

## ICASH-A029

# CORRELATION BETWEEN ANXIETY LEVEL AND SELF DIRECTED LEARNING READINESS (SDLR) WITH STUDENT PEFORMANCE IN PROBLEM BASED LEARNING (PBL)

Nita Safitri\*, Uswatun Khasanah, Ruri Eka Maryam Mulyaningsih

Faculty of Medicine, Universitas Swadaya Gunung Jati, Cirebon, Indonesia

\*Corresponding author email: nitasafitri88@gmail.com

### ABSTRACT

**Background:** The pattern of medical education in Indonesia has changed from teacher-centered learning to student-centered learning. This change has an impact on methods, learning activities, and learning achievements of medical students. Problem Based Learning (PBL) is one of the main learning methods used in the faculty of medicine. PBL is a learning method that requires students to play an active role and facilitate collaborative learning. Due to the change of learning method, new medical students experience a lot of stress from in doing Problem Based Learning such as anxiety and may affect their PBL results as can be evaluated using Self-Directed Learning Readiness (SDLR). There are very few studies found to date investigating this phenomenon.

**Aims:** This research aims to see the correlation between anxiety level and SDLR with student's performance participating in first-year PBL in the Musculoskeletal and Locomotory System block in the faculty of medicine Universitas Swadaya Gunung Jati Cirebon.

**Methods:** This is a cross-sectional observational study with total sampling. The samples were recruited from 167 first-year 2018 intake students of the faculty of medicine Universitas Swadaya Gunung Jati. Zung Self Rating Anxiety Scale questionnaire is used to measure anxiety levels and the SDLR questionnaire is used to measure Self Directed Learning Readiness (SDLR).

**Results:** The Spearman test showed a medium negative correlation value of  $-0.49$  ( $p > 0.05$ ) for the level of anxiety. It means that there is no significant effect of anxiety on the PBL performance. In addition, it shows a weak positive correlation value of  $0.196$  ( $p < 0.05$ ) for SDLR (self-directed learning readiness) showing a significant influence on PBL performance.

**Conclusions:** The level of anxiety does not significantly influence PBL performance while SDLR has a significant effect on PBL performance.

**Keywords:** Anxiety Level, Self-Directed Learning Readiness, Problem Based Learning.

### INTRODUCTION

The pattern of medical education in Indonesia has undergone a change from *teacher centered learning* to *student centered learning*. This change has an impact on methods, learning activities, and learning achievements of medical students themselves. Knowing the correlation between anxiety level and SDLR with student performance in participating in PBL .<sup>[1]</sup>

The teaching and learning process aims to provide behavioral changes in the aspects of knowledge (cognitive), attitudes (affective), and psychomotor aspects. The performance of students in achieving the target of learning is an interesting study in various educational studies, because student performance is one indicator of a person's success in learning. Good performance shows a person's learning performance in the form of an average value obtained during the learning activities that take place. [2]

*Problem Based Learning* (PBL) is one of the main learning methods used in the Faculty of Medicine. Problem based learning is a learning method that requires students to play an active role and facilitate the occurrence of *collaborative learning*. This method emphasizes *Active Student Center Learning* (ASCL) which means that students are expected to be able to search, investigate, understand meaning and understand science in relevant contexts. [3]

Students in the first year are students who have just finished their studies at their high school level. They are also not familiar with the SCL method, it is assumed that the students are experiencing a change of environment from high school to university level so they must be able to adapt to their new environment. Based on previous studies, students who are new to higher education are more susceptible to anxiety disorders which can reduce quality of life. This must be addressed immediately because it can cause various effects such as decreasing concentration in the educational process such as PBL, lectures, and other activities. [3,4]

*Problem based learning* is part of the *Student Centered Learning*, the inability of students to reach targets or discuss in the learning process is one of the obstacles in the learning process, particularly in this PBL method. Factors such as the lack of good learning preparation in terms of complex concepts, such as readiness of independent learning, communication skills, and anxiety can affect the activeness of discussions in PBL activities. [5]

## MATERIALS AND METHODS

This study employs an observational analytic study design with cross-sectional design, The independent variables in this study are SDLR (self-learning Learning Readiness). The dependent variable in this study is Student Performance in PBL (Problem Based Learning).

A total of 168 first-level students of batch 2018 who are following *Problem Based Learning* (PBL) at the Medical Faculty of Swadaya Gunung Jati University in Cirebon, West Java, Indonesia are the subject of this study by means of *total sampling*.

The research procedure which included Preparing research instruments, namely questionnaires, Prepare written informed consent, Explain the purpose and benefits of the research to the respondent as well as informed consent. The variables that are researched are determined using a questionnaire the *Zung Self Rating Anxiety Scale* questionnaire is used to measure anxiety levels. Additionally, the SDLR questionnaire is used to measure *Self Directed Learning Readiness* (SDLR).

## RESULTS

### Characteristics of Respondents

Characteristics of Respondents as follows:

Table 1: An overview of anxiety levels

Student anxiety	Frequency	Percentage (%)
Mild anxiety (Score 20-44)	85	50.8%
Moderate anxiety	80	47.9%

Student anxiety (score 45-49)	Frequency	Percentage (%)
Severe anxiety (score 50-80)	2	1.3%
Total	167	100%

Table 1 shows that the anxiety level of Unswagati Medical Faculty students when facing PBL (*problem based learning*) are various. Students who experience mild anxiety are 85 (50.8%). Then, students who experience moderate anxiety are 80 (47.9%). Lastly, students who experience severe anxiety is the least, namely 2 (1.3%).

The anxiety level category was taken from the results of the interpretation of the questionnaire from the research that had been done and the validated questionnaire.<sup>[7]</sup>

Table 2: Overview of *Self Directed Learning Readiness* (SDLR)

SDLR Level	Total	Percentage (%)
Low SDLR (score <84)	0	0%
Medium SDLR (score 84-<132)	25	14.9%
High SDLR (>132)	141	84.9%
Total	167	100 %

Table 2 displays the fact that the *Self Directed Learning Readiness* (SDLR) level of Unswagati Medical Faculty students when facing PBL (*Problem Based Learning*) is as follows. The low SDLR is 0 (0%). The medium SDLR is 25 (14.9%). Lastly, the high SDLR is 141 (84.9%). The SDLR level category was taken from the results of the interpretation of the questionnaire from the research that had been done and the validated questionnaire.<sup>[8]</sup>

#### Bivariate analysis

Table 3: The relationship between the level of anxiety on student performance in the process of *problem based learning* (PBL)

Anxiety Level	Low	Medium	High	p value	r
Mild	1	1	0	0.558	-0.46
Moderate	18	50	12		
Low	17	56	12		

Based on the analysis in Table 3, the value of p 0.558 is obtained. It indicates that the correlation between the influence of Impression on student performance when participating in PBL is not significant. The correlation value of -0.46 indicates the direction of the negative correlation with no correlation.

Table 4: Relation of *self directed learning readiness* (SDLR) to student performance in following the *problem based learning* (PBL) process

SDLR Level	Low	Medium	High	p value	r
Low	1	0	0	0.011	0.196
Medium	9	12	4		
High	26	95	20		

The analysis in table 4 obtains p value 0.011 which indicates that the correlation between SDLR on student performance when participating in PBL is meaningful. The correlation value of 0.196 shows Positive Correlation with very low correlation strength.

## DISCUSSION

The results of the study reveal that there is no influence on the performance of students when taking PBL. *Problem-Based Learning* (PBL) is a learning method that concerns on problem solving based on the real world. It is a process by which students hold group discussions and get feedback. The group discussion on the learning method serves as a springboard for the investigation and deepening of the material<sup>[5]</sup>

Problem based learning is part of Student Centered Learning, and is a component of self directed learning readiness. The inability of students to achieve targets or discuss in the learning process is one of the obstacles in the learning process especially in this PBL method. Factors such as lack of good learning preparation in terms of complex concepts, such as readiness of independent learning, communication skills, and anxiety can affect the activity in discussions at PBL activities<sup>[6]</sup>

Communication anxiety can occur in students, it usually occurs in particular situations such as when speaking in public. Communication anxiety for each individual is different, factors that influence communication anxiety include environment, confidence, and information.<sup>[8]</sup>

A comfortable and friendly environment will reduce anxiety in communicating. In the factor of self-confidence, if someone feels unsure of their abilities, it will be more easily hit by anxiety in communication. And if someone lacks enough information about what he is going to say, he will be afraid to convey the information.<sup>[8]</sup>

According to research conducted by Zalafi Kartika another factor to overcome anxiety is because respondents have known each other so that a closer relationship has been established. In this PBL conducted at the Unswagati Faculty of Medicine, students are grouped in the same group for 1 semester, so that the students (*Musculoskeletal and Locomotory System*) have known each other and are familiar one another. This is a factor that contributes to anxiety that is not related to student performance. This is in line with the research conducted by the researcher, namely there is no relationship between the level of anxiety on the performance of PBL on the Block (*Musculoskeletal and Locomotory System*).<sup>[9]</sup>

In the study conducted by Alicia Sandjaja, it is stated that age can also affect one's anxiety level. It is found that, in the age range of 17-40 years, a person can protect his mind when facing anxiety. This study uses respondents aged between 17 years and 21 years.<sup>[10]</sup>

The results of research shows that there is an influence of SDLR on student performance when

participating in PBL. *Self directed learning readiness* (SDLR) is included in the internal factors of student learning readiness. Learning readiness is the overall condition of a person that makes him ready to respond / answer in the learning process. Factors that mostly affect learning readiness include psychic readiness. <sup>[11]</sup>

One of the factors that dominates the level of *self directed learning readiness* (SDLR) is adaptation. The first-level student is still in the process of adjusting to follow PBL learning in the first year and previous learning experience with PBL that is currently being used. Then, the next factor is the time management factor, which is an adaptation to the schedule of tutorials or lectures that are crowded and the number of assignments in the initial semester, so that students experience fatigue and they have not been able to manage their time well. In addition, the learning time used by first-year students for the preparation of tutorials is conducted the day before or suddenly, because the adaptation process still dominates in the preparation for learning. However, with the correct adoption of SDLR, this will improve student performance when facing PBL. <sup>[11]</sup>

Internal factors that affect the SDLR consist of physical health, availability of leisure time, hobbies or preferences, self-maturity, and intelligence. Meanwhile, external factors consist of family and friends support, faculty facilities, problems faced, peer relations, and the influence of parents and friends. <sup>[12]</sup>

According to research conducted by Hasan Nyambe at the UGM medical school students who have high SDLR have priority in learning, and they do not delay what they have planned. Furthermore, there is a significant relationship between SDLR and PBL in grade I medical school students. This is in line with research conducted by the researcher. <sup>[13]</sup>

## CONCLUSION

Anxiety Level and Self Directed Learning Readiness (SDLR) correlation to student performance in following the Problem Based Learning (PBL) Process.

## REFERENCES

1. Mahardika N. Hubungan Kesiapan Belajar Mandiri dengan Performa Mahasiswa Fk Unila Angkatan 2015 dalam Mengikuti Tutorial Blok Spesial Sense; 2017.
2. Stella Tinia. Gambaran Tingkat Kecemasan pada Mahasiwa Semester I di Fakultas Kedokteran Universitas Kristen Maranatha Tahun ;2014.
3. Alawah I. Factors Influencing College Students ' Motivation To Learn From Students ' Perspective. Education ;2011
4. Lallo Alberth Daniel. L. F. Joyce Kandou, Herdy Munayang. Hubungan kecemasan dan hasil uas-1 mahasiswa baru fakultas kedokteran universitas sam ratulangi manado tahun ajaran vol 1;2013
5. Sulistiyana Setiya Catur. Faktor Faktor yang Mempengaruhi Tercapainya Learning Objective pada Diskusi Tutorial di Fakultas Kedokteran UNSWAGATi Cirebon. 2011
6. Miruralini Tinagar. Tingkat kecemasan mahasiswa kedokteran Universitas Udayana dan implikasinya pada hasil ujian. Volume 8 No 3:181-183;2017
7. Cahyani. Diana . Hasanah Uswatun, Maryam,Eka.R. Pengaruh tingkat kecemasan dengan pendekatan belajar terhadap kelulusan OSCE mahasiswa fakultas kedokteran unswagati . Cirebon. 2017
8. Zulharman. Self-Directed Learning Readiness (SDLR) questionnaire modified by Zulharman et al. 2009
9. Azka Kartika Z.dkk. Hubungan antara Tingkat Kecemasan Komunikasi dengan Keaktifan Diskusi Tutorial pada Mahasiswa Program Studi Kedokteran Fakultas Kedokteran Universitas Sebelas Maret. Nexus Pendidikan Kedokteran dan Kesehatan. Vol.5/No.1/Juni ; 2016
10. Sandjaja Alicia. Dkk. Hubungan Tingkat Kecemasan dengan Tingkat Sugestibilitas pada Mahasiswa Fakultas Kedokteran Tahun Pertama. Vol 6.No 2.April;2017
11. Purwandi Andri. Uji Komparasi Kemampuan Self Directed Learning pada Mahasiswa Keperawatan yang Menjalankan Problem Based Learning. Universitas Muhammadiyah Yogyakarta. 2016
12. Saputra O, Lisiswanti R, Aftria MP. Korelasi Self-Directed Learning Readiness ( SDLR ) Terhadap Prestasi Belajar Mahasiswa Tahun Pertama Fakultas Kedokteran Universitas Lampung TahunAjaran 2014 / 2015 The Correlation Between Self - Directed Learning Readiness (SDLR ) and Learning Achieveme. 2015
13. Nyambe.Hasan. Faktor- Faktor yang Mempengaruhi *Self Directed Learning Readiness* pada Mahasiswa Tahun Pertama, Kedua dan Ketiga di Fakultas Kedokteran Universitas Hasanuddin dalam PBL. Jurnal Pendidikan Kedokteran Indonesia Vol. 5 | No. 2 | Juli 2016