RESEARCH ARTICLE

SELF-ADJUSTMENT STRATEGIES AMONG MEDICAL STUDENT IN THE TRANSITION FROM HIGH SCHOOL TO MEDICAL COLLAGE.

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Manuscript Info

Abstract

Amongst the time, self-adjustment is always being considered as a prominent factor in predicting the successfulness of students' high school–college transition process. The transition period can lead to stressful and anxious events thus affect the learning process particularly the medical school students. Therefore this research was carried out to investigate as well as to determine the feasible self-adjustment strategies that can provide recommendations to institutions in order to help students pass the process of adjustment. Using literature review approach, this research was utilizing 24 literatures that later has been reviewed based on several criteria and criticized by critical appraisal, thus only four literatures that was admissible to this research. As a result from data synthesis, there were three factors that influence students' self-adjustment, known as academic, psychosocial and learning environments factor. Thus, there were three proposed self-adjustment strategies, including feedback and mentoring new students, preparing learning environment as well as curriculum adjustment strategies. By considering the three factors that cause adjustment problems among new students, self-adjustment strategies can be prepared by considering those factors. The self-adjustment strategies are recommended to be applied by medical education institutions in assisting students to face adjustment during transition period from high school to college.

Introduction:-
Self-adjustment is faced by new students in all majors. Some research results have shown that students experience adjustment problems during the transition from high school to college (Blair, 2016; Ababu et al., 2018). The adjustment problems faced by students can vary. The problem of self-adjustment is more faced by medical students. Ahmadi et al. (2009) showed that medical students faced more severe self-adjustment problems than students in humanities, natural sciences, paramedical, engineering and other majors. More severe self-adjustment is caused by the characteristics of medical education that is oriented to patient care and safety. In order to realize quality of care and patient safety, the process of medical education does not only involve the achievement of medical science but involves a complex learning process for the realization of professional attitudes and mastery of skills (Mahajan,

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2010). The process of medical education is different from the process of education in high school, therefore raises some problems of adjustment to the new student.

The research result conducted by Mahajan (2010) showed that the factors influenced the problem of self-adjustment of new students were academic pressure, learning environment and lectures that do not meet their expectations. New medical students were not satisfied with the educational process provided by the institution. Most students felt that lecturers do not teach as well as their expectations and they felt that examination was difficult (Barikani, 2008). Self-adjustment creates stress on students. Stressors from the academic factors were: 1) academic workload, 2) long academic hours, 3) frequency of examinations and 4) competition between classmates, beside the non-academic stressors were: 1) lack of time to rest, 2) lack of institution's facilities to help relieving stress, 3) far from home and 4) high expectations of parents towards student's achievement (Jan et al., 2018).

Some studies on self-adjustment were limited in discussing the factors that influence adjustment of medical students and the level of adjustment during the transition from high school to medical college. However research that discusses about the strategy of self-adjustment has not been done much. The results of study by Nyamayaro and Saravanan (2013) showed that medical students experience stress and anxiety in facing problems during adjustment process. In the process of self-adjustment, students faced various problems that causes stress and anxiety; therefore requires self-ability and strategies to deal with those various problems (Bandura, 2009). This study aims to review some literatures in order to formulate strategy of self-adjustment among medical students in the transition of learning process from high school to college. The strategies found are expected to be a reference for medical education institution to develop a number of steps that can help medical students undergoing the process of transition. Therefore, students can optimally take part in the learning process in medicine field.

Method:-
This study was conducted by literature review approach. Data should meet the following criteria below:
1. The researches were published in 2000-2018
2. The researches published by the use of English language
3. The research issues were about the adjustment of first-year medical students during the transition from high school to college, and
4. Keyword for searching research publication: adjustment problem in medical education, adjustment among first year medical student, adjustment strategies among first year medical student.

Data searching was executed by utilizing the search engines including PubMed, Google Scholar, Research Gate, and Medline or by tracking the bibliography of various research publications (snowballing techniques). The critical review process was carried out on all data obtained. Data already through the critical review process was synthesized by grouping the data first. Each publication that met the criteria and met critical appraisal was grouped by author, year of publication, title of publication, factors that influence the emergence of self-adjustment problems and adaptation strategies. From the results of the data grouping, the factors that influence the emergence of self-adjustment problems and adaptation strategies can be synthesized.

Result:-
From the data searched, 24 publications were obtained. However, publications that met the criteria of the study and critical review were four publications. Based on those four publications, a summary of the results from literature review about self-adjustment of first year medical students can be seen in table 1.

Based on data presented in table 1, the factors that influence the emergence of self-adjustment problems can be grouped into 3 including academic factors, learning environment and psychosocial factors. Academic factors generally include achievement of learning outcomes, test load, and the load of study time. Learning environment factors include interaction between classmates, student interaction with patients and interaction with tutors in the learning process. In addition, psychosocial factors include learning styles, difficulty managing time and lack of family time or for rest. From those various factors, there were several recommendations for self-adjustment strategies that have been presented in the publication (presented in table 1). Thus some of adjustment strategies was being synthesized according to those self-adjustment strategies (presented in table 1) and can be classified into three strategies as follows:
1. Strategy for providing feedback and mentoring new students

2. Strategy for preparing the learning environment for new students, and
3. Curriculum adjustment strategy.

Table 1:- The Results of Literature Review about Self-Adjustment for First Year Medical Students

Author	Year of Publication	Title of publication	Research design	Factors that influence the emergence of adjustment problems	Self-Adjustment Strategy
Moffat et al.	2004	First year medical student stress and coping in a problem-based learning medical curriculum	Longitudinal cohort questionnaire survey	**Academic:** Study habits, achievement of learning outcomes (progress) and availability of learning resources **Learning environment:** Tutor performance in the teaching and learning process, interactions between classmates during teaching and learning and interaction with patients.	1. Increasing the provision of feedback and guidance for students, especially to control the progress of learning outcomes 2. Increase the availability of learning resources 3. Introducing adjustment strategy to students
Soliman	2014	Perception of stress and coping strategies by medical students at King Saud University, Riyadh, Saudi Arabia	Cross sectional	**Academic:** Lack of time to study, too much material to learn, competition in class, examinations and demands to continue learning **Psychosocial:** Family problems, too many activities outside of academics	1. Respect to student abilities 2. Determine priorities 3. Don't compare with others excessively 4. Providing free time to read, exercise, watch movies, enjoy time with family and friends
Qamar et al.	2015	Factors associated with stress among medical students	Qualitative descriptive study	**Academic:** Increased examination load, extensive material on syllabus, lack of time to repeat material, long hours of study in class **Psychosocial:** Learning styles and lack of time to socialize	1. Providing counseling facilities to provide support for adjustment problems 2. Teach student about prevention strategies for stress 3. Creating a comfortable learning environment
Swaminathan et al.	2016	Perceived stress and sources of stress among first-year medical undergraduate students in a private medical college – Tamil Nadu	*Cross sectional*	**Academic:** The frequency of examinations, performance in examinations and practical skills, lack of rest periods, curriculum and demands to become professional health workers **Psychosocial:** Adjustment to new friends, live in boarding and be lonely **Health:** insomnia, attendance in the classroom must be optimal and nutrition problem	Mental health is included as part of the curriculum which can gives the provision concepts of stress identification and management or strategies to deal with stress.

Discussion:-
Based on the literature review we synthesized the self-adjustment strategy for new medical faculty students which are grouped into three main strategies as follow:
Strategy for providing feedback and mentoring for new students
In the process of self-adjustment, students need self-abilities and strategies to deal with these adjustment problems (Bandura, 2009). On all factors of self-adjustment problems, related to academic, psychosocial and learning environments, students need assistance and feedback. In the process of feedback and mentoring new students,

constructive feedback can be source of motivation for students. Teacher can provide motivation to students and help students to have greater intrinsic motivation than extrinsic motivation. Intrinsic motivation will be more stable and more optimal in influencing student interest so students feel more comfortable doing the learning process with the motivation they have (Ormrod, 2012). Starting from an interest in something, students will be motivated by themselves to actively learn new knowledge that optimizes learning activities, therefore students more easily adjust to learning (Bengtsson and Ohlsson, 2010). In line with the self-motivation theory, the teacher can explore the motivation of students to study in medicine; therefore students can continue to be motivated despite facing problems in self-adjustment. Every student should get the same academic counselors during the learning process in order to be able to monitor the development of students and help the problems faced by students including adjustment problems from the beginning (Al-Ansari, 2015). New student assistance can also be facilitated by the counseling unit. The counseling unit can help new students to maintain and develop their abilities and conditions to stay good or be better (McLeod, 2013).

Strategies for preparing a learning environment
Student perceptions of learning, such as perceptions about teaching staff, availability of infrastructure facilities and perceptions of friendship, will influence the learning process (Ugusman et al., 2015). This perception can cause adjustment problems for new students. New students felt that they have difficulty interacting with classmates and teaching staff (Swaminathan et al., 2016; Moffat et al., 2004), in addition, students felt that the facilities of infrastructure were inadequate to relieve stress (Jan et al., 2018). Interaction with the academic community and infrastructure facilities are part of the learning environment. The learning environment includes learning facilities, learning atmosphere, teaching staff and interaction among the academic community. Positive perceptions of the learning environment should be built from the beginning therefore it can be a positive external motivation for students to study in medicine. A positive learning environment is characterized by good interaction between students and the academic community. The teaching staff, as part of the academic community, should create a good learning atmosphere through good communication and cooperated with the students. This good relationship will make students more comfortable in learning; therefore students are more adaptable and can be more optimal in learning process (D'Souza et al., 2015).

The self-adjustment problem that related to the learning environment was the performance of the teaching staff and tutors who are not in line with student's expectations (Moffat et al., 2004; Barikani, 2008). Teaching staff as part of the learning environment has an important role in helping new students in self-adjustment. Teaching staff should be able to become inspiring role models that can provide solutions to students. The teaching staffs are expected to be able to interact with students both outside and inside the classroom, either communication about lecture material or outside the material. It can motivate the students in the process of self-adjustment (Shochet et al., 2013). In addition, the delivery of material by teaching staff is expected to be delivered in an interesting, enthusiastic and interactive manner as to facilitate students in the process of adjustment in learning (Bandura, 2009). Teaching in medical education requires an example about the application of the concept in real setting, however learning in high school is by delivering a theory that is not complex yet. Therefore teaching staff in medical education should have learning strategies that make the students easier to absorb the material provided. The material presented to students should be more applicable hereby students can have an idea about the application of the concept and more easily correlate the complex material (Cantillon et al., 2003). Learning that utilizes technology can be an alternative to facilitate students in learning. For example, using smartphone is not only to look for information moreover it can be used to learn through games about medical cases. The technology has been widely developed and it is hoped that through the game students will be more interested in learning (Yeh and Park, 2015).

Curriculum adjustment strategy
The academic workload is one of the factors that influence self-adjustment (Qamar et al., 2015; Jan et al., 2018). Academic workload can be reviewed from the curriculum. Therefore one of strategy that can help students to adjust is curriculum adjustment. The curriculum is important factors that influence learning process and consists of the contents of the material, how to deliver and assess, structure of teaching, sources of learning and evaluation of learning (Dent and Harden, 2013). The curriculum should be designed with the aim the material can be structured. The curriculum should be arranged in an integrated manner and arranged from simple material to complex (Barrow et al., 2010). A structured and integrated curriculum will facilitate students in mastering the material. In addition, a structured curriculum can be a direction for teaching staff to deliver complex material with more structured. Structured material can help students learn effectively therefore the material can be absorbed properly (Wirth et al., 2015). Self-adjustment will be easier to do when students feel that the material provided is easy to understand.

Some studies stated that the adjustment problems of new medical faculty students include students experiencing difficulties in managing study time, difficulties in examinations and difficulties in mastering many materials (Soliman, 2014; Swaminathan et al., 2016). One of strategy, that can be used to overcome this, is to equip students with materials related to learning and dealing with stress. In the medical education curriculum, students are currently given material about self-development and self-awareness of being medical students. Self-development and self-awareness materials include material about learning styles, active listening, active reading, reflection, exam preparation and notes taking (Indonesian Medical Council, 2012). By giving those materials we expect that the students will have an understanding of how to learn and managing stress; therefore it can help students in self-adjustment. As one example is by providing material about learning styles, students can find out the type of their learning style so as students can look for the learning strategies. Moreover health faculty students prefer the visual learning style, teacher can give suggestion to the students for learning by animation and video, therefore material retention is more easily achieved (Parai et.al., 2015).

Conclusion:-
New medical students experience a process of self-adjustment when entering lectures. In the process of self-adjustment, they are faced the adjustment problems. Adjustment problems can affect student learning achievement. Therefore the adjustment strategies need to be prepared as a recommendation to help students in the process of self-adjustment. Self-adjustment of new students can be influenced by several factors including academic, learning environment and psychosocial factors. Based on those factors, adjustment strategies can be grouped into three, including strategies for giving feedback and mentoring new students, strategies for preparing the learning environment and curriculum adjustment strategies. Those strategies can be a recommendation for medical education institutions to be able to seek an optimal learning environment, mentoring new students and planning curricula that can help students through the process of self-adjustment.

Study Limitations and Implications for Further Research:-
Our study discussed strategy of self-adjustment based on the factors that influence the emergence of adjustment problems in the publications that we have reviewed. However, we have not yet involved other factors that might influence the adjustment of new students. In addition, our study did not yet discuss the adjustment strategy based on the level of adjustment (low, medium and heavy levels). Therefore, for further research we recommended to discuss adjustment strategies based on other factors that might influence self-adjustment and develop strategies in more detail through different levels of adjustment.

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