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The Relationship between Emotional Intelligence and the Effectiveness of Online Problem Based Learning (PBL) Discussion for Medical Students of FKIK Untirta

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ABSTRACT

A study of nursing students at the Bali Institute of Technology and Health found that 60.3% of students were in the high emotional intelligence category. (Ni Kadek, 2022). The results of Pioh dkk (2016) show that as much as 95% of students stated that the effectiveness of the PBL group discussion was well assessed in its implementation.5 The success of the PBL group explored by Dolmans dkk, they found a linear relationship between the success of PBL tutorial group and several dimensions of motivation and cognitive (elaborasi dan interaksi). According to Dolman, there is a problem that is called "ritual" behavior, which is that students pretend to be active in the discussion process, while in fact they are not involved in the debate process. 5 Emotional intelligence will drive student learning motivation. Lack of learning motivation in discussion group members will cause students to contribute only little and less actively during discussion. Given the importance of group discussion learning method (PBL) in achieving medical learning CPL, the author is interested in conducting research into the relationship between emotional intelligence and the effectiveness of group discussions online in FKIK Untirta medical students. Research design method using cross sectional design, quantitative observational research. The researchers used a stratified random sampling technique on a medical student. The reseach uses two types of questionnaires; the adoption questionnaire of the Emotional Competence Inventory of Ini Kadek's research, and the Tutorial Group Effectiveness Instrument (TGEI). Based on the results of the study, the majority of emotional intelligence were in the middle category with 50 respondents (53,2%), in the high category 44 respondents (46,8%), and no respondents in the low emotional intelligence category. PBL discussions conducted by medical students of FKIK Untirta have been conducted effectively (98,9%). Bivariate analysis using Fisher Exact Test, showed no relationship (p>0,05) between emotional intelligence and discussion effectiveness. The category of emotional intelligence in students is at a moderate leel, the PBL discussions are already running effectively. There was no relationship between emotional intelligence and effectiveness of PBL discussions.

Keywords : *emotional intelligence; effectiveness; Problem Based Learning; discussions (PBL); medical students.* https://doi.org/.

INTRODUCTION

Emotional intelligence is an important element in the learning process of physician education and medical clinical fields.[1] Emotional intelligence also affects the level of motivation of students in the study process, thereby affecting the effectiveness of group discussion.[2] The results of research in nursing students of the Bali Institute of Technology and Health were 60..3% of students who entered the higgh-category emotional intelligences (Ni Kadek, 2022).[3] Medical learning adopted a student-centric model.[4] It aims to help the teaching and learning process become more active and effective and gain Graduate Learning Acces (Capaian Pembelajaran Lulusan/CPL).[5] The result of Gusti Ferri et al study (2022) showed that as many as 97.5% students stated that the efficacy of the PBL group discussion was well evaluated in its implementation.[6] About 95% of students of Pioh et al research stated learning methods Problem Based Learning were effective.[7]

According to Duch in Suharia (2013), PBL understanding is a learning method in which there is an incentive or requires students to know how to learn and teamwork to be able to solve a real problem in life.[8] In the process of PBL, students are required to think critically, actively in digging information and able to use it as a supply to solve a case or problem in the PBL discussion. The case raised must be authentic and contain the real problems that are happening in the real world.[9]

In student-centred learning, good emotional management or emotional interlligence is required.[10] According to Slavin, there are two main theoretical perspective that can be used to study PBL learning. The first perspective is a motivational perspective that emphasizes the importance of compactness or team spirit. Emotional perspective will drive student learning motivation. Lack of learning motivation in discussion group members will cause students to contribute little and less actively during discussion.[8] Dolman states that there are still dysfunctional groups in PBL discussions, where students perform “ritual” pretending to be active in group work, while in fact they are not involved.[10]

Several studies have stated that the effectiveness of PBL discussions in achieving CPL is good, but the aspects studied link a lot between cognitive aspects and motivation.6-8 There are dysfunctional groups in PBL discussions that cause CPL students' inability to reach because of demotivation related to student emotional intelligence.8,10 Because there are various aspects that affect the effectiveness of PBL group discussions, it is necessary to carry out research to find out the relationship of emotional intelligence with the efficacy of Group discussions (PBL) in students.

Some studies state the effectiveness of PBL disscussions in achieving CPL is good, but the aspects studied link a lot between cognitive aspects and motivation. There was a dysfunctional group in the PBL discussion that caused the CPL student's inaccessibility due to the demotivation associated with the emotional intelligence of the student. Because there are various aspects that affect the effectiveness of BPL group discussions, it is necessary to conduct research to find out the relationship between emotional intelligence and the efficaacy of PBL discussions in students.

METHODS

Design and selection of research respondents:

This research uses cross sectional design, with a type of quantitative observational research. Implementation of the research began in April to May 2024. The technique used is the probability sampling technique with a type of stratified random Sampling, i.e. taking randomly structured samples representing its sub-group, in this study the representatives of respondents come from each force of medical students of the Faculty of Medicine and Health Sciences (FKIK) Untirta as many as 94 people.

Level of study	Number of students per division	Lots of samples
4	48 people	$= \frac{48\ x\ 94}{177} = 25{,}491 \approx 26\ sample$
3	42 people	$= \frac{42\ x\ 94}{177} = 22{,}305 \approx 22\ sample$
2	45 people	$= \frac{45\ x\ 94}{177} = 23{,}898 \approx 24\ sample$
1	42 people	$= \frac{42\ x\ 94}{177} = 22{,}305 \approx 22\ sample$

Criteria for inclusion-exclusion and research variables: Criteria of inclusion: Medical students of FKIK Untirta level 1 (in 2023), level 2 (in 2022), level 3 (in 2021), and level 4 (in 2020) and active students of Medicine FKIK untirta and have studied using the PBL method. Exclusion criteria: Students or respondents who have not completed the questionnaire fully. Independent variables: Emotional intelligence. Dependent variable: Effectiveness of PBL discussions.

Research tools and materials: This research uses a digital platform in the form of a google form. The questionnaire used in assessing the level of emotional intelligence is measured using the Emotional Intelligence (EQ) scale, contains 20 questions adopted by the emotional competence inventory

questionnaires in Ni Kadek's study (2022) and is grouped into three categories; high (track 76-100); moderate (Track 48-75); and low (Track 20-47). The measurement tool that can be used as a tool for calculating the effectiveness of discussions is the Tutorial Group Effectiveness Instrument. (TGEI). Assessment is based on three aspects: cognitive, motivational, and demotivational. Each was assessed with an effective subpoint with a score >50% and an ineffective score <50%. The study performed univariate and bivariate analysis using the Fisher Exact Test.

Data Analysis:

Data simplification and grouping is a process that is carried out in data analysis. It aims to make it easier for researchers to present data in a simpler format so that it is easy to understand and read. In the process of data analysis and presentation, the researchers will perform univariat analysis and bivariat analysis. In this study, the researchers will use the Chi Square formula with a 2X2 table condition and a significant provision of 0.05 or a 5%. If p value a indicates that the hypothesis (H0) is accepted, this means that either variable, both free variables and bound variables, have no relationship. If one of the Chi Square conditions is not met, for example in the study obtained 2x3 table results, the researcher must simplify the table to 2x2. Another example is when the results are zero, researchers can use bivariate analysis using Fisher's Exact Test.

Researchers implemented ethical procedures by drawing up an ethical form submitted to UNTIRTA's ethics committee under number.55/UN43.20/KEPK/2024.

RESULTS

Based on the characteristics of the respondents, the researchers tried to disaggregate them according to the sex, age, and level of study of respondents.

Table 1.Frequency Distribution Characteristics of Medical Student Respondents FKIK UNTIRTA

Characteristics	Frequency (%)
Gender	
Man	25 (26,6)
Woman	69 (73,4)
Age	
18 years	11 (11,7)
19 years	18 (19,1)
20 years	26 (27,7)
21 years	17 (18,1)
22 years	17 (18,1)
23 years	5 (5,3)

Level of Study	
Level 4	26 (27,7)
Level 3	22 (23,4)
Level 2	24 (25,5)
Level 1	22 (23,4)

In the above table, data are presented on the distribution of the majority of the characteristics of respondents of medical students of FKIK UNTIRTA with the most gender are from the group of women 69 (73.4%) and the number of men 25 (26.6%). The results show that there are age groups with most respondents and the least respondents. The most age group, dominated by the age group of 20 years of age 26 (27.7%). Whereas the group with the lowest respondents was in the age of 23 years 5 respondents (5.3%) and came from the level 4. Based on other respondents' characteristics, namely the level of study of medical student of FKik UN TIRTA, showed that the most of the respondents from level 4 (students of the Army 2020) represented as much as 26 (27,7%), 2 represented 24 respondents (25,5%), level 1 and level 3 equally represented 22 respondents (23,4%).

Table 2. Relationship of Respondent Characteristics with Emotional Intelligence

Variabel	**Emotional Intelligence**			**Total**
	High	Medium	Low	
	n (%)	n (%)	n (%)	n (%)
Gender				
Man	15 (60,0)	10 (40,0)	0 (0)	25 (100)
Woman	29 (42,0)	40 (58,0)	0 (0)	69 (100)
Age				
≤ 20 years	23 (41,8)	32 (58,2)	0 (0)	55 (100)
>20 years	21 (53,8)	18 (46,2)	0 (0)	39 (100)
Level of Study				
Level 4	13 (50,0)	13 (45,5)	0 (0)	26 (100)
Level 3	12 (45,5)	10 (45,5)	0 (0)	22 (100)
Level 2	10 (41,7)	14 (58,3)	0 (0)	24 (100)
Level 1	9 (40,9)	13 (59,1)	0 (0)	22 (100)

n=frequency, % = persentage

The above table presents data related to the distribution of respondents in detail and connects the respondent's characteristics with the category of emotional intelligence. The age group is divided into two large groups, aimed at making it easier for researchers to analyze data. The highest number of respondents were in the age group <20 years 32 people (58.2%), from the middle emotional intelligence

category. Based on the level of study category, level 2 or 2022 force had the highest percentage of 58.3% or as many as 14 respondents from the medium emotional intelligency category.

Table 3. Frequency Distribution Category Emotional Intelligence Medical Students FKIK Untirta.

Emotional Intelligence	Frequency (%)
High	44 (46,8)
Medium	50 (53,2)
Low	0 (0)

The above table presents data related to the frequency distribution of the emotional intelligence category of medical students of FKIK UNTIRTA. The results show that the majority of emotional intelligentsia is in the middle category with respondents 50 (53.2%), in the high emotional Intelligence category there are 44 respondents (46.8%), and none of the respondents fall into the low emotional intel category.

Table 4. Effectiveness of PBL Discussion Respondents of Medical Students of FKIK Untirta.

Characteristics	Frequency (%)
Effectiveness of Discussion	
Efective	93 (98,9)
Inefective	1 (1,1)

Based on table 4, presented data related to the distribution of frequency of effectiveness of PBL discussions. Results of data show that PBL online discussions at the Faculty of Medicine and Health Sciences at Sultan Ageng Tirtayasa University have been running effectively (98.9%).

Table 5. Relationship of Emotional Intelligence with Effectiveness of PBL Discussion Respondents of Medical Students of FKIK Untirta.

Variabel	Emotional Intelligence			Total	P value
	High	Medium	Low		
	n (%)	n (%)	n (%)	n (%)	
Effectiveness of Discussion					
Efective	43 (46,2)	50 (53,8)	0 (0)	93 (100)	0,468[F]
Inefective	1 (100)	0 (0)	0 (0)	1 (100)	
Total n (%)	44 (100)	50 (100)	0 (0)	94 (100)	

n=frekuensi, % = persentase
F = uji *fisher exact test*, nilai p signifikan < 0.05

In table 5, 43 respondents (46.2%) from the high emotional intelligence category agreed that PBL discussions were running effectively and 1 respondent did not agree that the PBL discussion was going effectively. Based on statistical calculations, results were obtained with a p value of 0.468 (p>0,05) using the Fisher Exact Test. This means that there is no relationship between emotional intelligence and the effectiveness of discussing Problem Based Learning. (PBL).

DISCUSSION

According to the results of the study, the number of characteristic respondents in the gender category was dominated by 29 female respondents, while the male respondents were 15, both from the category of high emotional intelligence. With good emotional intelligence, individuals can be more sensitive to the feelings of themselves and the people around them, as well as manage those emotions and feelings.[11,12] This is supported by a Fadhil R study (2020), which stated that the average woman has some sensitive feelings to some emotional skills.[13] The ability of men and women is relatively equal in improving emotional intelligence.[12,13]

The results of the study show that there are age groups with the most respondents and the age group with the least respondents. The age group with the least respondents was in the age group of 23 with 5 respondents (5.3%) and came from level 4. The findings are consistent with Lawson's findings, emotional intelligence has a weak relationship with age.[12] However, there are other studies that contradict the findings of this study. In other studies using a sample of the general population with a wider age spectrum, there are other factors other than age that can affect emotional intelligence. With this in mind, it can be said that the respondents of medical students have a relatively narrow and very limited age range, so the positive influence of age on emotional intelligence is not achieved. [11,12]

Most of the respondents were from level IV, with 13 people in the high emotional intelligence category. The Bitar dkk study supports the current findings, which state that the emotional intelligence of the last year students is much higher than that of the first year students.[14] These findings are reinforced by the Chew dkk research that states that the final year students have emotional Intelligence that originates and is shaped by the tenacity and humanism developed during the learning process.[15] However, these results are not similar to the findings of Lawson dkk and Imran, both of whom found that there is no relationship between emotional intelligency with the end-level students and the first-class students.[12] According to Irman, the reasonable explanation for the results he obtained is the fact that the medical curriculum is more focused on clinical skills than on developing skills in emotional management.[16]

Based on the results of the study, the majority of respondents were in the middle-level emotional-intelligence category with a total of 50 respondents (53.2%). The findings of this study are in line with Simangunsong's findings, most students of Tanjungpura Medical Faculty 2019 are on moderate emotional intelligence levels.[12] However, unlike Ni Kadek dkk and Ni Luh Gede dkk, the results of both were mostly from the category of high emotional intelligence. Although the results had different categories, both results were equally influenced by gender or the gender and age of the respondents. This is supported by the results of the Kristanti dkk and Argunmas dkk studies, both of which have a large percentage of female sexes of 68% and 60,4%.[11,17] In the Ni Kadek study, the majority of sexes are dominated by women in the category of high emotional intelligence. Unfortunately, Ni Kadek's research does not explain in detail the number of gender differences between women and men, so there is no conclusion on gender categories.[3]

Age is the second influence on emotional intelligence. This was supported by Argunmas dkk, who stated that the majority of age groups were under 20 years of age.[17] This was reinforced by Lawson dkk's study, in which he obtained a positive correlation that meant that there was no relationship between age and emotional intelligence. The positive influence of age factors does not affect good results when the age range is small and relatively narrow. The same is true of this study that did not use a widespread sample or general population, so the results did not match the initial assumptions.[12]

On PBL discussions in medical students FKIK Untirta has been effective with a percentage of 98.9%, only 1 respondent (1,1%) did not declare effective. These results are in line with the study of Guru Ferri dkk (2022), which shows that discussions have been effective in the Faculty of Medicine of Mulawarman University with a percentage of 97.5%.6 In the study Pioh dkk (2016) also showed the same results, PBL discussions are already running effectively in Sam Ratulangi University Medical Faculty with a percent of 95%.[7] According to Rifal Akbar research, the effectiveness of discussions of PBL is affected by the quality of trigger scenarios of 94.4%, the facilitator that accompanies discussions 92.6%, the convenience of places during discussions lasted 78.8%, the availability of references available 78.8% and the schedule of modules under way 51.9%.[18]

Ranasinghe's research suggests that high emotional intelligence is often found in students who have good self-satisfaction and low levels of stress. It needs to be considered and reviewed the results of this study that states the category of moderate emotional intelligence. Do medical students have poor levels of self-satisfaction and high levels of stress.[19] In the medical environment, high levels of emotional intelligence are associated with successful leadership, thus resulting in greater productivity and efficiency. In the world of medical education, emotional intelligence can be used to assess and predict

better academic performance.[20]

Emotional intelligence has three main ways to conceive and measure. The first concept, emotional intelligence as a model of ability. Based on a performance-based evaluation that evaluates social skills, this model describes cognitive-emotional abilities. The second concept, the character model, tends to behavior and self-evaluation over time. The third concept, a mixed model. This model is a combination of abilities (social skills), properties, and competences that can be measured using a questionnaire. If emotional intelligence is seen as a behavioral attribute, it should be seen as something dynamic and can be directed to something better. According to Lawson Dkk's research, the average medical student can't handle his emotions competently in difficult times like getting a bad academic performance after the exam. Medical students are also constantly undergoing a series of assessments and presentations so that medical students' sleeping hours are short enough, study hours longer, and the pressure is huge to succeed. It is not surprising that stress and anxiety are always experienced by medical students and this can affect their cognitive function and learning.[20]

Medical professions require medical students to be more sensitive and manage their emotions well. Previous research has shown that the prevalence of levels of stress and mental illness among medical students and doctors is increasing. This is very worrying and may be addressed by imposing aspects that can support a person's level of emotional intelligence.[20] One way to cope with the stress of a medical college is to develop an emotional intelligent person.[21] According to previous research, enhancing emotional Intelligence in medical students can be a valuable supply for future doctors. Not only to deal with stress triggers in the workplace, but can be used to reach academic and clinical potential fully.[20]

Fishbowl is a small group teaching technique involving two or more people in interviews or discussions in the middle of a room. Fishbowl is commonly used in many disciplines, one of them in medical education. In practice, fishbowl can be used as a realistic medium under peer supervision, like practicing meeting patients and students to learn from each other in a safe and controlled environment. Facilitators can identify and discuss important teaching moments that emerge.[23] When medical students are included and engaged in a sustainable curriculum, students will begin to think that emotional intelligence plays an important role in everyday life practice. [22]

Using the Fisher Exact Test bivariate analysis, statistically insignificant results were found ($p>0,05$). This is based on a result of 0.468 which means that there is no relationship between the free variable or emotional intelligence with the variable bound to the effectiveness of the PBL discussion. It may be

that the efficiency of the discussion is influenced by factors other than emotional Intelligence. Therefore, other additional factors, such as student knowledge exposure experience, skills in the discussion or learning process, and other factors, need to be considered.

According to Rifal Akbar dkk, the effectiveness of discussions can be influenced by other factors such as group dynamics, active participation of students, facilities of sponsorship, and student schedule setting. Students' skills in understanding the context of discussion can also affect the effectiveness of discussion. It is supported by the theory of constructivism that states that individuals can elaborate new knowledge and knowledge already possessed into a new understanding.[24] In addition, students must also have a sense of responsibility to succeed in discussions. This responsibility can be cultivated by students by searching for literature and understanding the material well, so that PBL discussions can run successfully when each member of the discussion communicates ideas and engages each other in the duo of ideas.[5]

Internal factors that can influence the outcome of the discussion are fear, such as fear of speaking, fear of explaining something, and usually students have low self-confidence. In this case, the student's motivation plays an important role in making a person become more conscious and start thinking that what he does on the basis of fear will have a negative impact on the environment, especially in the discussion process.[11] According to Dolman, discussions dominated by silent students can hinder student learning, there will be no argument in the group. Therefore, it is necessary to create an effective learning environment. It can start with self-awareness and motivation. It doesn't go without a person's desire to be a better person.[6]

CONCLUSION

From the overall outcome, it is assumed that the effectiveness of discussions is not only influenced by the emotional intelligence parameters, but may also be affected by external factors such as the quality of the trigger scenario, the facilitator of the discussion, the convenience of the place where discussions take place, the availability of references, and the schedule of the modules that students are going through. According to Rifal Akbar dkk, the effectiveness of discussions can be influenced by other factors such as group dynamics, active participation of students, facilities of sponsorship, and student schedule setting. Students' skills in understanding the context of discussion can also affect the effectiveness of discussion. It is supported by the theory of constructivism that states that individuals can elaborate new knowledge and knowledge already possessed into a new understanding. Internal

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REFERENCES

1. Daud N, Abdul R AFA, Mat-pa MN, Ahmad A,Yusof NA, Hassan NM, et. al. Emotional intelligence among medical students and its relationship with burnout. Education in Medical Journal. 2022; 14(3):49-59. Available from : https://doi.org/10.21315/eimj2022.14.3.4
2. Karkada IR, D'souza UJA, Arifin Zainal. Relationship of emotional intelligence and academic performance among medical students: systemic review. Universitas Journal of Educational Research. 2020;8(3A:72-79. Available from: https://www.hrpub.org/download/20200229/UJERA10-19590932.pdf
3. Lestari NKI. Hubungan antara kecerdasan emosional dan kecerdasan spiritual dengan perilaku caring mahasiswa prodi sarjana keperawatan institut teknologi dan kesehatan bali [skripsi]. Denpasar: Institut Teknologi dan Kesehatan Bali; 2022.
4. Metsala E, Tornroos S. Benefits and outcomes of student-centered learning strategies in a healthcare higher education institution setting-a scoping review. American Journal of Nursing Studies. 2021;2:1008. Available from:https://www.medtextpublications.com/open-access/benefits-and-outcomes-of-student-centred-learning-strategies-in-a-healthcare-699.pdf
5. Wulandari D, Cahyono E, Kusumawardani SS, Arifin S, Hertono GF, Wiyanto dkk. Panduan implementasi pembelajaran berpusat pada mahasiswa. Jakarta: Direktorat Pembelajaran dan Kemahasiswaan; 2023.
6. Sandaria GF, Sulistiawati, Purnamasari CB. Efektivitas diskusi *problem based learning seven jumps* secara daring di fakultas kedokteran universitas mulawarman. Jurnal Pendidikan. 2022:10(2).
7. Pioh VE, Mewo Y, Berhimpon S. Efektivitas kelompok diskusi tutorial *problem based learning* di fakultas kedokteran universitas sam ratulangi. eBm. 2016:4(1). Available from : https://ejournal.unsrat.ac.id/v3/index.php/ebiomedik/article/view/12141/11722

8. Rahmadani. Metode penerapan model pembelajaran *problem based learning (pbl).* Lantanida Journal. 2019:7(1); 1-100. Available from : https://media.neliti.com/media/publications/287750-metode-penerapan-model-pembelajaran-prob-b6fb960b.pdf
9. Daud N, Abdul R AFA, Mat-pa MN, Ahmad A,Yusof NA, Hassan NM, et. al. Emotional intelligence among medical students and its relationship with burnout. Education in Medical Journal. 2022; 14(3):49-59. Available from : https://doi.org/10.21315/eimj2022.14.3.4
10. Asif M, Idrees M, Ghazal S, Ishaq G. Relationship of emotional intelligence and life satisfaction: mediating role of affectivity in medical students. ASEAN Journal of Psychiatry. 2022; 23(9): 1-8. Available from : https://www.aseanjournalofpsychiatry.org/articles/relationship-of-emotional-intelligence-and-life-satisfaction-mediating-role-of-affectivity-in-medical-students.pdf
11. Kristanti NL, Cahyawati PN, Kurniawan IG. Hubungan kecerdasan emosional terhadap tingkat stres mahasiswa fakultas kedokteran dan ilmu kesehatan universitas warmadewa di masa pandemi COVID-19. e-Journal AMJ. 2022;(2)3: 174-180.
12. Lawson HJ, Yigah M, Yamson P. Emotional intelligence in medical students at the university of ghana medical school, accra, ghana. Ghana Med J. 2021 Mar; 55(1): 52–59. doi: 10.4314/gmj.v55i1.8
13. Asmara FS. Hubungan antara efektivitas diskusi tutorial dengan penguasaan materi tutorial pada mahasiswa program studi pendidikan dokter fakultas kedokteran dan ilmu kesehatan universitas islam negeri maulana malik ibrahim malang[skripsi]. Malang: Universitas Islam Negeri Maulana Malik Ibrahim; 2020.
14. Bitar, A., Amnelius, L., Kristoffersson, E. *dkk.* Kecerdasan emosional di kalangan mahasiswa kedokteran di Swedia – sebuah studi kuesioner. *BMC Med Pendidika.* 2023; **(23)**603. https://doi.org/10.1186/s12909-023-04570-0
15. Chew BH, Zain A, Hassan F. Hubungan antara manajemen sosial kecerdasan emosional dan kinerja akademik di kalangan
16. Imran K, Aftab MA, Haider II, Farhat A. Mendidik dokter masa depan: Sebuah survei cross sectional kecerdasan emosional dan empati pada mahasiswa kedokteran di Lahore. *Jurnal Ilmu Kedokteran Pakistan.* 2013; 29 (3):710–714.
17. Argunmas, Wilson, Fitriangga A. Hubungan kecerdasan emosional terhadap nilai ujian sumatif modul penginderaan pada mahasiswa pspd fakultas kedokteran universitas tanjungpura. 2019.
18. Jacobs, J.C.G., van Luijk, S.J., van der Vleuten, C.P.M. *et al.* Teachers' conceptions of learning and teaching in student-centred medical curricula: the impact of context and personal

characteristics. *BMC Med Educ. 2016;* 16(1): 244. Available from: . https://doi.org/10.1186/s12909-016-0767-

19. Ranasinghe, P., Wathurapatha, W.S., Mathangasinghe, Y. *et al.* Kecerdasan emosional, stres yang dirasakan dan kinerja akademik sarjana kedokteran Sri Lanka. *BMC Med Educ.* 2017; (*17)*41. https://doi.org/10.1186/s12909-017-0884-5
20. Bitar, A., Amnelius, L., Kristoffersson, E. *dkk.* Kecerdasan emosional di kalangan mahasiswa kedokteran di Swedia – sebuah studi kuesioner. *BMC Med Pendidika.* 2023; **(23)**603. https://doi.org/10.1186/s12909-023-04570-0
21. Lawson HJ, Yigah M, Yamson P. Emotional intelligence in medical students at the university of ghana medical school, accra, ghana. Ghana Med J. 2021 Mar; 55(1): 52–59. doi: 10.4314/gmj.v55i1.8
22. Sundararajan S, Gopichandran V. Emotional intelligence among medical students : a mixed methods study from chennai, india. BMC Medical Education. 2018; (18)97. https://doi.org/10.1186/s12909-018-1213-3
23. Sutherland R, Reid K, Kok D, Collins. Teaching a fishbowl tutorial : sink or swim. Blackwell Publishing. 2012;9(1):80-84
24. Akbar R, Widjaja. Efektivitas diskusi *problem based learning* di fakultas kedokteran universitas tarumanegara. TMJ. 2019:1(3);327-633. Available from : https://journal.untar.ac.id/index.php/tmj/article/view/5854/3898