

STUDENTS' PERCEPTIONS OF THE EDUCATIONAL ENVIRONMENT OF MEDICAL INTERNSHIP IN TWO MEDICAL SCHOOLS IN FORTALEZA

Manoel Coutinho Filho, Lucas Loiola Ponte Albuquerque Ribeiro, Olívia Andréa Alencar Costa Bessa

Introduction: The educational environment is made of a web of interlinked factors which interact constantly with one another and influence the teaching and learning process. Studying the educational environment becomes essential for the development of modern and effective curricula. The Dundee Ready Education Environment Measure (DREEM) inventory is a validated global tool for guantifying the main factors involved in this process. The medical internship usually lasts two years, and it is critical for medical training. This study aims to evaluate the perception of the medical interns about the educational environment who are from two medical schools in Fortaleza, one of which uses an active learning methodology (A) and the other uses a traditional learning methodology (B). Method: This is an observational, crosssectional and quantitative study. Sampling involved students in medical internships from two medical schools. The instruments for collecting data were: a sociodemographic questionnaire with nine questions, and the DREEM questionnaire. The quantitative data were expressed as mean ± and standard deviation in accordance with the analysis of data distribution normality, which was made by using the Kolmogorov-Smirnov Normality Test and histograms. The Student T test was used in order to compare the DREEM score between two groups, and the one-way ANOVA followed by the Tukey's post-test were used in cases of comparing three or more groups. Results: The DREEM global scores of the medical interns were 144,65 ± 26,21. Regarding the medical school with traditional learning methodology, the value found was 122.45 ±25.42, while in the medical school with active learning methodology the value was 154.75 ± 19.55. The analysis of item 25 of the questionnaire related to contents that require memorization pointed to a mean of 1.46±1.04, and it indicated a problematic area. The score of the dimension related to the Perception of Preceptors in the internship was 33.75± 6.18, with the teachers being considered as models. Conclusion: In the medical intern's view which came from the medical school with traditional learning methodology, the classification showed "more positive scores than negatives", while relating to those who came from



medical school with active learning methodology, the perception points to "excellent". The medical interns considered as a weak point the existence of some situations which they are subjected to the learning of memorable facts. The strong point is the perception of the preceptors by students.

Keywords: Medicine. Learning. Medical student. Medical Internship.

INTRODUCTION

The Medical School is divided into basic cycle and clinical practice or internship. The basic cycle covers basic knowledge and theories regarding complex situations experienced within the context of clinical practice. The experience in health services as learning scenarios provides diversification, and so, it approaches professional practice. An important concept that fits into this situation is the interdisciplinary that provides advances in learning process.¹

The medical internship consists of an in-service training that appeared in the 1940s. The Federal Council of Education's resolution of 1969 formalized the students' practices in different services at the end of the medical school. In 1983, the Brazilian Association of Medical Education (ABEM) and the Federal Council of Education established the training of general practitioners as an objective of the internship.²

In 2001, the National Curricular Guidelines for medical education established the minimum internship hour load equal to 35% of the total course load. In 2008, in accordance with the Brazilian Federal Law 11,788, the working hours were reduced to forty hours per week. Also in this context, in 2014, the Guidelines established the obligation of 30% of the internship hour for primary care and urgency and emergency services.²

There are three types of internship: rotating medical internship, elective internship, and integrated internship. The rotating medical internship is the most common in Brazil which consists of the stratification and fragmentation of the medical practice. Its bigger disadvantage is the discontinuation of the medical assistance and a fragmented view of the care process. The elective internship works with the student's election in order to improve he/she learning in a specific medical service. The integrated internship works both with primary care and interdisciplinary, which is a point that stands out from this internship.²



Hence, the different scenarios where the interns are inserted set the complex educational environment of the medical schools. The curricular activities, the teachers/preceptors, the medical practice context, and the interaction between the students were considered relevant points in this background.^{3,4}

The educational environment is formed by several dimensions that make up a complex web, which is reflected in the relationship and the interaction between its members. The relationship between students, the growing learning, the teachers' attitude, the family relationships, among other interactions, constituted the educational environment. The factors may have some positive or negative influence on the medical training.^{4,3}

Various elements are perceived in this context. These elements can be material or affective, and surround the student. The most described material elements are: physical space, furniture, temperature, sound condition, lighting, and adequacy of visual. The most relevant affective elements are: respect, feeling of belonging, security, encouragement and trust.⁵

Different scales can be used to quantify the influence of many factors in the teaching-learning process. Among them, we can mention: Johns Hopkins Learning Environment Scale (JHLES), Medical School Learning Environment Survey (MSLES), and the Dundee Ready Education Environment Measure (DREEM).

The Dundee Ready Education Environment Measure (DREEM) is a instrument that evaluates the educational environment and reveals the degree of student's recognition of the learning environment.^{6,7,8}

The DREEM has been widely used. According to a relevant systematic review performed in 2018 showed that 86.8% of the studies on the educational environment carried out in the world used it as an assessment tool.⁹

The DREEM has been translated into eight languages, including Portuguese. It is used in more than twenty countries, being an important evaluation tool for students in the learning environment. The DREEM is formed by fifty items with a maximum score of 200 points when added together to the five dimensions. In the overall score the range 0–50 is considered "very low"; the range 51–100 is "very problematic"; the range 101–150 is "more positive than negative"; and the range 151–200 is "excellent".^{3,2}

Another way to analyze the score obtained by questionnaire is the division into dimensions. These are: the student's perception of learning (twelve items), the

25



student's perception of teachers (eleven items), the student's perception of atmosphere (twelve items), and the student's perception of social aspects (seven items).^{10,11}

A third way to evaluate the DREEM questionnaire is observing each item. This can bring more specific results than the value of global score and the dimensions. The assessment can be made considering each item: <2 (problematic area), 2–3 (requiring more teacher's actions for improvements), 3–3.5 (strong score area), and >3.5 (very strong score area).¹²

In this way, the study aimed to evaluate the perception of medical interns from two medical schools, one of which with active learning methodology (A) and the other with traditional learning methodology (B).

METHODS

Study design and place

This is an observational, cross-sectional, quantitative and analytical study performed from October 2019 to December 2020, in two medical schools in Fortaleza, indicated as medical school (A), which works with active learning methodology, and medical school (B), which works with traditional learning methodology.

Survey participants

It used a convenience sampling (non-probability sampling) of students enrolled in second and seventh semester and in the internships from both medical schools aged 18 years or older. Students on medical leave and in internships/activities outside the city were excluded.

Instruments and data collection

Data collection was performed on the learning environments of the second and seventh semester of each university and in health services for medical interns.

It was used for data collection: (1) Sociodemographic and economic questionnaire with nine questions; (2) DREEM questionnaire (Dundee Ready



Education Environment Measure) with 50 questions divided into five domains: academic achievement, environment, learning, teachers, and social.

The DREEM questionnaire offers five answer options using a Likert scale numbered from zero to four, which zero is "strongly disagree" and four is "strongly agree". There are nine items in which the positive perception will be given by disagreement and not by agreement. This aims to verify the degree of attention of the students in filling the questionnaire.

The score of the academic achievement dimension had the following interpretation: 0–8 "feeling of complete failure", 9–16 "many negative aspects", 17–24 "more positives aspects than negative", and 25–32 "self-confident".^{20, 21}

The score of the environment dimension was interpreted as: 0–12 "bad", 13– 24 "many aspects should be improved", 25–36 "more positives aspects than negative", 37–48 "Good, in general".^{20,21}

The score of the learning evaluation dimension had the values defined as: 0– 12 "very bad", 13–24 "more negative", "more positive than negative", 37–48 "totally positive".^{20,21}

The score of teacher evaluation dimension had the following interpretation: 0– 11 "very bad", "they need training", 23-33 "They're in the right direction", 34–44 "Teachers as role models".^{20,21}

The score of social evaluation dimension had the following division: 0–7 "bad", 8–14 "not very good", 15–21 "not so bad", and 22–28 "very good".^{20,21}

Also in this context, it was asked to students if they had already thought about giving up the medical school due to some subject with excessive hour load or with a demotivating learning methodology.

Outcome

The outcome was the educational environment in the internship assessed using the DREEM questionnaire.

Variables

27



The independent variables for characterizing the sample was: gender, marital status, number of children, age, income, housing, cost of college, medical school with active and traditional methodology.

Data analysis

The collected data were stored and analyzed using SPSS software, version 23 for Macintosh (Armonk, NY, USA). The categorical variables were expressed as absolute count and percentage in parentheses. Quantitative data were expressed as mean ± standard deviation in accordance with the analysis of data distribution normality, which was made by using the Kolmogorov—Smirnov Normality Test and histograms. The Student T test was used in order to compare the DREEM score between two groups, and the one-way ANOVA followed by the Tukey's post-test were used in cases of comparing three or more groups, which performs the paired comparison analysis between groups. The values p<0.05 were considered statistically significant.

The study was approved by the Research Ethics Committee of both medical schools, according to the opinion no 3.711.307 e no 3.797.368. It was requested from the participants their agreement through the signing of a Consent Form.

RESULTS

Out of the total 346 medical interns enrolled in the two medical schools, 208 (60.1%) participated in the study. The average age of the participants was 23.3 years. There was no significant difference in the perception of the educational environment, when they were analyzed by gender, income, number of children and housing.

The perception of the medical interns in the two medical schools under study was "more positive than negative" with a DREEM's overall value of 144.65.

The Table 1 shows the medical interns evaluation in the medical schools distributed under the five dimensions. It is a positive highlighted point the scores regarding the teacher's performance, which were considered as role models.

Table 1. The internship evaluation in the medical schools (A) and (B) based on the DREEM questionnaire and the five dimensions, city of Fortaleza, 2020.

Domains Mean/standard	Interpretation of the scores
-----------------------	------------------------------



	deviation	
Teaches/Preceptors	33.75± 6.18	Teacher Model
Learning	33.73 ± 7.89	More positive than negative
Academic atmosphere	23,24 ± 4.78	More positive than negative
Environment	35.19 ± 7.15	More positive than negative
Social	18.74 ± 4.23	Not so bad

Data expressed with mean \pm standard deviation Source: the authors, 2020.

The medical school with traditional learning methodology had lower scores in the DREEM questionnaire, with the overall value of 122.45, as well as in each dimension, when they were compared to the values regarding the medical school with active learning methodology, based on the medical interns' perception.

The medical school with active learning methodology had an overall value considered "excellent". In this medical school, it is highlighted the students' perception of the teachers/preceptors, which are considered as "models" (35.87), as well as the learning is considered as "totally positive" (37.13), and the general environment considered as "Good, in general" (37.37).

There was a significant difference regarding the internship educational environment in the two medical schools, which was found in the DREEM questionnaire and the five dimensions (Table 2):

	Medical Internship			
	Active Methodology	Traditional Methodology	р	
Domains				
Perception of the preceptors	35.87 ± 4.94	29.09 ± 6.09	<0.001	
Perception of learning	37.13 ± 5.3	26.26 ± 7.5	<0.001	
Perception of academic achievement	24.78 ± 3.8	19.85 ± 5	<0.001	
Perception of the general environment	37.37 ± 5.8	30.38 ± 7.53	<0.001	
Perception of social relationships	19.59 ± 3.93	16.86 ± 4.29	<0.001	
DREEM overall score	154.75 ± 19,55	122.45 ± 25,42	<0,001	

Table 2. The internship educational environment evaluation, overall score, and the five domains of the DREEM questionnaire regarding the medical schools (A) and (B), city of Fortaleza, 2020

Data expressed with mean \pm standard deviation. Student T Test used to compare the two groups in each internship situation, p< 0,05.

Source: the authors, 2020.



The assessment can be made considering each item: <2 (problematic area), 2-3 (requiring more teacher's actions for improvements), 3-3.5 (strong score area), and >3.5 (very strong score area).¹²

The evaluation of the items of the questionnaire (table 3) shows the students feel very stimulated to take part in the class (item 1) and seek self-learning, both items with means higher than three points.

It is possible to identify three means lower than three points in the evaluation regarding the preceptors. They are: "teachers are authoritarian" (mean = 2.81), "the teachers give good feedback to students" (mean = 2.7), and "the students annoy teachers" (mean = 2.77). This should be interpreted as "requiring more teacher action for improvements". None of the items regarding the preceptors were considered as a very strong score area (score higher than 3.5).

A fundamental fact in this process is to evaluate the perception of academic achievement. A point that stands out negativity is the low mean on Table 3 (1.83) related to the item "The way I used to study before works in this course". However, it was observed that the high score (3.52) of the item "I am confident that I will pass this year".

Regarding the general environment where the students are inserted, it was not identified any score with problematic evaluation, and three factors were considered strong. They are: peaceful environment during the classes, practice of personal relationships, and comfort in classes. Those three were represented by items 23, 30, and 33. All of them had scores higher than three, according to Table 3.

The need of a good support program for stressed students is highlighted by the low score of item 3 related to the social relationship dimension. Added to this, there is a feeling of low productivity in the school due to the tiredness. The item 4 related to the social relationship dimension reports such facts.

The housing in a comfortable place is considered as a very strong point in the evaluation of the social relationship, according to item 46.

Table 3. Evaluation of the internship educational environment based on the
items of the DREEM questionnaire, medical schools A e B, city of Fortaleza,
2020.

DREEM Questions	Internshi	p Interpretatio n
		ndard iation



1. I am stimulated to take part in the classes	3.25	2.23	Strong area
2. It is possible to understand the teachers in their classes	3.3	0.73	Strong area
3. There is a good support program for stressed students	1.88	1.29	Problematic area
4. I have been too tired to harness this course	1.96	1.13	Problematic area
5. The way I used to study before works in this course	1.83	1.27	Problematic area
6. Teachers have shown to be patients with patients	3.2	0.88	Strong area
7. The education method adopted is usually stimulating	2.82	1.09	Action for improvemen ts
8. Teachers ridicule students	3.13	1.02	Strong area
9. Teachers are authoritarian	2.81	1.1	Action for improvemen ts
10. I am confident that I will pass this year	3.52	0.85	Very Strong area
11. The environment is peaceful during the classes in wards.	2.93	1.04	Action for improvemen ts
12. This college is very punctual in the courses.	2.79	1.18	Action for improvemen ts
13. Education is student-centered (more self-learning)	2.93	1.18	Action for improvemen ts
14. I rarely feel discouraged in this course	2.27	1.26	Action for improvemen ts
15. I have good friends in college	3.54	0.79	Very Strong area
16. The education is concerned with developing my competences	3.21	0.98	Strong area
17. The practice of cheating on tests is common in this college	2.45	1.22	Action for improvemen ts
18. Teachers communicate well with patients	3.29	0.71	Strong area
19. My social life is good	2.97	1.09	Action for improvemen ts
20. Teaching is very cohesive and focused	2.75	1.07	Action for improvemen ts
21. I feel I have been well-prepared for the profession	3.06	1.04	Strong area
22. The education method is concerned with developing my self-confidence	2.76	1.12	Atuação para gerar melhorias
23. The environment is peaceful during the classes	3.07	0.89	
_			

TECHNIUM

			A ation for
24. Teaching time is well spent	2.5	1.14	Action for improvemen ts
25. The education emphasizes the learning of memorable facts	1.46	1.04	Área com problema
26. The learning of the last year made me well- prepared for this year	2.82	1.01	Action for improvemen ts
27. I have a good memorizing capacity for everything I need	2.08	1.18	Action for improvemen ts
28. I rarely feel me lonely	2.44	1.22	Action for improvemen ts
29. The teachers give good feedback to students	2.7	1.09	Action for improvemen ts
30. I have the opportunity to develop a practice of personal relationship	3.22	0.86	Strong area
31. I learned a lot about personal relationship in this profession	3.4	0.82	Strong area
32. Teachers give us constructive criticism	3	0.98	Strong area
33. I feel comfortable in class	3.14	0.84	Strong area
34. The environment is peaceful during the seminars	3.12	0.82	Strong area
35. I feel my experience here disappointing	3.12	1.04	Strong area
36. I have good ability to concentration	2.43	1.15	Action for improvemen ts
37. Teachers give very clear examples	2.88	0.88	Action for improvemen ts
38. I am certain about the objectives of this course	3.24	1.14	Strong area
39. Teachers get nervous in the classroom	3.47	1.07	Strong area
40. Teachers are well-prepared for classes	3.21	0.96	Strong area
41. The search for solutions has been developed in this course	3.1	0.91	Strong area
42. Satisfaction is greater than the stress of studying medicine	3.09	1.03	Strong area
43. The environment encourages me to learn	3.11	0.91	Strong area
44. The education encourages me to pursue my self- learning	3.27	0.82	Strong area
45. Much of what I have seen seems important for medicine	3.18	0.95	Strong area
46. I live in a comfortable place	3.68	0.63	Very Strong area
47. The importance of continuing education is emphasized	3.35	0.85	Strong area
48. Education is student-centered	2.38	1.18	Action for improvemen t



49. I feel comfortable to ask whatever I want in class	2.71	1.1	Action for improvemen t
50. Students annoy teachers	2.77	1.07	Action for improvemen t

Data expressed with mean \pm standard deviation. Source: the authors, 2020.

The interns were divided into two groups, according to their internship location (hospital environment or outpatient setting).

The item 11 was the only one that showed some statistical differences between the hospital and outpatient setting group, according to Table 4. Thus, there is a more peaceful environment in the hospital, according to the interns' evaluation. In general, there was no difference in the mean related to the compared groups (hospital and outpatient).

There are four items related to the dimension of the perception of the general environment which scores "Requiring more teacher's actions for improvements" in both groups. They are: "This college is very punctual in the courses." (item 12), "the practice of cheating on tests is common in this college" (item 17), "I have good ability to concentration" (item 36), and "I feel comfortable to ask whatever I want in classes" (item 49).

	Internship			
	Hospital	Outpatient	р	
1. I am stimulated to take part in the classes	3.33 ± 2.5	3.06 ± 1	0.469	
2. It is possible to understand the teachers in their classes	3.34 ± 0.69	3.29 ± 0.71	0.691	
3. There is a good support program for stressed students	1.84 ± 1.27	2.02 ± 1.3	0.393	
4. I have been too tired to harness this course	1.95 ± 1.13	2.06 ± 1.16	0.546	
5. The way I used to study before works in this course	1.95 ± 1.29	1.6 ± 1.18	0.099	
6. Teachers have shown to be patients with patients	3.24 ± 0.87	3.1 ± 0.93	0.346	
7. The education method adopted is usually stimulating	2.87 ± 1.04	2.83 ± 1.15	0.852	

Table 4. Evaluation of the internship educational environment based on the items of the DREEM questionnaire, in hospital environment and outpatient setting, city of Fortaleza, 2020.

TECHNIUM

8. Teachers ridicule students	3.17 ± 1.04	3.02 ± 0.96	0.39
9. Teachers are authoritarian	2.81 ± 1.12	2.85 ± 1.03	0.803
10. I am confident that I will pass this year	3.51 ± 0.84	3.54 ± 0.92	0.821
11. The environment is peaceful during the classes in wards.	3.02 ± 1.01	2.65 ± 1.1	0.029
12. This college is very punctual in the courses.	2.84 ± 1.16	2.77 ± 1.08	0.711
13. Education is student-centered (more self-learning)	2,9 ± 1.16	3.13 ± 1.16	0.252
14. I rarely feel discouraged in this course	2.33 ± 1.26	2.1 ± 1.22	0.274
15. I have good friends in college	3.55 ± 0.84	3,42 ± 0.79	0.337
16. The education is concerned with developing my competences	3.23 ± 0.97	3.21 ± 1.01	0.897
17. The practice of cheating on tests is common in this college	2.54 ± 1.23	2.23 ± 1.19	0.122
18. Teachers communicate well with patients	3.32 ± 0.73	3.25 ± 0.67	0.561
19. My social life is good	2.99 ± 1.11	2.85 ± 1.03	0.44
20. Teaching is very cohesive and focused	2.8 ± 1.03	2.71 ± 1.07	0.584
21. I feel I have been well-prepared for the profession	3.09 ± 1.02	3.06 ± 1.02	0.874
22. The education method is concerned with developing my self-confidence	2.82 ± 1.09	2.69 ± 1.09	0.458
23. The environment is peaceful during the classes	3.14 ± 0.88	2.98 ± 0.84	0.264
24. Teaching time is well spent	2.54 ± 1.17	2.6 ± 0.94	0.722
25. The education emphasizes the learning of memorable facts	1.39 ± 1.04	1.6 ± 0.94	0.213
26. The learning of the last year made me well-prepared for this year	2.9 ± 1.02	2.73 ± 0.87	0.284
27. I have a good memorizing capacity for everything I need	2.13 ± 1.23	1.96 ± 1.01	0.388
28. I rarely feel me lonely	2.41 ± 1.25	2.46 ± 1.13	0.802
29. The teachers give good feedback to students	2.69 ± 1.06	2.85 ± 1.07	0.342
30. I have the opportunity to develop a practice of personal relationship	3.2 ± 0.9	3.23 ± 0.81	0.861
31. I learned a lot about personal relationship in this profession	3.39 ± 0.83	3.42 ± 0.79	0.836
32. Teachers give us constructive criticism	3.01 ± 0.99	3.08 ± 0.9	0.66
33. I feel comfortable in class	3.17 ± 0.82	3.15 ± 0.87	0.885
34. The environment is peaceful during the seminars	3.2 ± 0.77	2.94 ± 0.95	0.055
35. I feel my experience here disappointing	3.11 ± 1.07	3.12 ± 0.98	0.952



37. Teachers give very clear examples	2.93 ± 0.83	2.75 ± 0.81	0.186
38. I am certain about the objectives of this course	2.77±0.92	2.87 ± 1.27	0.177
39. Teachers get nervous in the classroom	3.48 ± 1.04	3.44 ± 1.18	0.793
40. Teachers are well-prepared for classes	3.27 ± 0.92	3.1 ± 0.95	0.281
41. The search for solutions has been developed in this course	3.13 ± 0.89	3.17 ± 0.83	0.821
42. Satisfaction is greater than the stress of studying medicine	3.1 ± 0.99	3.06 ± 1.14	0.846
43. The environment encourages me to learn	3.11 ± 0.95	3.02 ± 0.89	0.543
44. The education encourages me to pursue my self-learning	3.31 ± 0.77	3.15 ± 0.95	0.216
45. Much of what I have seen seems important for medicine	3,46 ± 0.72	3.31 ± 0.78	0.229
46. I live in a comfortable place	3.71 ± 0.58	3.63 ± 0.76	0.392
47. The importance of continuing education is emphasized	3.4 ± 0.78	3.27 ± 0.98	0.344
48. Education is student-centered	2.35 ± 1.24	2.56 ± 0.9	0.273
49. I feel comfortable to ask whatever I want in class	2.76 ± 1,12	2.6 ± 1.01	0.396
50. Students annoy teachers	2.79 ± 1.12	2.75 ± 0.91	0.822

Data expressed with mean \pm standard deviation. Student T Test used to compare the two groups in each internship situation. Source: the authors, 2020.

DISCUSSION

Studying the educational environment becomes essential for the development of modern and effective curricula. The educational environment of medical school is more complex when the students are inserted in the internships at the end of the course. The medical internship usually lasts two years, and it is critical for medical training.¹

The curriculum structure prioritizes the establishment of areas of competence taking into account situations that simulate real problems or professional practice issues. These situations constitute stimuli for the beginning of the teaching-learning process. There is a noticeable change in the role of the school and teachers regarding the relationship with students. Interdisciplinarity enriches the educational environment. These practices are more observed in schools with an active methodology.¹



Students from different medical schools report that the learning methods do not motivate them for the learning process. The insistent on keeping the curriculum structure which prioritizes the study of memorable facts brings dissatisfaction.¹⁴

The study datas support this understanding, because the mean 1.46 reported in item 25 of the DREEM questionnaire ("the education emphasizes the learning of memorable facts") reflects this is still a problematic practice in the medical internship, according to this specific point.

The strong point in student evaluation are the preceptors who were considered models. The score is even higher for teachers when only the medical school with active learning methodology is analyzed separately. It is possible that this fact is related to the teaches development, through academic trainings and the application of the methodologies.¹⁵

The individual analysis of the "Learning" dimension items showed a negative evaluation to the following question: "the education emphasizes the learning of memorable facts". In face of that, there is a medical interns' understanding that the subjects which require memorization have been present in the educational process.

The analysis of the "Perception of preceptors" dimension items showed points that should be improved: the authoritarian attitude, feedback, and using clearer examples in learning exercises. Even so, the teachers were considered "models" in this dimension evaluation.

According to the World Federation for Medical Education (WFME), evaluating the educational environment considering the students' feedback is critical for medical schools. According to the datas under analysis, our sample showed scores that require more teacher's actions for improvements. Thus, the students consider that feedbacks are not performed in a satisfactory way.¹⁶

In the students' point of view, the rhythm of studies before the entrance in medical school used to be higher, it means that there is a decrease of available time for learning, according to the low score of item 5 "the way I used to study before works in this course" (1.83). It supports the feeling of confidence in the approval in that period of the course shown by the high score of item 10 "I am confident that I will pass this year" (3.52).

The interns are inserted in different practice scenarios in the public health services which can be hospital environment or outpatient setting.¹



In the hospital, essential experiences for medical training are performed. Dealing with a patient in the hospital bed is not just offering medication or performing required surgery, but also to understand all the social context that the patient's family is involved in, and the financial problems regarding to brazilian Health Unic System (SUS, in portuguese), to live with other professions and respect them, among other peculiarities that interfere in the educational environment. The establishment of a rating scale for this process is essential.¹⁷

The outpatient setting is made by basic health units which are responsibles for many preventive practices, and chronic pathological control, in order to avoid hospitalization and medical complications. This educational environment provides the opportunity for the student to know the reality of communities and daily life in a closer way.

In this way, we analysed the "perception of the general environment (atmosphere)" of the DREEM questionnaire regarding those two groups. Two fundamental points stand out: the most peaceful place seems to be the hospital environment, according to item 11, including during the seminars (item 34). In other criterias, there was no difference between the groups.

CONCLUSION

The evaluation of the internship educational environment was satisfactory based on the students' perception. The medical school with active learning methodology scored better than the medical school with traditional learning methodology. The medical interns considered as a weak point the existence of some situations which they are subjected to the learning of memorable facts. The strong point is the perception of the preceptors by students.

REFERÊNCIAS

1. BRASIL. Diretrizes curriculares nacionais do curso de graduação em medicina. Conselho Nacional de Educação/Câmara de Educação Superior, publicado no D.O.U. de 6 de junho, Seção 1, Pág. 17, 2014.

2. BATISTA NA, VILELA RQB, BATISTA HSS. Educação Médica no Brasil. 2015; 217-235.

3. HUTCHINSON L. ABC of learning and teaching: Educational environment. BMJ. 2003; 12; 326 (7393):810-812.



4. HONGKAN W, *et al.* Perception of educational environment among medical students in Thailand. International Journal Of Medical Education. 2018; 9: 18-23.

5. TRONCON LEA. Ambiente educacional. Medicina (Ribeirão Preto). 2014. 47(3): 264-71.

6. SCHUBIGER M, *et al.* Informing the medical education reform in Tajikistan: evidence on the learning environment at two nursing colleges. Bmc Medical Education. 2019; 19 (01): 19-85.

7. STORMON N, FORD PJ, ELEY DS. DREEM-ing of dentistry: Students' perception of the academic learning environment in Australia. European Journal Of Dental Education. 2018; 23 (01):35-41.

8. FARAJPOUR A, *et al.* Perception of educational environment among undergraduate students of health disciplines in an Iranian university. International Journal Of Medical Education. 2017; 08:300-306.

9. CHAN CYW, *et al.* Adoption and correlates of the Dundee Ready Educational Environment Measure (DREEM) in the evaluation of undergraduate learning environments – a systematic review. Medical Teacher. 2018; 40 (12):1240-1247.

10. ROFF S, MCALEER S, HARDEN RM, AL-QAHTANI M, AHMED AU, DEZA H, *et al.* Development and validation of the Dundee Ready Education Environment Measure (DREEM). Medical Teacher. 1997; 19: 295–299.

11. ROFF S. The Dundee Ready Educational Environment Measure (DREEM) - a generic instrument for measuring students' perceptions of undergraduate health professions curricula. Medical Teacher. 2005; 27 (04): 322-325.

12. GUIMARAES AC, *et al.* Percepção do Estudante de Medicina acerca do Ambiente Educacional Utilizando o Dreem. Revista Brasileira de Educação Médica. 2015; 39 (04):517-526.

13. SOLIMAN MM, KAMRAN S, SAMI A, FAISAL A, KHALID A, MOHAMED A, *et al.* Medical students' perception of the learning environment at King Saud University Medical College, Saudi Arabia, using DREEM Inventory. Advances in Medical Education and Practice. 2017; 8:221–227.

14. ENNS SC. Avaliação da percepção do ambiente de ensino e sua relação com qualidade de vida em estudantes de medicina. 2014.



15. YONGJIE QIN A YUNGUI WANG B ROBERT E. FLODEN. The Effect of Problem-Based Learning on Improvement of the Medical Educational Environment: A Systematic Review and Meta-Analysis Med Princ Pract 2016;25:525–532.

16. World Federation for Medical Education. International standards in medical education: assessment and accreditation of medical schools' – educational programmes. A WFME position paper. The Executive Council, Med Educ. 1998;32(5):549–558

17. World Health Organisation. Transformative scale up of health professional education. An effort to increase the numbers of health professionals and to strengthen their impact on population health. 2009

AUTHORS 'CONTRIBUTION

Project design and conception; Manoel Coutinho Filho, Olivia Andréa Alencar Costa Bessa Data collection: Manoel Coutinho Filho, Lucas Loiola Ponte Albuquerque Ribeiro Data analysis and interpretation: Manoel Coutinho Filho, Olívia Andréa Alencar Costa Bessa Writing of manuscript: Manoel Coutinho Filho, Olívia Andréa Alencar Costa Bessa The authors assume public responsibility for the content of this article.



CONFLICTS OF INTEREST

The authors declare that they do not have any conflict of interest in this study. This project had no external funding.

MAILING ADDRESS

Manoel Coutinho Filho - E-mail: arquivoeducmanoel@gmail.com Av. Rui Barbosa 639 – Meireles – CEP 60115220 Fortaleza – Ceará. Contato: (85) 999588705