The relationship between emotional intelligence and self-directed learning readiness among students in the faculty of medicine

Eko Novanto Nurismail
Faculty of Medicine, University of Nusa Cendana
Email : ekonovantonurismail14@gmail.com

Dyah Gita Rambu Kareri
Department of Physical Medicine and Rehabilitation, University of Nusa Cendana
Email : yaya_rk@yahoo.com

Derri Riskiyanti Tallo Manafe
Department of Physiology, Faculty of Medicine, University of Nusa Cendana
Email : dery_1207@gmail.com

I Made Artawan
Department of Anesthesiology, Faculty of Medicine, University of Nusa Cendana
Email : imad3adr@gmail.com

Abstract. This study is aimed to investigate the relationship between emotional intelligence and self-directed learning readiness (SDLR) among students in Faculty of Medicine, University of Nusa Cendana. This analytical observational research implemented cross sectional design with stratified random sampling technique on preclinical medical students at the Faculty of Medicine, University of Nusa Cendana, in the academic years of 2017, 2018, and 2019. A total of 156 respondents which fulfilled the inclusion criteria were recruited in this study by filling questionnaires of Schutte emotional intelegence scale (SEIS) and self-directed learning readiness scale (SDLRS) analyzed using Somer's d test. The results of the study showed that: (1) there is a significant relationship between emotional intelligence and SDLR of the students at the Faculty of Medicine, University of Nusa Cendana (p<0.05) with strong correlation coefficient (r: 0.534); (2) there were 127 preclinical medical students (81.41%) with a high level of emotional intelligence and 29 preclinical medical students (18.59%) had a moderate level of emotional intelligence, but none of them had a low level of emotional intelligence; and (3) there were 84 preclinical medical students (53.84) who had high level of SDLR and 72 (46.16%) with a moderate level of SDLR, but none of them had a low SDLR level.

Keywords: Emotional Intelligence, SDLR, Medical Students

Abstract. *This study aims to determine the relationship between emotional intelligence and self-directed learning readiness (SDLR) of students at the Faculty of Medicine, University of Nusa Cendana. This research is an observational analytic study with a cross sectional design with a sampling technique using stratified random sampling conducted on preclinical students of the Faculty of Medicine, University of Nusa Cendana, batch 2017, 2018 and 2019. A total of 156 respondents who met the inclusion criteria were asked to fill out the Schutte Emotional Intelligence Scale questionnaire. (SEIS) and Self Directed Learning Readiness Scale (SDLRS) which were analyzed using Somer's d test . The results showed that: (1) There is a significant relationship between emotional intelligence and self-directed learning readiness (SDLR) from medical students, University of Nusa Cendana (p <0.05) with a strong / moderate strength relationship (r: 0.534), (2) the level of emotional intelligence from pre-clinical medical students, University of Nusa Cendana was 127 (81.41%) students had high emotional intelligence, then the level of emotional intelligence was moderate with 29 (18.59%) students, and none had low emotional intelligence. , (3) the level of self-directed learning readiness (SDLR) of the pre-clinical medical students, University of Nusa Cendana with the high category was 84 (53.84%) people, the moderate category was 72 (46.16%), and there were no students who had low SDLR level.*

Keywords: *Emotional intelligence, SDLR, Medical Students*

INTRODUCTION

Medical science is dynamic and enforces medical students to practice lifelong learning in order to develop their medical professionalism in the future (Shafira, 2015). Thus, medical school has changed its paradigm from teacher-centered learning (TCL) to student-centered learning (SCL), under the direction of competence-based curriculum (KBK) (Ambarsarie dkk., 2016).

Problem-Based Learning (PBL) is a method of SCL that is widely used in medical faculties around the world in which there are some integrated components guiding students to be more active in showing initiatives and independent in learning which is called as self-directed learning (SDL)(Meity dkk., 2017). Every student needs to practice SDL so that they can understand the learning material better and more independently, whether it is with their own initiatives or with the help of others (Chigerwe dkk., 2017; Jacobs dkk., 2016; Örs, 2018). However, the levels of readiness to apply SDL are different among students, or in the other words, there are different states of self-directed learning readiness (SDLR) among students (Dewi dkk., 2020; Hartono, 2014; Meity dkk., 2017; Nyambe dkk., 2016).

Medical students already have high SDLR, but they do not have good readiness to self-directed learning, although it is expected that they should be able to adapt to the environment and education system. Students tend to only study when there is an upcoming exam, showing a mindset that they are dependent upon lecturers, and some of them even only study to avoid drop out (DO).(Nyambe dkk., 2016)

Students having moderate SDLR tend to be willing to study and make schedules, but it is not realized due to their inability to control themselves when they face a certain inhibiting situation (Meity dkk., 2017; Nyambe dkk., 2016).

A study conducted in India showed that medical students have a low level of SDLR (Madhavi & Madhavi, 2017). Meanwhile, a study by (Gayathridayawasi dkk., 2019) showed that almost half of the first semester medical students of Udayana University (40%) had a moderate SDLR level. On the other hand, a study conducted by (Dewi et al., 2020) showed a high level of SDLR among 78.4% of its respondents, which were the students in University of Lampung.

There are some factors affecting the students' SDLR which can be classified into internal and external factors. Those factors influencing the components of student learning readiness are willingness to learn, self-management, and self-control (Nyambe dkk., 2016). Good emotional intelligence can develop those components so the students can control their emotions as expected (Goleman, 2019; Koç, 2019).

Emotional intelligence is the ability to feel, express, understand, motivate, control, and manage emotions (Khraisat dkk., 2015). Someone with a good emotional intelligence is more aware of their own emotion so they are able to control it in the face of a hardship that may trigger depression, anxiety, or stress and able to give a peaceful reaction toward disturbing situation instead of being controlled by momentary wish (Goleman, 2019; Khraisat dkk., 2015). A good emotional state is expected to boost students' levels of SDLR, maximizing their cognitive abilities and preparing their future as a lifelong learners (Cazan & Stan, 2015; Goleman, 2019; Karen, 2015; Khraisat dkk., 2015).

Previous studies exploring the relationship between emotional intelligence and SDLR were conducted by Hartono (2014) on medical students of Sebelas Maret University and by Dewi (2020) on medical students of University of Lampung. Both studies found that that there is a relationship between emotional intelligence and SDLR, but the correlation coefficient or the strength of the relationship between them was not studied (Dewi dkk., 2020; Hartono, 2014).

There have been no similar studies conducted on the students of Faculty of Medicine, University of Nusa Cendana. Based on the problem stated above and the importance of SDLR for the students in practicing the lifelong learning principle, it is interesting to investigate the relationship between the students' emotional intelligence and the students' SDLR at the Faculty of Medicine, University of Nusa Cendana.

RESEARCH METHOD

This analytical observational study was conducted in Faculty of Medicine, University of Nusa Cendana, on October 2020 by using cross sectional research design on the preclinical medical students in Faculty of Medicine, University of Nusa Cendana in the academic year of 2017, 2018, and 2019. The data of the students were gathered using questionnaire. Schutte emotional intelligence scale (SEIS) was applied on the questionnaire that was validated by using r-count of 0.328-0.765 with high reliability based on the Cronchbach Alpha value of 0.903. Moreover, the questionnaire also included self-directed learning readiness scale (SDLRS) that was validated with r-count of 0.328 and high reliability showed by the Cronchbach Alpha value of 0.921. The questionnaire was distributed to the respondents recruited using stratified random sampling technique.

Based on the Slovin formula, a total of 142 students were recruited as the sample of the study. Then, the sample was added by 10% to minimize the drop out problem, resulting in a total of 156 students involved in the study. The inclusion criteria of this study were students actively studying at the Faculty of Medicine of UNDANA and willing to be the respondents of the study as well as having biological parents. On the other hand, the exclusion criteria were students with illness at the time of the research and participating in more than three organizations inside or outside the campus. However, drop out criteria were students incompletely filling the questionnaire and not submitting it.

A computer program called SPSS version 24 was used to analyze the univariate data of each of the variables, which were emotional intelligence and SDLR. Then, bivariate analysis was done using the somers' d test.

RESULTS AND DISCUSSION

Primary data from the SEIS questionnaire presented in Table 1 below showed that 127 preclinical medical students (81.41%) at the Faculty of Medicine, University of Nusa Cendana had a high level of emotional intelligence, followed by 29 students (18.59%) with a moderate level. However, no students were found to have a low emotional intelligence level.

Table 1. Dstribution of Students' Levels of Emotional Intelligence

No.	Level of Emotional Intelligence	n	Percentage (%)
1.	High	127	81.41
2.	Moderate	29	18.59
3.	Low	0	0
	Total	156	100

The average score of students' emotional intelligence was 129.82 from the maximum score of 165. The lowest and highest scores of the respondents were 102 and 160 respectively. The SEIS questionnaire component with the highest average score (4.16) was self-management, while the lowest one (3.68) was emotion perception.

Emotional intelligence is one's ability to understand, express, motivate, manage, and control one's emotion (Khraisat dkk., 2015). Emotional intelligence is needed in daily life to deal with a certain situation, including learning behavior. A good emotional intelligence helps people understand their emotions or others' and manage their emotions well and accordingly so that stress and other bad conditions can be avoided. Finally, they can achieve their goals successfully(Goleman, 2019; Khraisat dkk., 2015).

The results of the current study agree with the results of the study conducted by Dewi dkk., (2020)in University of Lampung, which found that in general, medical students have a high level of emotional intelligence. It is likely to be related with the process of maturity experienced by the students.

Table 2. Distribution of Students' Levels of SDLR Frequency

No.	Level of SDLR	n	Percentage (%)
1.	High	83	53.21
2.	Moderate	73	46.79
3.	Low	0	0
	Total	156	100

The data in Table 2 show that 83 students (53.21%) had a high level of emotional intelligence, followed by 73 (46.79%) with a moderate level, and no students were found to have a low level of emotional intelligence.

The average score of preclinical medical students' emotional intelligence was 154.08 from the maximum score of 200. The lowest and highest scores of the respondents were 121 and 188 respectively. The SDLRS questionnaire component with the highest average score (4.05) was self-control, while the lowest one (3.49) was self-management.

A high level of SDLR shows that student is ready to learn independently so they have all of its components which are behavior, personal ability, and character able to plan, manage strategy, maintain, and practice independent learning well (Fisher & King, 2010; Monkaresi dkk., 2015; Nyambe dkk., 2016). It is beneficial for their future carrier as a doctor if they are practicing lifelong learning principle especially on the dynamic medical science (Shafira, 2015).

The fact that there were a lot of respondents having a moderate level of SDLR was also found in the study by ayathridayawasi (2019) in which almost half of them had it. This condition occurred due to some factors, especially those regarding with self-management. Based on the data, the average score of the students' self-management in SDLRS was the lowest among the other. It is in line with a study conducted by Nyambe (2016) that students with moderate SDLR are more likely to be unable to manage themselves well yet, especially in terms of time management and self-control from the external disruptions. Moreover, students with a moderate level of SDLR tend to be more dependent on the lecturer in their learning process or they study only when there is an upcoming exam (Nyambe dkk., 2016). Generally, the respondents actively joined in an organization so it can develop the emotional, interpersonal, and soft skills that can affect their SDLR. Too much time and energy spent on the organization's activities can negatively impact students' SDLR (Karen, 2015; Nyambe dkk., 2016).

The absence of students with a low SDLR level is possibly due to the exposure of PBL in their previous educational level and in their earlier blocks. Besides, good SDLR may also be resulted from the respondents' comfortable environment and social circle providing them with a proper reward and punishment system (Nyambe dkk., 2016). Internal motivation of the respondents in taking the medical study can be a major factor that encourages them to learn more, practice better self-management, and practice better self-control (Koç, 2019; Meity dkk., 2017; Nyambe dkk., 2016).

Table 3. The Analysis of Relationship between Emotional Intelligence and SDLR

Emotional Intelligence	Self Directed Learning Readiness (SDLR)						N (%)	p	r
	Low		Moderate		High				
	n	%	n	%	n	%			
Low	0	0	0	0	0	0	0.(0)		
Moderate	0	0	26	16.67	3	1.92	29 (18.59)	0.000	0.534
High	0	0	46	29.49	81	51.92	127 (81.41)		
Total	0	0	72	46.16	84	53.84	156 (100)		

Based on the statistical test with the Somer's D test, it is found that the p value was 0.000 (p < 0.05) and the r value was 0.534, meaning that there is a significant and positive

relationship between emotional intelligence and SDLR of the students at the Faculty of Medicine, University of Nusa Cendana with moderate correlation coefficient. It also means that the higher the level of emotional intelligence, the higher the level of SDLR. The result of the current study about the significance correlation between emotional intelligence and SDLR is consistent with the studies both by Dewi (2020) on students at the Faculty of Medicine, University of Lampung and Hartono (2014) on the students at the Faculty of Medicine, Sebelas Maret University.

Good emotional intelligence supports students' readiness in independent learning, either in encouraging the will to study or self -control (Koç, 2019). With a good emotional intelligence, one can understand one's emotional state preceding one's action. As a result, one can properly manage emotions(Goleman, 2019). It is important for students to be aware of this because it can boost their internal and external motivation to study better(Karen, 2015), as well as create and maintain willingness to learn (Johnson, 2016; Lee dkk., 2017). Moreover, students should also realize that good self-management, especially through self-control, regulation of motivation, or defense from external disruptions will be beneficial for their learning readiness and independent learning progress. A better self control through a good emotional intelligence can be achieved by having more perseverance, being not easily satisfied with the present learning achievement, and avoiding the feeling of boredom or stress during the independent learning process (Goleman, 2019; Koç, 2019).

CONCLUSSION AND SUGGESTION

The results of the research revealed that there was a significant relationship between emotional intelligence and SDLR of the students at the Faculty of Medicine of UNDANA (p<0.05) with moderate correlation coefficient (r: 0.534). A total of 127 students (81.41%) at the Faculty of Medicine of UNDANA had a high level of emotional intelligence, meaning that they generally have a good emotional intelligence. Besides, 84 students (53.84%) had high level of SDLR,

meaning that generally they are ready to learn independently despite of the fact that there were 72 students (46.16%) with a moderate level of SDLR.

It is suggested that medical students train their self-management in order to maintain their learning readiness and independent learning process. On the other hand, educational institution should update their tutorial scenario module to increase students' SDLR. The results of this study are expected to be able to help other researchers in doing studies on emotional stability and SDLR.

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