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Original Article

Assessment of Clinical Anxiety and Coping Mechanisms in Dental Undergraduate Students of Zahedan University of Medical Sciences: A Cross-sectional Study

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Abstract

Background: Undergraduate students cope with different aspects of dental learning creating stressful situations automatically.

Objectives: This study aimed to evaluate clinical anxiety and coping mechanisms in students.

Methods: This cross-sectional study involved 218 dental students from the fourth to sixth year at Zahedan University of Medical Sciences. Questionnaires, including the MMMS and CSIS, were utilized to identify anxiety-inducing situations and various coping strategies. Participants assessed their anxiety levels regarding specific situations on a 4-point scale, categorizing them as "not anxious," "fairly anxious," or "severely anxious." Using the CSIS, participants indicated their coping strategies, which were scored on a 3-point scale. The subgroup with the highest scores was designated as the primary coping strategy. Statistical analyses, including Chi-square, Fisher Exact Test, Independent t-test, and One-way ANOVA, were conducted using SPSS 22 at a significance level of 0.05.

Results: Response rate was 92%. The mean clinical anxiety score was 2.09±0.33. The majority was fairly anxious. Levels of clinical anxiety showed a significant relation with age ($P<0.001$), and academic year ($P=0.002$). Mean score of clinical anxiety was significantly differed due to age ($P<0.001$), and academic year ($P<0.001$). No significant relationship was found between clinical anxiety and gender; neither qualitatively nor quantitatively. Seeking Social Support was the most prevalent coping. Coping had no relation with age, gender, academic year and level of clinical anxiety.

Conclusion: Younger students and those new to clinical training experience higher anxiety, underscoring targeted interventions. Dental schools should implement mental health support to enhance the student well-being preventing psychological challenges.

Keywords: Clinical Anxiety; Coping; Dental Students

Background

There is a high level of stress and anxiety perceived by dental undergraduates during their educational course (1). Theoretical and clinical acquisitions and examinations are stress and anxiety-provoking situations for the dental trainers as transition stage to being professional practitioners in near future (2). However, accepting responsibility for using patient management approaches as well as executing a broad variety of irreversible treatments on dental patients is widely recognized as the primary stressors in establishing scenarios that result in clinical anxiety (2, 3). Clinical anxiety is an emotional reaction in clinical performance stimulated by the transition from pre-clinic to clinic in the dental course. This special anxiety is felt before providing health care which is a complex and multisystem response to clinical stressful events that may affect the student's well-being and academic achievement (2-4).

Anxiety may be compared to a double-edged knife. Undoubtedly, decreased anxiety promotes academic success and learning. It is worth noting that reduced levels of anxiety cause the student to be more focused, aware, and ready to do specified activities. However, high stress can lead to learning difficulties, poor performance, poor health service, and ultimately learner's illness. Subsequently, the cascade of bad consequences accelerates, and insults the student in personal, interpersonal, and professional relationships (2, 5).

Several numbers of studies were conducted on dental students' population to assess their level of stress and anxiety in academic and personal performance. The great majority of studies have shown that dentistry students had higher levels of stress and anxiety throughout their academic careers than their peers (6-9). Leading researchers in the field of stress have long been looking for a set of "strategies" that people turn to it to deal with their life's problems. There were always efforts to find a tool that is applicable, sensitive enough to cover human diversity, and exactly reflects general coping mechanisms (10). One developed relevant questionnaires, derived from Amirkhan studies (11), which introduced an assessment instrument divided into three aspects of "Problem-Solving" (instrumental active problem-directed approach against stressors), "Seeking Social Support" (turning to others originating from basic needs and characteristics of human beings for comfort, advice, help or simple human contact), and "Avoidance Behavior" (either physical or psychological withdraw such as distraction). Preliminary questionnaires contained too many questions which became shorter over time. Now the summarized, self-reported questionnaire is widely used in research about different populations and contexts with a wide range of generalizability (10, 11).

Dental students use a variety of coping mechanisms when faced with anxiety-inducing circumstances. In this sense, a person's choice of type is greatly influenced by their educational environment. As with any vicious cycle, the person who is under stress may resort to emotion-based (passive) coping rather than problem-based (active) coping, and they may get locked in harmful and inappropriate coping and dealing techniques (4, 12). Up to the authors' knowledge, scarce studies on clinical anxiety and coping strategies in Iranian dental students was found. Clinical anxiety is considered a potential opposing force against the quality of dental training and skill acquisition. The necessity for study in this field is evident from this fact alone. A supportive and stress-relieving clinical education environment may be established by recognizing the perceived causes of stress and being aware of the coping strategies used. So, this study aimed to assess clinical anxiety and associated copying mechanisms in dental undergraduate students of Zahedan University of Medical Sciences.

Objectives

This study aimed to evaluate clinical anxiety and coping mechanisms in students.

Methods

Type and Stages of the Study: In May 2022, a descriptive analytical cross-sectional research was carried out in the southeast Iranian university of medical sciences, Zahedan. The purpose of the research was to evaluate coping strategies and clinical anxiety in undergraduate dentistry students undergoing clinical training. The dental course in Iran is a six-year program, with the first two years focused on basic sciences, one preclinical year, and three years of clinical training alongside didactic courses. Clinical responsibilities, and procedure complexity increase progressively during the fourth to sixth years.

Sample and Population: The study population included 218 undergraduate dental students in their fourth to sixth years at Zahedan University of Medical Sciences. Inclusion criteria were: enrollment in the clinical training years (fourth to sixth), voluntary participation, and no known mental, psychological, or anxiety disorders. Census sampling was used to invite all eligible students. A total of 200 students completed the survey (response rate: 92%).

Data Collection Tools: A three-part self-reported questionnaire was employed to gather data. Part I focused on demographic data to ascertain variables such as age (categorized as <25 or ≥25 years based on), gender, and academic year (fourth-year, fifth-year, and sixth-year).Since the normality of data regarding age of participants was not assured, the cut –off point of 25 was determined based on quartile of 20 and 80. Part II and III dealt with Modified Moss and McManus Scale (MMMS) and Coping Strategy Indicator Scale (CSIS) to study various anxiety-provoking situations and used different coping strategies respectively.

Modified Moss and McManus Scale consists of 38 questions representing different clinical encounters (20 original questions and 18 later-added questions reflecting dental situation) (2, 3, 5)However, for the research design of our study the questionnaire was revised, so that it can be applied to the clinical aspects of training in Zahedan Dental School. Thus, 2 items were

omitted in terms of lack of relevance to dental situation. A native Persian speaker translated the modified original questionnaire. The preliminary version of the questionnaire was subsequently translated back into English to guarantee the veracity of the translation. In addition, to verify face and content validity, a team of experts was requested to assess the preliminary questionnaire. The questionnaire improved after obtaining suitable comments and suggestions. Afterthought: content validity ratio and index have been validated. A content validity ratio of more than 0.62 and a content validity index of greater than 0.79 were used to approve the items. Consequently, three articles were eliminated. The questionnaire was then piloted to ten dental students who were not participants in order to further regulate the translation and ensure that it could be completed in a fair amount of time. After going through this process, the questionnaire considered suitable for distribution. Moreover, to ensure reliability, the questionnaire redistributed among 10% of participating students with a time interval of one month. Alpha-Cronbach coefficient of 77% for Persian version of MMMS was driven. Hence, the final version of questionnaire consisting of 33 items that is applicable to the Iranian dental education background was used to assess clinical anxiety provoking situations. Hence, the questions addressed the possible sources of clinical anxiety as perceived by the student during the past one month, while attending professional school. For statistical analysis, the responses to each item were based on a 4- point Likert-type scale as follows: 1 (not anxious), 2 (slightly anxious), 3 (fairly anxious), 4 (very anxious). Based on this rating, the lowest and highest obtainable value could be 33 and 132 respectively, and the higher value indicates the higher perceived clinical anxiety. The obtained score divided by 33 was recorded as the average score of anxiety of each person and thus individuals were grouped into three categories of “not anxious”, “fairly anxious”, and “severely anxious” with an average in the range of “equal to or greater than 1 to less than 2”, "equal to or greater than 2 to less than or equal 3” and “greater than 3 to less than or equal 4”. In addition, the most to least common stressful situations were reported in a given continuous mean range of 1 to 4 assigned to each item based on the responses of all students.

The Coping Strategies Indicator Scale is divided into three major subgroups: issue resolution, seeking social support, and avoidance behavior (11). The content validity ratio and content validity index were treated as previously. We also validated the dependability of the Alpha-Cronbach coefficient of 81% for the Persian version of CSIS using a similar technique. As a result, the number of questions stayed consistent with the original version. In total, CSIS consisted of 33 items equally distributed in three subgroups (11 per each). The responses including a 3-point scale of “a lot”, “a little” and “not at all” were scored as 3, 2 and 1 respectively for statistical analysis. The score assigned to each subgroup; ranging from 11 to 33; were calculated by the sum of scores allocated to individual items. The high-scored subgroup was identified as the primary copping approach. As a consequence of completing questions, participants were able to identify the kind of coping technique used in response to a recent major and distressing incident that happened during the last six months. Eleven questionnaires that were incompletely filled were not analyzed. Furthermore, 7 questionnaires containing more than one subgroup with the same maximum score were excluded from the study. The final questionnaire was scored as demonstrated in table 1.

Data Analysis: SPSS version 22 (SPSS Inc., Chicago, Illinois, USA) was employed to analyze the data. Frequencies, percentages, and means (± standard deviations) comprised descriptive statistics. The Kolmogorov-Smirnov test was employed to verify the normality of clinical anxiety scores ($P>0.05$). The relationship between the frequency of various levels of clinical anxiety and age, gender, and academic year was evaluated using the Chi-square and Fisher Exact Tests. Independent t-test examined age and gender differences in mean anxiety scores. One-way ANOVA compared anxiety scores across academic years. Chi-square tests evaluated associations between coping strategies and demographic variables (age, gender, academic year) and between clinical anxiety levels and coping strategies. The significance level was set at 0.05.

Ethical Considerations: The Ethical Committee of Zahedan University of Medical Sciences granted ethical approval (reference number IR.ZAUMS.REC.1401.318). All participants were guaranteed anonymity and confidentiality, and informed consent was obtained. There were no incentives or obligations to participate, and it was entirely voluntary.

Participants were informed of study’s purpose and provided general instructions via email, with an estimated questionnaire completion time of 15 minutes. Responses were anonymous, with no identifiers collected.

Results

The current study assessed the clinical anxiety and coping mechanisms of Zahedan dental students. Two hundred respondents completed the survey (as mentioned before, data of eighteen subjects were not entered in analyses). The mean age of participants was 23.81±1.9 years. The youngest participant was 21 and the eldest was 32 years old. The data distribution of participants according to age, gender, and academic year is presented in table 2.

In this study, 37% (n=74) of dental students were not anxious, 62% (n=124) were fairly anxious, and 1% (n=2) were severely anxious. Moreover, the data regarding the frequency of clinical anxiety in participants based on age, gender, and academic year has been shown in table 3. Considering low frequency in some cells of the table, data of fairly anxious and severely anxious columns were merged as anxious group.

As well, the anxiety of participants was quantitatively reported. The mean of total clinical anxiety score among the dental students was 2.09±0.33. The lowest clinical anxiety score was 1.12 and the highest was 3.48. Respectively, "Extracting the wrong tooth", "Helping in a faint episode", "getting infected by patients", "accidental pulp exposure" were the most stressful items according to MMMS. On the contrary, "discussing with patients", "Interacting with nursing staff", "Taking the patient's history", "Examining patient" and "Telling patients that I do know your diagnosis"" were the least stress provoking items (Table 4).

The relationship between age and the total clinical anxiety score was statistically significant ($P \leq 0.001$), as indicated by the independent t-test. Nevertheless, the independent t-test did not reveal a statistically significant relationship between gender and the total clinical anxiety score ($P = 0.945$). The relationship between the academic year and the total clinical anxiety score was statistically significant ($P<0.001$), as indicated by the one-way ANOVA (Table 5). Sixth-year dental students had a considerably lower mean total clinical anxiety score than fourth- and fifth-year dental students ($P < 0.001$ and $P = 0.001$, respectively). There was no significant difference in the overall clinical anxiety level between fourth- and fifth-year dentistry students ($P = 0.196$). Qualitatively, 26% (n=52) of dental students had the coping strategy of "Problem-Solving", 66% (n=132) had "Seeking Social Support", and 8% (n=16) had the "Avoidance Behavior" coping strategy in the present study. Based on table 6, chi-square analysis showed that coping strategy had no significant relation with age, gender, and academic year (P=0.878, P=0.203, and P=0.969, respectively). The relationship among different levels of clinical anxiety and coping strategy was assessed. Regarding clinical anxiety, since more than 20% of the cells of table were less than 5, the data of two levels of fairly anxious and severely anxious were merged.

Hence, results of the chi-square showed no significant relationship between clinical anxiety and coping strategy (P=0.540).

Discussion

Dental students showed a moderate score of clinical anxiety. The majority experienced a fair level of anxiety, while a smaller proportion reported no anxiety, and a very small fraction showed severe anxiety. In previous studies, a high prevalence of anxiety was observed among dental students (13, 14). According to Basudan et al., anxiety affected almost half of the dentistry students in their research (15). More than 70% of dentistry students suffer moderate to severe levels of stress throughout their education, according to a research by Stormon et al. (13) According to a number of recent studies, between 40 and 50 percent of dentistry students report high levels of stress, which is indicative of the mental health toll that students bear as they adjust to interrupted coursework and heightened health issues (14, 16). The high levels of depression, stress and anxiety may well be ascribed to the pressure of dental course by their workload, clinical requirements, examinations and grades. This raised cautions about the requirement for greater mental health support inside dental schools.

The mean of total clinical anxiety score was higher in females than in males. Recent studies consistently showed that stress levels are higher among female dental students compared to their male counterparts (17, 18). Furthermore, gender roles and societal expectations may exacerbate stress among female dental students. Females often experience more societal pressure to balance academic achievement with traditional gender roles, such as caregiving and maintaining social relationships. This additional weight may induce emotions of shame and stress, especially when academic expectations escalate throughout clinical training (19). This is especially common in competitive domains such as dentistry, where self-assurance is essential for clinical efficacy and patient management. Nonetheless, our investigation did not find any statistically significant gender differences. One of the reasons for the lack of significance difference in stress level of males and females can be the older age of girls, which has led to the

masking of the effect of gender and the lack of significant difference.

Clinical anxiety showed a significant difference based on dichotomized age groups. About 65% of the < 25 years old group were fairly anxious, while this proportion decreased to nearly 50 % in the ≥ 25 years old group. One significant source of stress for younger dental students is the uncertainty surrounding their professional identity. Early in their education, many students are still grappling with whether they have chosen the right career path or whether they will succeed in the demanding field of dentistry (19).

As students age, they generally acquire greater emotional regulation skills, which help them manage stress more effectively.

In our research, fourth- and fifth-year dental students reported being quite worried, whereas sixth-year dental students reported feeling not anxious. Accordingly, Basudan et al. found that anxiety reduced as participants' ages and academic years rose (15). Similarly, Morse and Dravo found that third-year students had the highest degree of anxiety, followed by fourth- and fifth-year students (20). The findings of the research conducted by Grandy et al. and Sanders and Lushington corroborate the outcomes of the present investigation. In the aforementioned studies, dental students began their clinical courses in the third year of their education (21, 22). Consequently, third-year dentistry students had the greatest degree of anxiety relative to their peers. In the present research, dental students at Zahedan University of Medical Sciences began clinical courses in their fourth year; hence, fourth-year dental students exhibited elevated anxiety scores. In contrast to the aforementioned studies and the present research, Jowkar et al. discovered that anxiety levels were highest among fifth-year dentistry students, followed by fourth-year and sixth-year students. The research comprised dentistry students from Shiraz University of Medical Sciences. Jowkar et al. indicate that fifth-year dental students are provided a greater number of clinical courses than their peers, which accounts for their elevated levels of anxiety (23). Divergent outcomes may be attributable to disparate curricula. The experience of stress is prevalent among dental students, with both age and academic year playing significant roles. The tension levels of younger pupils and those in their early academic years are frequently higher than those of their older and more senior peers (24). In the present investigation, there was no statistically significant correlation between clinical anxiety and coping strategy. Additionally, there was no correlation between the prevalence of the coping mechanism and age, gender, or academic year. The primary coping strategy of the students was "seeking social support," while "avoidance" was the least coping mechanism. The most prevalent coping strategy identified in the study conducted by Ersan et al. was "Planning," while the least prevalent coping strategy was "Drug." (25). According to Darwita et al., the most prevalent coping mechanism among dental students was the pursuit of emotional support (26). The current research is consistent with the findings of the aforementioned studies. For the most part, dental students do not engage in detrimental coping mechanisms and rarely pursue narcotics or violence. Previous research has demonstrated that the perceived stress of an individual is influenced by the varied consequences of various coping strategies. For example, Carver et al. asserted that the efficacy and utility of behavioral and/or mental disengagement, as well as the focus on and purging of emotions, may be restricted (27). Conversely, problem-focused coping strategies, including active coping, scheduling, suppressing competing activities, and seeking instrumental social support, alongside emotion-focused strategies such as seeking emotional social support, positive reinterpretation, acceptance, and denial, were found to be comparatively more effective. Dwyer and Cummings asserted that, according to this hypothesis, university students' use of avoidance-focused coping techniques was strongly correlated with stress (28). The increasing use of professional mental health services, and the role of spirituality also highlight the diversity of coping strategies among dental students. By promoting healthy coping mechanisms, and providing adequate support, dental schools can help mitigate the stress and anxiety that students face throughout their education (29). Furthermore, the clinical learning experience for students improves, allowing them to perform with increased assurance (30).

The high response rate and the simple and concise test tool are the strengths of this study. Although the basis of questionnaire was adapted from previous studies in this field, its validity and reliability were assured following some changes in the questionnaire. Our study decreased the bias by utilizing close ended self-reporting questions. The interviewer had no intervention, therefore no misunderstanding in communication was caused between the researcher and participants.

Nonetheless, the authors assert that it has some limits. The present research did not assess changes in psychological state over time due to its cross-sectional

methodology. Furthermore, self-reported evaluation instruments may induce response bias that cannot be disregarded. Additionally, our literature review was restricted to studies published in English, thus excluding comparisons with important results documented in other languages.

Conclusion

It can be concluded that most dental students were fairly anxious in the current study. This study showed the notable presence of clinical anxiety among dental undergraduate students, particularly those in earlier clinical training years, requiring appropriate interventions to address this issue. Dental schools should implement practical measures to support student well-being, such as integrating stress management workshops into the curriculum, establishing peer mentorship programs to guide students transitioning into clinical practice, and providing accessible mental health resources, including counseling services. Moreover, cultivating an educational atmosphere that encourages adaptive coping mechanisms, including problem-solving and soliciting social support, can bolster students' resilience, enhance academic achievement, and guarantee superior patient care, thereby diminishing the likelihood of enduring psychological distress and professional burnout. To improve the accuracy of outcomes, it is advisable to use a longitudinal design in future studies that include a greater number of schools on a national or worldwide level. Future research on this area is crucial. Moreover, both students and staff should be informed about the signs and symptoms of anxiety and depression, as well as their impact on the physical and psychological well-being of students, to facilitate early identification and timely intervention. To enhance student health, mitigate dropout rates, and assure adequate patient care, dentistry schools should include measures for stress avoidance and management. The continuation of these issues may lead to further physical and psychological challenges that linger post-graduation, resulting in unhealthy dentists or premature retirement, so diminishing both the number and quality of the workforce.

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Conflict of interests: There is no conflict of interest.

Ethical approval: The Ethical Committee of Zahedan University of Medical Sciences granted ethical approval (reference number IR.ZAUMS.REC.1401.318).

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Table 1. Score and Score Range of Each Part of Questionnaire

	Questions		Response and Score	
I: Demographics	Age		<25 years old, ≥25 years old	
	Gender		Female, Male	
	Study Year		4th- year, 5th- year, 6th- year	
II: MMMS	1	Getting diagnosis wrong	Responses to each item were based on a 4- point scale as follows: Not anxious (1) Slightly anxious (2) fairly anxious (3) Very anxious (4) Total Range: 33-132	Total score divided by 33 was recorded as the average score of anxiety of each person. Then, subjects grouped into: not anxious: equal to or greater than 1 to less than 2 fairly anxious: equal to or greater than 2 to less than or equal 3
	2	Presenting in the clinic		
	3	Inadvertently hurting patient		
	4	Telling consultants that "I don't know anything"		
	5	Getting infected by patients		
	6	Dealing with psychiatric patients		
	7	Making diagnosis		
	8	Being asked difficult questions by patients		
	9	Treating children		
	10	Telling patients that "I do know your diagnosis"		
	11	Giving local anesthesia		
	12	Examining patient		
	13	Telling patients that "I don't know anything"		

	14	Taking the patient's history		severely anxious: greater than 3 to less than or equal 4”
	15	Interacting with nursing staff		
	16	Discussing with patients		
	17	Grasping extraction forceps		
	18	Arresting post-operative bleeding		
	19	Helping in a faint episode		
	20	Fracturing a tooth during extraction		
	21	Using high-speed hand piece		
	22	Accidental pulp exposure		
	23	Extracting wrong tooth		
	24	Not taking radiographs properly		
	25	Not developing radiograph properly		
	26	Not being able to interpret radiographic findings		
	27	Discovering calculus by supervisor after scaling		
	28	Not able to defend diagnosis		
	29	Not meeting requirement for examination		
	30	Inability to pass practical courses		
	31	Dealing with children		
	32	Dealing with elderly patients		
	33	Iatrogenic gingival trauma		
III: CSIS	1	Explained your feelings to a friend (SSS).	a lot (3) a little (2) not at all (1) The score assigned to each subgroup ranged from 11 to 33. The high-scored subgroup was labeled as the main applied copping strategy.	
	2	Checked everything again so your problem could be solved (PS).		
	3	Thought of different ideas before making decision what to do (PS).		
	4	Tried to distract yourself from the problem (A).		
	5	Accepted sympathy and understanding from someone (SSS).		
	6	Did all you could to keep others from noticing the severity of the situation (A).		
	7	Talked to others about the problem because doing that makes you feel better (SSS).		
	8	Sat some goals for yourself to deal with the situation (PS).		
	9	Weighed up your options carefully (PS).		
	10	Daydreamed about better times (A).		
	11	Tried different ways to solve the problem until you found one that worked (PS).		
	12	Talked about your fears and worries with a relative or friend (SSS).		
	13	Spent more time alone than usual (A).		
	14	Told people about the situation because it helped you come up with solutions (SSS).		
	15	Thought about what needs to be done to make things right (PS).		
III: CSIS	16	Turned your full attention to solving the problem (PS).		
	17	Designed a plan in your mind (PS)		
	18	Watched TV more than usual (A)		
	19	Went to a friend or professional to help you feel better (SSS).		
	20	Stood firm and fought for what you wanted in the situation (PS)		
	21	Avoided being with people in general (A).		

	22	Buried yourself in a hobby or sports activity to avoid the problem (A).	
	23	Went to a friend to help you feel better about the problem (SSS).	
	24	Went to a friend for advice about how to change the situation (SSS).	
	25	Accepted sympathy from friends who had the same problem (SSS).	
	26	Slept more than usual (A)	
	27	Daydreamed about how things could have been different (A).	
	28	Identified with characters in movies or novels (A)	
	29	Tried to solve the problem (PS).	
	30	Wished that people would just leave you alone (A).	
	31	Accepted help from a friend or relative (SSS)	
	32	Sought reassurance from those who know you best (SSS)	
	33	Tried to carefully plan a course of action rather than acting on impulse (PS).	

PS: Problem Solving, SSS: Seeking Social Support, A: Avoidance

Table 2. The data distribution of participants

Demographic Parameter		Percent (Number)
Age	<25 years old	74. 00% (148)
	≥25 years old	26.00% (52)
Gender	Female	51.00% (102)
	Male	49.00% (98)
Academic year	Fourth-year	39.50% (79)
	Fifth-year	34.50% (69)
	Sixth-year	26.00% (52)

Table 3. The frequency of clinical anxiety in participants according to age, gender, and academic year

Demographic Parameter		Clinical Anxiety [Percent (Number)]		P Value
		Not Anxious	Anxious	
Age	<25 years old	33.80% (50)	66.20% (98)	< 0.001*
	≥25 years old	46.20% (24)	53.80% (28)	
Gender	Female	37.30% (38)	62.70% (64)	0.372*
	Male	36.70% (36)	63.30% (62)	
Academic year	Fourth-year	26.60% (21)	73.40% (58)	0.002**
	Fifth-year	36.20% (25)	63.80% (44)	
	Sixth-year	53.80% (28)	46.20% (24)	

*Fisher Exact Test, **Chi-square test

Table 4. Mean scores of participants in the questions of MMMS

MMMS		Mean (SD)
1	Getting diagnosis wrong	2.45 (0.81)
2	Presenting in the clinic	1.77 (0.77)
3	Inadvertently hurting patient	2.71 (0.86)
4	Telling consultants that "I don't know anything"	1.94 (0.81)
5	Getting infected by patients	3.02 (0.98)
6	Dealing with psychiatric patients	2.13 (0.86)
7	Making diagnosis	1.69 (0.71)
8	Being asked difficult questions by patients	1.76 (0.75)

9	Treating children	1.99 (0.88)
10	Telling patients that "I do know your diagnosis"	1.47 (0.72)
11	Giving local anesthesia	1.61 (0.62)
12	Examining patient	1.37 (0.59)
13	Telling patients that “I don't know anything”	1.96 (0.96)
14	Taking the patient's history	1.30 (0.62)
15	Interacting with nursing staff	1.28 (0.62)
16	Discussing with patients	1.27 (0.57)
17	Grasping extraction forceps	1.70 (0.75)
18	Arresting post-operative bleeding	1.84 (0.79)
19	Helping in a faint episode	3.10 (0.94)
20	Fracturing a tooth during extraction	2.53 (0.89)
21	Using high-speed hand piece	1.91 (0.84)
22	Accidental pulp exposure	2.87 (0.91)
23	Extracting wrong tooth	3.49 (0.82)
24	Not taking radiographs properly	2.09 (0.77)
25	Not developing radiograph properly	1.99 (0.72)
26	Not being able to interpret radiographic findings	2.20 (0.82)
27	Discovering calculus by supervisor after scaling	2.71 (1.02)
28	Not able to defend diagnosis	2.58 (0.92)
29	Not meeting requirement for examination	1.97 (0.81)
30	Inability to pass practical courses	2.65 (0.95)
31	Dealing with children	1.92 (0.86)
32	Dealing with elderly patients	1.69 (0.73)
33	Iatrogenic gingival trauma	2.24 (0.81)

SD: Standard deviation

Table 5. The mean of clinical anxiety in participants according to age, gender and academic year

Demographic Parameter		Clinical Anxiety (Mean (SD))	P Value
Age	<25 years old	2.13 (0.23)	<0.001*
	≥25 years old	2.01 (0.15)	
Gender	Female	2.12 (0.29)	0.945*
	Male	2.06 (0.37)	
Academic year	Fourth-year	2.20 (0.35)	<0.001**
	Fifth-year	2.11 (0.27)	
	Sixth-year	1.90 (0.3)	

*Independent T test, **One Way ANOVA

SD: Standard deviation

Table 6. The frequency of coping strategy in participants according to age, gender, and academic year and clinical anxiety

Demographic Parameter	Group	Coping Strategy (Percent and Number)			P value
		Problem-Solving	Seeking Social Support	Avoidance Behavior	
Age	<25 years old	26.40% (39)	66.20% (98)	7.40% (11)	0.878*
	≥25 years old	25.00% (13)	65.40% (34)	9.60% (5)	
Gender	Female	20.60% (21)	70.60% (72)	8.80% (9)	0.203*
	Male	31.60% (31)	61.20% (60)	7.10% (7)	
Academic year	Fourth-year	26.60% (21)	67.10% (53)	6.30% (5)	0.969*
	Fifth-year	26.10% (18)	65.20% (45)	8.70% (6)	
	Sixth-year	25.00% (13)	65.40% (34)	9.60% (5)	
Clinical Anxiety	Not Anxious	20.30% (15)	67.60% (50)	12.20% (9)	0.540*
	Fairly Anxious	29.80% (37)	65.30% (81)	4.80% (6)	
	Severely Anxious	0.00% (0)	0.05% (1)	0.05% (1)	

*Chi-square test