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RESEARCH ARTICLE

Perceptions of Students of the Clinical Pathology Specialist Medical Education Program towards the Learning Environment: A Multi Methodology Study

Yuyun Widaningsih[1,2*], Haerani Rasyid[1,6,7], Irawaty Djaharuddin[3], Budu[4], Alfian Zainuddin[5], Irfan Idris[1,7], Ichlas Nanang Afandi[1,7], Asty Amalia[1,7]

[1]Department of Medical Education, Faculty of Medicine, Hasanuddin University, Indonesia
[2]Department of Clinical Pathology, Faculty of Medicine, Hasanuddin University, Indonesia
[3]Department of Pulmonology and Respiratory Medicine, Faculty of Medicine, Hasanuddin University, Indonesia
[4]Department of Eye Health Sciences, Faculty of Medicine, Hasanuddin University, Indonesia
[5]Department of Public Health Sciences, Faculty of Medicine, Hasanuddin University, Indonesia
[6]Department of Internal Medicine, Faculty of Medicine, Hasanuddin University, Indonesia
[7]Department of Clinical Nutrition, Faculty of Medicine, Hasanuddin University, Indonesia

ARTICLE INFO	ABSTRACT
*Corresponding Author yuyunwidaningsih5979@gmail.com	This study aims to determine the perceptions of Specialist Doctor Education Program Students (MPPDS) of the learning environment in the Clinical Pathology Study Program, Faculty of Medicine, Hasanuddin University. The method used was multi-methodology with sequential explanatory design using the Dundee Ready Educational Environment Measure (DREEM) questionnaire and Focus Group Discussion (FGD). The sample consisted of 92 students for quantitative survey and 9 students for FGD. The results showed that the DREEM quantitative method indicated that most of them perceived the learning environment positively (46.74%) and very positively (53.26%), with the social environment domain having the lowest mean of 19.84%. However, the qualitative FGD method revealed dissatisfaction, especially regarding poor interactions between students and lecturers and suboptimal facilities and infrastructure. The lack of dynamics in the academic atmosphere also hinders their motivation and academic engagement, potentially affecting their overall academic performance. The conclusion shows that the perception of MPPDS Clinical Pathology is more on the less than optimal social environment, both technical aspects (facilities and infrastructure), and non-technical aspects (less vibrant academic atmosphere).

INTRODUCTION

Medical education is an essential basis in shaping the competence and professionalism of doctors. The quality of the learning environment plays an important role in determining the effectiveness of the education received by students. A supportive learning environment will increase student motivation, satisfaction, and academic achievement, while a less conducive environment can hinder the learning process and the development of clinical competence and professionalism [1].

The Clinical Pathology Specialist Education Program (PPDS) at the Hasanuddin University Faculty of Medicine (FK Unhas) Makassar, South Sulawesi, is one of the institutions committed to producing quality clinical specialists. However, student perceptions of the learning environment in this program have not been widely studied. Students' perception of the learning environment is one of

the important indicators that can provide valuable information for improving the quality of education [2].

Various studies have examined medical students' perceptions of their learning environment. The study by Lizzio et al (2002), showed that a positive learning environment correlated with improved academic performance and student satisfaction [3]. Another study by Genn (2001), emphasizes the importance of evaluating the learning environment to improve the quality of medical education [4].

Many studies using the Dundee Ready Education Environment Measure (DREEM) instrument have also been conducted to assess students' perceptions of their learning environment. A study by Al-Qahtani et al (2021), in Saudi Arabia found that a supportive learning environment has a significant effect on student satisfaction and academic performance [5]. In India, a study by Roff (1997), using DREEM showed similar results, namely the need for continuous improvement in the medical education environment [6].

This study has several uniqueness that distinguish it from previous studies. First, the focus of this research is on PPDS Clinical Pathology, a specific field and has not been widely studied in Indonesia, especially at FK Unhas Makassar. Second, this study adopts a multi-methodology approach that combines quantitative with qualitative, namely by using the DREEM instrument to obtain quantitative data and Focus Group Discussion (FGD) for qualitative data. This approach provides a more comprehensive picture of student perceptions.

In addition, the geographical and cultural context of FK Unhas which is located in South Sulawesi. These geographical and cultural conditions may influence student perceptions and have not been widely explored in previous studies. Therefore, the results of this study are expected to make an important contribution in understanding how the learning environment is perceived by students in this region, as well as providing relevant recommendations for the improvement of the quality of education in related institutions.

Therefore, the researcher formulated the problem to be studied in this study, namely how the perceptions of students of the Clinical Pathology Specialist Doctor Education Program (PPDS) towards the learning environment at FK Unhas Makassar, South Sulawesi. The general objective is to determine student perceptions of the learning environment based on the DREEM method, with specific objectives including the learning process, lecturers, academic achievement, educational atmosphere, and social life.

This study is very important because it can provide in-depth insight into the perceptions of Clinical Pathology PPDS students towards their learning environment. This information can be used by education program managers to improve the quality of the learning environment, which in turn will improve the competence and professionalism of graduates. In addition, this study can be a reference for other medical education institutions in Indonesia in evaluating and improving their learning environment.

RESEARCH METHODS

Research Design

This research is a multi-methodology study, namely a mix method that combines elements of quantitative and qualitative research approaches in a cross sectional manner. This aims to determine the perception of the learning environment in clinical pathology specialist medical education program students. The mixed method research design used is an explanatory sequential design.

Research Instrument

Quantitative data were collected using the Dundee Ready Educational Environment Measure (DREEM) questionnaire. This questionnaire consisted of 50 expectation and perception questions from five dimensions, namely learning process, teaching staff, academics, atmosphere, and social life. In addition, these questions were measured by a Likert scale consisting of 1-5 points, including 1) strongly disagree, 2) disagree, 3) moderately agree, 4) agree, 5) strongly agree.

The qualitative data was collected by means of Focus Group Discussions (FGDs) using open-ended questions, namely the DREEM model questionnaire, to dig deeper into students' perceptions of the

quality of education services from their point of view, challenges faced, and areas of difficulty. Respondents were asked to give consent to have audio recordings of the discussions. The FGDs were conducted until new ideas were no longer presented or respondents reached saturation.

Sample and Respondent Characteristics

The method used in sampling in this study was total sampling for quantitative surveys with an open question method of 92 people, where the entire population was used as a research sample, namely Residents of the FK Unhas Clinical Pathology Study Program, while for qualitative data collection using purposive sampling method for FGDs as many as 9 people.

The selection of subjects in this study was based on inclusion and exclusion criteria. Inclusion criteria include students of the FK Unhas Clinical Pathology Study Program with active status, as well as students who are willing to take part in the study by signing the research subject agreement sheet (PSP). The exclusion criteria include students of the FK Unhas Clinical Pathology Study Program with leave / inactive status, as well as students who do not fill out the research questionnaire completely.

Data Analysis and Statistical Methods

The data were analyzed using reliability and validity tests to measure consistency and how far the measuring tool used can measure what you want to measure. The reliability test was carried out using the Cronbach's Alpha formula because it used a questionnaire as a research instrument. The data validity test was carried out using Statistical Product and Service Solutions (SPSS) 23 software using the Bivariate Pearson (Product Moment Pearson) correlation method.

The data obtained in this study were also analyzed using descriptive statistical methods, Paired-t Test, and Kolmogorov-Smironov Test (for data normality). The significance of the relationship between differences in student expectations and perceptions was determined by the Paired-t Test.

Ethics Approval

This study was approved by the Ethics Committee of Hasanuddin University (UH24030197). Prior to the start of the study, we provided a detailed explanation to the research subjects regarding the purpose and procedures of the study, and guaranteed the confidentiality of their personal data. After understanding the information, the respondents voluntarily signed the consent form to participate in this study.

RESULT

Quantitative Data

Based on Table 1, it is known that the age of Clinical Pathology PPDS respondents ranged from 25 to 42 years with an average age of 33.1 years and a standard deviation of 3.0 years. This indicates that the majority of respondents were in their early to mid-30s. The gender distribution showed that the large majority of respondents were female, at 87%, while only 13% were male. This shows the dominance of women in the Clinical Pathology PPDS program. The distribution of respondents by semester showed that respondents were spread fairly evenly across various semester levels, with the largest proportion being in semester 1 (16.3%), followed by semester 2 (15.2%) and semester 3 (14.1%). Respondents who were in semester more than 8 were only 5.4%. The distribution of respondents by educational stage showed that almost half of the respondents were at the basic stage (45.7%), while the rest were spread across the clinical (28.3%) and application (26.1%) stages. This suggests that most respondents are still in the early stages of their specialist education.

Overall, table 1 shows that the majority of PPDS Clinical Pathology participants are women with an average age in their early 30s. Respondents are spread fairly evenly across semesters and stages of education, with the largest proportion at the basic stage. These data provide a clear demographic picture of the participants in the 2024 PPDS Clinical Pathology program.

Table 1. Frequency Distribution of Respondent Characteristics of MPPDS Clinical Pathology 2024

Respondent Characteristics		Mean (sd)	Min-Max
Respondent Age (Years)		33.1 (3.0)	25-42
Respondent Characteristics		Mean (sd)	Min-Max
		n	%
Gender	Male	12	13.0%
	Female	80	87.0%
Semester	1	15	16.3%
	2	14	15.2%
	3	13	14.1%
	4	10	10.9%
	5	8	8.7%
	6	8	8.7%
	7	10	10.9%
	8	9	9.8%
	> 8	5	5.4%
Stages	Base	42	45.7%
	Clinical	26	28.3%
	Application	24	26.1%

Source: Primary Data

Table 2 shows that the perception of the learning process, from a total of 12 statements, there are 9 statements that received responses with an average score of ≥ 3. With the highest value in response to statement number 16 (score 3.3 (0.44) namely "Teaching and learning activities help me develop my competence". In addition, there are 3 statements that received responses with an average score of <3, namely statements 25, 47 and 48. Statement number 48 received the lowest score response (1.3 (0.74)) namely the negative statement "Teaching and learning activities are too focused on teaching staff".

In the perception component of lecturers and teaching staff, from a total of 11 statements, there were 7 statements that received responses with an average score of ≥3. With the highest value in response to statement number 1 (score 3.38 (0.66)), namely "Teaching staff are sufficiently knowledgeable". In addition, there were 4 statements that received responses with an average score of <3, namely statements 8,9,39 and 50. Statement number 31 received the lowest response score (0.70 (0.51)), namely the statement "Teaching staff mock students".

In the component of perception of academic achievement, from a total of 8 statements, there are 7 statements that received responses with an average score of ≥3. With the highest value in response to statement number 10 (score 3.41 (0.56)), namely "I am confident that I can get through this academic year". In addition, there are 4 statements that received responses with an average score of <3, namely statement 27. Statement number 27 received the lowest response score of 2.68 (0.61)), namely the statement "I can memorize everything I need".

In the component of perception of academic achievement, from a total of 12 statements, there were 7 statements that received responses with an average score of ≥3. With the highest value in response to statement number 40 (score 3.29 (0.48)), namely "The teaching staff prepare themselves well to teach their classes". In addition, there were 5 statements that received responses with an average score of <3, namely statements 11,12,17,35 and 36. Statement number 35 received the lowest response score of 1.29 (0.78)), namely the statement "I had a disappointing experience".

In the component of perception towards the achievement of Social Life, from a total of 7 statements, there are 4 statements that received responses with an average score of ≥3. With the highest value in response to statement number 15 (score 3.28 (0.48)), namely "I have good friends in this faculty". In addition, there are 3 statements that received responses with an average score of <3, namely statements 4.12 and 28. Statement number 4 received a response with the lowest score of 1.58 (0.96)), namely the statement "I am too tired to enjoy this study".

Table 2. Distribution of Student Perceptions on Each Question in the DREEM Questionnaire for PPDS Clinical Pathology Students in 2024

	Statement Items	Mean ± SD
a. Perception in the Learning Process		
1.	I was encouraged to participate in class	3,09 ± 0,77
7.	Teaching and learning activities often provide stimulation / encouragement	3,22 ± 0,44
13.	Student-centered teaching and learning activities	3,07 ± 0,46
16.	Teaching and learning activities help me develop my competencies	3,26 ± 0,44
20.	Teaching and learning activities are well focused	3,11 ± 0,52
22.	Teaching and learning activities help develop my self-confidence	3,22 ± 0,44
24.	Time for teaching and learning activities is well spent	3,03 ± 0,56
25.	Teaching and learning activities overemphasize learning about factual information *	2,18 ± 0,86
38.	I understand the learning objectives clearly	3,1 ± 0,47
44.	Teaching and learning activities encourage me to be an active learner	3,11 ± 0,48
47.	Long-term learning is emphasized over short-term learning for the short term	2,89 ± 0,64
48.	Teaching and learning activities are too centered on teaching staff *	1,3 ± 0,74
b. Perception of Lecturers or Teaching Staff		
2.	Teaching staff are knowledgeable enough	3,38 ± 0,66
6.	Teaching staff are patient with patients	3,35 ± 0,54
8.	Teaching staff mocking students*	0,7 ± 0,51
9.	Teaching staff are authoritarian*	0,79 ± 0,58
18.	Teaching staff have good communication skills with patients	3,29 ± 0,48
29.	Teaching staff able to give good feedback to students students	3,22 ± 0,49
32.	Here the teaching staff provide constructive criticism	3,21 ± 0,41
37.	Teaching staff set clear examples for me	3,22 ± 0,44
39.	Teaching staff showing anger in class*	1,1 ± 0,76
40.	Teaching staff are well prepared to teach their classes	3,29 ± 0,48

| 50. | Students irritate the teaching staff* | 1,07 ± 0,53 |

c. Perception on academic achievement

5.	The study strategies that worked for me before continue to work for me today	3,14 ± 0,35
10.	I am confident that I can make it through this academic year	3,41 ± 0,56
21.	I feel that I am well prepared for my profession	3,26 ± 0,49
26.	Last year's learning is good preparation for this year's learning	3,1 ± 0,49
27.	I can memorize everything I need	2,68 ± 0,61
31.	I have learned a lot about empathy in my profession	3,16 ± 0,52
41.	Problem-solving skills are well developed here	3,1 ± 0,42
45.	Most of the material I had to learn felt relevant to a profession/career in the health sector	3,25 ± 0,57

d. Perceptions on Educational Atmosphere

11.	The atmosphere of teaching and learning activities in the ward/polyclinic/health care center is relaxed	2,87 ± 0,67
12.	The schedule of teaching and learning activities is well organized	2,95 ± 0,65
17.	Cheating behavior is a problem in this faculty*	1,52 ± 0,84
23.	Relaxed lecture atmosphere	3,03 ± 0,6
30.	There are opportunities for me to develop interpersonal skills	3,13 ± 0,47
33.	I feel comfortable socializing in class	3,16 ± 0,45
34.	The atmosphere during the seminar/tutorial is relaxed	3,07 ± 0,53
35.	I had a disappointing experience*	1,29 ± 0,78
36.	I can concentrate well	2,98 ± 0,49
40.	Teaching staff are well prepared to teach their classes	3,29 ± 0,48
43.	The atmosphere here motivates me as a student	3,09 ± 0,41
49.	I feel I can ask the questions I want	3,07 ± 0,55

e. Perception on Social Life

3.	There is a good support system for students who experience stress	3,07 ± 0,64
4.	I'm too tired to enjoy this study*	1,58 ± 0,96
14.	I rarely feel bored with this study	2,76 ± 0,64
15.	I have good friends in this faculty	3,28 ± 0,48
19.	I have a good social life	3,22 ± 0,44
28.	I rarely feel lonely	2,87 ± 0,67
46.	My accommodation is pleasant	3,08 ± 0,37

Source: Primary Data Qualitative Data

The results of qualitative analysis using thematic analysis found 10 themes of clinical pathology PPDS students' perceptions of the learning environment in the Clinical Pathology department, which are best divided into two sub-categories, namely: 1) Technical Perception, and 2) Non-Technical Perception.

In technical perceptions related to learning facilities and infrastructure are less supportive A total of 6 MPPDS Clinical Pathology as respondents have a negative perception of the Learning Environment at the Department of Clinical Pathology. The statements are as follows:

"Maybe some may lack learning support facilities that might have to be equipped, that's all, for example like I don't think it's updated, the internet network, that's what we hope for,"

In Non-Technical Perceptions related to when reading scientific lecturers tend to be passive A total of 7 MPPDS Clinical Pathology as respondents have a negative perception of the Learning Environment at the Department of Clinical Pathology. The statements are as follows:

"Meanwhile, when we have scientific readings, I feel that I am not maximized there because the lecturer seems to only ask questions, but at that time does not really direct what the answer is, so I feel like what is the answer, it's not like that, not all lecturers are like that, so I am curious about why that is."

A total of 5 students of the specialist medical education program (MPPDS) found it difficult to meet supervisors in the Learning Environment at the Department of Clinical Pathology. The statements are as follows:

" But for the discussion, the time is rather minimal for the teaching staff ".

A total of 4 students of the MPPDS specialist medical education program felt that the academic atmosphere was less lively than other departments with the following statements:

"That's right, I ask seniors, seniors also may not know the answer, there is something like that, because the education system here is like that, then I go to the application, if in the application we join other residents, I join children's resident activities, internal resident activities, like that, I see that they have a more lively discussion than the discussion here."

Seniority is not healthy, a total of 3 MPPDS stated that:

"If it's a mental problem, maybe there is, but there is no senior here, no, later doc if it's all good it's thought that I'm lying, so I'd rather be honest, uh there are usually, some, maybe only one or two people, like saying, I happen to be the class president, there was recently said, there is no point in being the class president, then I don't care, because in my opinion as long as what he said is not true, I don't care, that's how it is, I am an ignorant person, and there are some seniors sometimes in other ordinary, in chat sometimes angry but not originally ji and usually it is only to educate and I was taught to during school, as long as it does not violate things that violate religion is not a problem, and see everything that is good, for example told to see this is good, it is very honest mi, just recently ji was told that you are the head of the class, there is no point in being the head of the class".

A total of 2 MPPDS have the perception that when they were juniors, they were asked to be more multitask, in this case taking care of seniors and so on. Statements as follows:

"So when we were in the first semester, the lower semester, when defending an activity, we were told to be ninjas, or told to divide ourselves like amoebas, actively involved in the service, also active in the activity, which maybe Dr. Fadilah said when there is a friend who cannot be managed, or is difficult to find, the class leader must be the one who is hit, including my class leader. Fadilah said that when there are friends who cannot be arranged, or are difficult to find, the class leader must be the one who is hit, including my class leader, sometimes if we disappear and so on, the mental pressure as the class leader, first must be the most sought after, only a little bit sought after is the mother, because the majority of our mothers are here sir, the mother must be sought after, where is the class leader, where can you not manage your members, not an obstacle, so things like this are what becomes the learning process in it, there is also a notification or notification from seniors like that, so there are service activities as well as our additional activities, well sometimes there are two things that run simultaneously, it becomes two that shadow ki, 1 from the activity side, 1 from the service side, well this is what people sometimes, when I take care of activities like this, neglected."

A total of 2 MPPDS have statements of new residents with low work ethic (want to feel good), the following statement:

"Imagine a doctor who wants to go to school, complaining about the length of duty, where is this, I said it was damaged by this child, right, you doctor, you know that we work without hours, where do we rotate patients coming, his views sir, so imagine if he complains about the problem of duty, the length of duty hours, this is damaged reasoning, making it damaged, finally we PK pity is considered something wrong, even though it's just because of these crazy people, just give it out, meaning I return it to myself anyway, I pass it, imagine a doctor complaining about the length of duty hours, thank you".

Scientific reading, health workers are not cooperative, and the role as Chief is burdensome, a total of 1 MPPDS each has a perception of each of these statements, this can be seen from the following statements:

"Or mentally disturbed during the learning process, and still in the corridor of the presentation, I used to have a problem, this is just a matter of mechanism, and there are those who agree and those who disagree, I am in the minority, there are conditions where the presentation prepares questions so that the first goal is a smooth discussion, the second is considered to be able to answer these questions, so that it is considered that the reading is safe".

"Then for the relationship with the laboratory, maybe with the analysts, that's what is sometimes up and down because maybe they feel equal to us analysts, that means, analysts who are non-doctors, it's D3 S1 analysts so they are non-doctors, I don't know D3 S1 S2, they are employees like that, so sometimes I am confused in the curriculum, for example we learn about molecular PCR, but when we ask in there, for example, how to read it, they don't teach us, they don't tell us that, then we want to know".

"As for my duties as chief, let me discuss, here unfortunately as chief it is not an award in my opinion, it is a burden, no resident wants to be appointed as chief, like that, yes such a punishment, maybe there needs to be innovation in the duties and responsibilities of the chief, so that he does not feel burdened".

Integration of Quantitative and Qualitative Data

Based on the results in Table 3, the integration of quantitative and qualitative data, it can be seen that the perceptions of Clinical Pathology PPDS students towards the learning environment show interesting findings. Quantitatively, the social environment aspect scored the lowest with a mean of 19.84, indicating a need for significant improvement in this aspect.

From a qualitative perspective, the theme with the highest response was dissatisfaction with unsupportive learning facilities and infrastructure, such as Wifi and toilet facilities, with a total of 6 responses. In addition, it was also found that students consider lecturers tend to be passive during scientific readings (7 responses), interaction with lecturers is limited (5 responses), and the academic atmosphere is less lively compared to other departments (4 responses).

In conclusion, there is consistency between the quantitative and qualitative findings that the social environment in the context of clinical pathology learning is not optimal. Both technical and non-technical aspects, such as unsupportive facilities and limited interaction with lecturers, need to be improved to enhance students' learning experience.

Table 3. Quantitative and Qualitative Data Integration Results

Quantitative Results	Qualitative Result (theme with the	Conclusion

(aspects with the lowest mean)	highest response)	
Social Environment (mean 19.84)	Learning facilities and pre-facilities are less supportive (Wifi, toilets, etc.) (number of responses 6) Lecturers tend to be passive during scientific reading (number of responses 7) Interaction with lecturers is limited (difficult to meet supervisors) (number of responses 5) The academic atmosphere is less lively than other depts (number of responses 4)	Perceptions about the learning environment of clinical pathology PPDS students are more on the less than optimal social environment, both technical aspects (facilities and pre-facilities that are less supportive), and non-technical aspects (academic atmosphere that is less lively than other depts, scientific reading atmosphere that tends to be passive, and not much interaction time with lecturers).

Source: Primary Data

DISCUSSION

This study identified that the social environment in the context of learning in the Specialist Medical Education Program (PPDS) Clinical Pathology FK Unhas Makassar, especially interactions with peers and lecturers, has a significant influence on student perceptions and engagement. The results showed that the social environment aspect received the lowest score with an average of 19.84 and SD 2.01, indicating challenges in meeting the need for social support during the learning process. This limitation is in line with previous findings that emphasize the importance of social support from peers and lecturers in increasing student satisfaction and engagement in specialist education programs [7].

The study by Ramkissoon et al (2020), confirms that positive social interactions in the educational environment can improve students' academic engagement and performance [8]. These findings are consistent with research showing that a conducive social environment can positively influence students' feelings of attachment and participation in academic activities [9]. In the Clinical Pathology Study Program of FK Unhas, the creation of a supportive social environment needs to be strengthened to improve MPPDS academic satisfaction and outcomes. Other studies have shown that good social support can also reduce academic stress and improve the well-being of medical students [10].

Therefore, improving social interactions between students, lecturers, and academic staff is expected to produce a more supportive environment and improve conditions for student engagement in the learning process. This will help in overcoming dissatisfaction that may arise due to lack of social support, thus strengthening the social aspects of the PPDS Clinical Pathology educational environment.

This study underlines the importance of adequate learning facilities and infrastructure in supporting the learning process of Clinical Pathology PPDS students. The study results show that one of the main complaints expressed is the inadequacy of facilities such as WiFi and toilets. The existence of stable and fast WiFi in the learning environment is very important to support access to digital learning resources, communication with lecturers, and online assignments and exams.

Other research shows that good infrastructure, including stable internet access, has a positive correlation with students' level of satisfaction and motivation to learn [11]. In the Clinical Pathology study program at the Faculty of Medicine, Hasanuddin University, the need for improved facilities such as adequate WiFi is in line with the findings that good internet access is important for improving learning outcomes, especially during the Covid-19 pandemic [12].

In addition, the quality of other physical facilities such as clean toilets also plays an important role in creating a comfortable and conducive learning environment. Studies show that good sanitation facilities can reduce stress and improve students' learning focus [13]. Therefore, efforts to improve

and update the learning support infrastructure in the Clinical Pathology study program at the Faculty of Medicine, Hasanuddin University are expected to improve the quality of learning and student satisfaction.

The perception that lecturers tend to be passive during scientific readings is an important focus in this study. Clinical Pathology PPDS students at the Faculty of Medicine, Hasanuddin University stated that lecturers often only ask questions without providing clear direction during scientific discussions. This attitude can negatively impact the quality of learning, as the lack of adequate interaction can reduce student satisfaction and engagement in learning.

Research shows that lecturer-centered learning approaches tend to reduce student engagement and learning effectiveness [14]. On the contrary, interactive and student-centered learning methods can improve their understanding and clinical skills [15].

Other studies have shown that active participation of lecturers in supporting the clinical learning process can improve students' clinical competence and their confidence in facing practical medical challenges in the field [16]. Thus, it is important for lecturers in the Clinical Pathology Study Program to adopt a more active and responsive approach in scientific discussions to improve the quality of learning and student satisfaction.

Limitations in interaction with lecturers, especially difficulties in meeting with supervisors, are challenges faced by Clinical Pathology PPDS students at FK Unhas. Some students revealed that the lack of interaction time with lecturers can hinder their opportunity to get the necessary guidance.

Research shows that the availability and accessibility of lecturers as mentors is very important in supporting the learning process and academic development of students [17]. This lack of interaction can also affect students' motivation and overall learning quality [18].

In the context of the Clinical Pathology Program, improvements in providing better interaction time between students and supervisors are expected to overcome this challenge. Proper support from lecturers not only supports academic development, but also increases students' confidence and motivation in achieving their full potential.

A vibrant academic atmosphere is key to an effective learning environment. However, the study revealed that the Clinical Pathology Program of FK Unhas is less lively compared to other departments. Only 4 MPPDS felt that discussions in their department were as lively as other departments, suggesting that a less dynamic academic atmosphere may reduce student engagement and motivation [19]; [20].

Students who feel bored and uninspired are likely to experience stress and dissatisfaction, which negatively impacts their academic performance [21]; [22]. Studies show that a lively academic atmosphere increases intrinsic motivation and engagement in clinical learning. To improve this, strategies are needed to encourage active participation and collaboration between students and lecturers, including the use of technology for online discussions [21]. Efforts to create a dynamic and inclusive academic atmosphere are essential to improve the learning experience and academic performance of students of the Specialist Doctor Education Program at the Faculty of Medicine, Hasanuddin University.

CONCLUSSION

Based on the results of the research and discussion above, it can be concluded that the perceptions of students of the Clinical Pathology Specialist Medical Education Program (MPPDS) on 5 domains of the learning environment in the Clinical Pathology Study Program, Faculty of Medicine, Hasanuddin University based on the DREEM quantitative method show two categories, namely the category more positive than negative as much as 46.74% and the perfect category as much as 53, 26%. The domain with the lowest mean is the social environment domain of 19.84%. Perceptions of MPPDS Clinical Pathology based on the results of qualitative methods, namely FGDs, tend to show dissatisfaction, especially in the aspect of the social environment. The low quality of interaction between students and lecturers, as well as facilities and infrastructure that are not yet optimal, are the main factors that influence this negative perception. The less dynamic academic atmosphere also hampers MPPDS's motivation and academic engagement, which in turn can have an impact on their academic performance.

This research leads to the conclusion (based on a combination of quantitative and qualitative analysis) that the perception of specialist medical education students (MPPDS) of Clinical Pathology is more on the less than optimal social environment, both technical aspects (facilities and infrastructure that are less supportive), and non-technical aspects (academic atmosphere that is less lively than other departments, scientific reading atmosphere that tends to be passive, and not much interaction time with lecturers).

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