The differences in mean scores of physical environment compared with the teacher and student factors ($p < 0.05$), and between male and female participants ($p = 0.006$) were statistically significant (16).

5. A cross-sectional study was conducted at three universities of Babol, Shahid Beheshti, and Iran University of Medical Sciences on two student groups: students attending the first classes of the semester ($n = 218$), and students who missed the classes ($n = 130$). The study aimed to determine the causes of students' irregular

class attendance at the beginning of each semester in medical sciences universities. The results showed that the main reason to attend the first classes of the semester was the importance of specialized courses (4.16 ± 0.94), and teachers' emphasis (4.13 ± 0.96). The main factors for students' absence were previous experiences of first classes being canceled (3.51 ± 0.95), and their disregard for attending the first sessions on time (3.22 ± 1.01). The t-test showed a significant direct relationship between students' age and their timely attendance at the beginning of the semester ($p = 0.035$), so the young students were more willing to attend classes at the beginning of the semester, but as students got older, their willingness was significantly decreased (17).

6. A descriptive-correlational study on 306 students of Hamadan University of Medical Sciences investigated the role of the educational system variables in the students' absenteeism and tendency to be absent. The results showed a negative relationship between university absenteeism and the perception of content usefulness, teaching method, fair evaluation, human relationships in the educational environment, staffing, and welfare services provided for students (18).

7. A descriptive cross-sectional study on 277 dental, medical, and pharmacology students in basic sciences courses at Tabriz University of Medical Sciences aimed to determine the causes of absenteeism based on students' viewpoints. The results showed that two factors had a more significant effect on students' absenteeism: the instructor's academic ability and teaching method and students' personal conditions, including occupation and interest in the field of study. The most and least important factors affecting absenteeism were inadequate sleep at night and coeducational classes (19).

8. A descriptive-analytical study on 127 basic science students of Guilan University of Medical Sciences aimed to investigate the root causes of absenteeism among medical students. The results showed that professors' performance had the most significant effect on absenteeism, and personal and family issues had the lowest effect. In addition, significant correlations were observed between the status of medical sciences in the community with the variables of age, marital status, and housing occupancy status, as well as students' personal and family issues with marital status, professors' performance with students' grade point average, and housing occupancy status and personal and family issues with professors' performance (20).

9. A descriptive-analytical study on 378 medical students of the basic sciences of Islamic Azad University, Tehran Medical Branch, examined the causes of absenteeism from class and lack of attention to lessons among medical students. The results showed that professors' performance had the greatest impact on student absenteeism from class, followed by educational problems (21).

10. A mixed-method study was conducted in 2015-2017 on 183 medical students and 74 faculty members of basic sciences of the faculty of medicine to determine the factors affecting class absenteeism from the viewpoint of faculty members and students. The results showed that the most important factor affecting student attendance was faculty members' scientific expertise, mastery of the content, and power of expression. There was a statistically significant difference between the views of students and faculty members ($T = -2.34$, $p = 0.02$) regarding the effect of class attendance on academic achievement. The faculty members believed that class attendance was a criterion of student professionalism, while

students were less likely to agree ($T=-6.21$, $p=0.001$) (22).

11. A cross-sectional study on 152 Islamic Azad University of Hamedan nursing students aimed to investigate the reasons for students' absence. The results showed that most students thought that their engagement in part-time jobs, the loss (lack) of instructors' control in maintaining the classes, their inability in conveying course content, their bad manners, the unsuitable class time, the distance between the class buildings and the dormitory, and the days of holding the classes were among the major factors influencing their presence (23).

12. A narrow-needs assessment survey on 70 students of the School of Dentistry, Tehran University of Medical Sciences, aimed to investigate the reasons for students' attendance and absenteeism from lecture classes from the perspective of students. The results showed that various factors, such as the empowerment of professors, evaluation system, audiovisual equipment of the classes, educational curriculum, and class schedules, affect the attendance of students in the classroom (24).

13. A descriptive-analytical study on 38 faculty members and 447 students of Paramedical Sciences at Mashhad University of Medical Sciences aimed to determine the effective factors in the absence from the theoretical classes from the viewpoint of faculty members and students. The results showed that the most important factors affecting students' attendance were moral characteristics, the professors' scientific ability, appropriate teaching methods, and the professors' communication skills (25).

14. A descriptive-analytical study on 181 medical students from basic, physiopathology, and clinical sections of Jahrom University of Medical Sciences aimed to evaluate effective factors in

students' presence in theoretical classrooms. The results showed that the application of content presentations at bedside patients, mastery of professors on the subject, and the importance and necessity of the subject could affect the continuity of students' presence in classrooms. Inappropriate teaching methods, low efficiency of classes, and fatigue from the previous classroom were mentioned by medical students as important factors that encouraged the students not to take part in classrooms (26).

15. A descriptive-analytical study on 381 students of Kurdistan University of Medical Sciences aimed to determine the effective factors on the attendance of students in the classroom from the perspective of students. The results showed that the factors of the professor, student, and educational environment have a significant relationship with the attendance of students in the classroom, and these factors can predict the rate of attendance. Female students mentioned the factors of the student, educational environment, and the professor as the most important factors affecting students' attendance in the classroom. However, according to male students, factors of the student, the professor, and the educational environment had the highest impact (27).

16. A descriptive, cross-sectional study on 120 students of Shahrekord University of Medical Sciences investigated the factors affecting students' absence from the classroom from the perspective of students. The results showed that the inappropriateness of the class time, the monotonousness of the class, and the professors' teaching style were the most important factors in the absence of students from the classroom (28).

4- DISCUSSION

This study aimed to determine the factors that influence students'

absenteeism from Iranian University classrooms. Results showed that various factors, such as professors' performance, teaching method, evaluation system, educational curriculum, and class schedules, affect the attendance of students. Absenteeism is the absence of people from places such as school, workplace, or meetings where they should be. Student absenteeism is students failing to attend school (3, 4).

Nowadays, the absence of students in higher education is a major concern. Despite strict rules on student presence, this problem is spreading in many universities around the world. The concept of "university absenteeism" can be assessed from two aspects: study and evaluation. The first aspect focuses on the absence and tendency of students to be absent from classrooms, especially long-term absence, without a valid and logical reason. This aspect can be called "physical absence". The second aspect, which has received less attention, is called "emotional absence". In addition to physical presence, mental-psychological presence and "academic engagement" are of great importance in university classrooms (29). Today, absenteeism has become an unfortunate norm (30), creating problems for students, teaching staff, and education units (31).

Many researchers have investigated the causes of student absenteeism, which are mainly divided into personal issues and educational problems (32). Personal issues include spending time with friends and social commitments (32, 33). Educational problems include spending time on other assignments (34), the difficulty of the subject, crowded classes (35), inappropriate class time (27, 35), the distance between classrooms and the dormitory, and the environment of the class (13, 18, 24, 28). Some researchers have assessed students' access to technology and the Internet as the causes

of non-attendance in the classroom (37, 38). Massingham and Herrington (2006) indicate health and lifestyle as barriers to class attendance and lack of motivation as a barrier to classroom learning. In addition, academic failure can lead to absence from the classroom (39). Researchers have also pointed out the impact of educational factors, including inappropriate teaching methods, lack of applicability of content, long class time, lack of evaluation, and lack of motivation of learners in the absence of learners from classrooms (13-28, 40-48). Non-participation in the classroom can also be intentional or unintentional (49). In England, 40% of students cannot participate in classes due to reasons such as being forced to work to afford tuition and living costs (50, 51).

Effective education does not only depend on the teacher, but the learners also have duties and assignments in the learning process. The mastery of course materials, the power of expression, and the ability to convey course materials are among the most important characteristics of professors with a significant impact on improving the quality of teaching and learning and are considered motivational factors for attending class (7). Moreover, although the absence of students from classrooms affects the inefficiency of the university system, the mere physical presence of students in classrooms cannot be considered a factor of educational efficiency, as the mental presence of students in classrooms is more important than their physical presence. Despite their physical presence, some students might be emotionally disconnected from the university, which is an important issue and needs more research.

5- CONCLUSION

The present study investigated the reasons for the absenteeism of Iranian university students. The reasons found included the professors' performance,

teaching method, communication skills, evaluation system, educational curriculum, low efficiency of classes, the distance between the class buildings and the dormitory, class schedules, and fatigue from the previous sessions. The physical environment and students' personal and family issues had the lowest impact on class attendance of students. There was a significant direct relationship between students' age and their timely attendance, so the young students were more willing to attend the classes ($p < 0.05$). The faculty members believed that class attendance was a criterion of student professionalism, while students were less likely to agree ($p = 0.001$). Suggestions to counter this phenomenon are professors' attention to students' learning, mastery over the course content, practical teaching, focus on main course content, paying attention to students' attendance, using various teaching methods, continuous evaluation, and surveying students regarding educational programs and the performance of education officials.

6- AUTHORS' CONTRIBUTIONS

Study conception or design: RV and MS; Data analyzing and draft manuscript preparation: RR, MN, HA, and MA; Critical revision of the paper: RV; Supervision of the research: RV and MS; Final approval of the version to be published: RV, RR, MN, MA, HA, and MS.

7- CONFLICT OF INTEREST: None.

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