NARRATIVE REVIEW

Factors related to achievement, interaction in learning groups and depression levels in students of the Faculty of Medicine

Reqgi First Trasia[1], Nirmala Gimbar Yamin[1]

[1]Prodi Kedokteran, Fakultas Kedokteran, Universitas Sultan Ageng Tirtyasa

Correspondence author: reqgi.first@untirta.ac.id

ABSTRACT

The level of depression throughout the world, including in Indonesia, reaches a fairly high level and is a serious problem that many occur in students, especially medical students. One of the factors causing is the lack of interaction in the learning group, it can trigger depression which can even lead to suicide cases. However, there is no study that reviews this regarding this matter in Banten. Therefore, it is important to do a study related to how the relationship between achievement and interaction in student learning groups to the level of depression in the Faculty of Medicine. Based on this review it can be concluded that the factors related to depression in medical students are gender, age, parenting, education level, academic achievement, marriage status, personality, socioeconomic, and interaction in learning groups. In addition, the factors relating to the achievements of medical students are physiological conditions in general, psychological, the condition of the five senses, intelligence, talent, motivation, the environment and other supporting matters. In addition, the factors that influence the interaction of learning groups include imitation, suggestion, identification, sympathy, motivation and empathy.

Keywords: depression, medical student, stress, learning, achievement, motivation, interaction

INTRODUCTION

Depression is a major factor that encourages suicide and ranks sixth as the main cause of death in the United States.[1] According to the World Health Organization (WHO), globally, it is estimated that there are around 280 million people suffering from depression, with more than 700 thousand cases of killing self every year. Suicide is one of the main causes of death in the age range of 15-29 years.[2] Regional Classification WHO states that, the highest depression incidence is recorded in the Southeast Asian region, reaching around 27% or around 85.67 million individuals who experience depression. [3] In Indonesia, according to data from basic health research (Riskesdas) in 2018, more than 19 million people over the age of 15 years experiences mental emotional disorders, with more than 12 millions of whom suffer from depression.[4] In Banten, the number of individuals who experience cases Depression reached 33,269 people, currently 2,866 people are undergoing treatment (Ministry of Health of the Republic of Indonesia, 2018) .[5]

Symptoms of depression are a common mental health problem experienced by medical students around the world. According to a meta-analysis study involving 129,123 medical students from 47 countries, the global prevalence of

depression symptoms reached 27,2%. A study that measures the prevalence of depression symptoms in 1,115 medical students in Asia using the Beck Depression Inventory (BDI) questionnaire shows 11%. In Indonesia, research on 156 students of the Diponegoro University Faculty of Medicine (FK UNDIP) using the BDI-II questionnaire found that 64.8% of samples experienced symptoms of mild to severe depression. Then a study was carried out on 126 students of the Faculty of Medicine at Atma Jaya University (FK UAJ), found that 34.9% of respondents showed symptoms of depression measured using Hamilton Depression Rating Scale (HDRS) .[6,7,8]

Medical students are expected to experience growth in physical, mental, spiritual, and social aspects so that they can realize their potential, face good pressure, work effectively, and contribute positively to their community.[9] This is supported by a Young and Mack study that states Good social interaction will create good mental health too. So that lack of social interaction, especially in learning groups can be one of the factors causing depression in medical students. Interaction in a learning group should be a supporting place, where students can help each other to overcome the gap of knowledge, solve problems, and encourage critical thinking to achieve academic success.[10] However, in reality not all students can feel the same benefits from group learning experiences. An interactive perspective states that stress to depression can originate from various factors in the environment and from the characteristics of the individual itself. Environmental factors that can trigger stress to depression from learning groups including noise, vibration, lighting, interpersonal relationships, and the level of activity provided. Meanwhile, individual factors that can cause stress to depression include factors such as age, level of education, health conditions, and role conflicts. As a result, some students may experience difficulties in achieving the expected "ideal" conditions from interactions in the study group.[11]

One of the real cases that occurred was when a postgraduate student at the Bandung Institute of Technology (ITB) was found dead from suicide by hanging himself in his residence on Tuesday (3/9/2019) ago. This incident was surprising because the student had a brilliant academic achievement on his campus despite his young age, which was 25 years. It is estimated that the ITB student ended his life because he suffered from depression due to the learning pressure he received on campus. Depression in students is a serious problem in mental health that cannot be ignored. This can occur because of the accumulation of stress that causes a person's emotional instability so that it triggers the desire to commit suicide.[12]

Based on this, it is necessary to examine the connection between academic achievement and interaction in student learning groups with the level of depression in the Faculty of Medicine. This study was conducted in order to achieve a better understanding of the relationship between academic achievement and interaction in learning groups and how much influence on the level of depression among medical students. The results of this study are expected to provide significant benefits in efforts to improve student academic welfare and mental health, as well as being a basis for the development of more effective interventions in the future.

DEPRESSION ON MEDICAL STUDENTS

Depression is a mental condition that is often characterized by deep feelings of sadness, loss of interest or excitement, lack of energy, guilt, feeling inferior, difficulty sleeping, lack of appetite, fatigue, and difficulty concentrating. This condition can be chronic and repeated, and can significantly disrupt a person's ability to carry out daily tasks. At the

most severe level, depression can lead to the mind to commit suicide.[3] Individuals aged between 18 to 29 years have a three -fold risk of being depressed compared to people aged 60 years.[15]

The Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2019 states that two mental disorders that have the most significant impact are depression and anxiety. Both of these disorders are included in the list of 25 main causes of disease burden worldwide in 2019.[13,14] according to WHO 2017, Indonesia itself is ranked fifth in terms of the incidence of depression in the world.[3] Then, supported from data from basic health research (Riskesdas) years 2018, Banten Province ranks sixth in terms of the percentage of population that experiences the highest depression throughout Indonesia.[16]

Based on this, WHO estimates that there are around 280 million individuals suffering from depression and more than 700 thousand people die from suicide every year in the world.[2] As many as 65% of them experience repeated episodes of the disorder, making depression as the main cause of disease worldwide.[17] The highest depression incidence was recorded in the Southeast Asian region, reaching 85.67 (27%) of a total of 322 billion individuals in the world. According to data from WHO 2017, Indonesia has a depression incidence of 3.7%. In Indonesia, the incidence of depression in individuals aged ≥ 15 years shows that as many as 6.1% experienced depression, with a higher incidence rate in Central Sulawesi Province, reaching 12.3% (Ministry of Health of the Republic of Indonesia, 2018) .[3] in Banten Province itself, there are 33,269 individuals suffering from depression, but only 2,866 individuals receive treatment. This figure is quite significant and requires serious attention.[5]

In the last 60 years, suicide rates in adolescents have tripled. A study reported that 60% of students experienced high levels of anxiety and depression, especially in the age range of 18-24 years.[5] More worrying, medical students tend to experience a higher stress level compared to the population in general.[18] Symptoms of Depression are mental health issues which is common among medical students in various countries. The global prevalence of depression symptoms, based on a meta-analysis study involved 129,123 medical students in 47 countries, was found to be 27.2%. A study of the prevalence of depression symptoms in 1,115 medical students in Asia, who used the Beck Depression Inventory (BDI) questionnaire, showed a figure of 11%. In Indonesia, a study in 156 FK Undip students using the BDI-II questionnaire found that 64.8% of samples showed symptoms of mild to severe depression. A study at 126 FK students at Atma Jaya University showed that 34.9% of respondents experienced symptoms of depression, measured using Hamilton Depression Rating Scale (HDRS) .[6,7,8]

Risk Factors of Depression on Student

Gender Research on students from the Faculty of Medicine, Nusa Cendana University (FK Undana) explained that the distribution of respondents who experienced depression by sex showed the number of women who experienced 54 respondents (66.7%), more than the number of men who experience depression, namely 27 respondents (33.3%). This finding is in line with the results of research conducted by Steinberg, which shows that from the beginning of puberty to late adults, women have a higher risk for depression. This is caused by factors such as genetic influence, social interaction during puberty, and exposure to various stressors that occur simultaneously. Women tend to rely more on feelings in dealing with stressors, more sensitive to interpersonal relationships, and more likely to use emotional problem solving strategies.[28,29]Age

Study conducted on students from FK Undana explained that the characteristics of respondents who were depressed, based on age, showed that the age group was more than or equal to 20 years was a group with the highest number, namely 44 respondents (54.3%), while the age group was in Lower or equal to 19 years is a group with the lowest

number, namely 37 respondents (45.7%). Depression is more likely to occur at a young age, with the highest frequency in the productive age range of around 20-40 years. However, depression can also occur in children and the elderly.[28.29]Parenting Style

Research on students from FK Undana explained that respondents who experience depression can be grouped based on parenting parents. It was found that as many as 30 respondents (37%) came from families with democratic parenting, while as many as 51 respondents (63%) came from families with authoritarian and permissive parenting. These families may have a history related to depression, suicide, or alcohol addiction.[28.29]

Education Level

Research on students from FK Undana explained that the distribution of respondents based on the level of education can be sorted into three categories. It was found that 33 respondents (40.7%) were in semester 3, 10 respondents (12.3%) in semester 5, and 38 respondents (47.0%) were in semester 7 or higher. These findings are in line with research conducted at Surabaya State University in 2013 by Gema Agung, which indicates that the stress level in final year students who are working on thesis tends to be quite high, where 97.0% of them experience impact that has the potential to cause depression.[28]

Academic Achievement

Research on students from FK Undana explained that respondents who experience depression can be categorized based on academic achievement. It was found that 79 respondents (97.5%) came from the category with praise and were very satisfying, while only 2 respondents (2.5%) came from the satisfactory category.[28]

Marital Status

Research on women working in the Betungan Puskesmas area in Bengkulu City. Research findings show that there are 6 women who are not married and work experiencing mild depression, 12 women who are married and work also experience mild depression, and 11 women who are widows and work also experience mild depression. From the discussion, found the percentage of working women who were widows and experienced depression turned out to be higher than those who were not married or were married. The conclusion of this study is that there is a significant relationship between marital status and depression level in women who work in the working area of the Betungan Health Center in Bengkulu City in 2018, although the relationship can be categorized as moderate.[30]Personality

Based on research, it was found that 22 students of the doctor's education study program, or around 30.99%, experienced symptoms of depression. Of these, 13 people or around 18.31% experienced mild depression symptoms, 8 people or around 11.27% experienced symptoms of moderate depression, and only 1 person or around 1.41% experienced severe depression symptoms. Through multiple regression analysis, it was found that the personality that has the most powerful influence on the level of depression symptoms is the personality type of neuroticism, where its contribution reaches around 22.9% in the level of symptoms of depression. The conclusion is that there is a significant relationship between the dimensions of the personality of neuroticism with the level of symptoms of depression in students.[31]

Sosio-Economic

According to the World Federation Mental Health, 1 of 5 individuals in the world experience mental disorders. Several studies have shown that one of the causes is low socioeconomic status in developing countries. Research uses

secondary data from Indonesia Family Life Survey (IFLS). This indicates that the socioeconomic status, plays a role in the possibility of a person experiencing symptoms of depression.[32]

Student Group Interaction

Research with a study conducted by Eisuki Ono entitled "Relationship between Social Interaction and Mental Health" shows the results of the psychological questionnaire conducted on 40 respondents showed that individuals who actively interact with others tend to experience a lower stress level. The findings of Eisuki Ono's research show that individuals involved in communication and positive relationships with their social environment have a higher possibility to meet their needs well, so they do not feel lonely or isolated when facing difficulties. This contributes to good mental health and reduces excessive stress levels when interacting socially. [33]

The quality of the environment around a person has a significant impact on mental health. The study has shown that increasing social interaction can help improve individual mental health. Thus, the better a person's social interaction, the better the mental health. Conversely, social isolation can increase the risk of mental health problems. Therefore, it can be concluded that there is a relationship between social interaction and mental health. [33]

Impact of Depression on Student

Depression is a serious problem in the latest society. According to WHO, depression is currently ranked fourth as a disease that affects the global population and is expected to be one of the main problems in public health. The issue of suicide is also a serious concern in public health today. According to WHO data in 2019, around 800,000 people died from suicide every year worldwide, with a higher suicide rate occurred in a young age group. In the Southeast Asian region, the highest suicide rate was recorded in Thailand (12.9 per 100,000 population), followed by Singapore (7.9), Vietnam (7.0), Malaysia (6.2), Indonesia (3.7), and the Philippines (3.7). Behavior related to suicide, such as suicide ideas, suicide plans, and suicide, is often associated with various mental disorders, including depression disorders.[29]

Symptoms of depression, such as feelings of useless, loss of hope, or despair, are significant risk factors for suicide. About 55% of individuals who experience depression also have a suicide idea. Depression is characterized by a sad mood, loss of interest, and irritability. Patients often experience cognitive distortion, such as criticism of themselves, feelings of guilt, inferiority, decreased self-confidence, and pessimistic and hopeless attitudes. Other symptoms include fatigue, decreased energy, decreased psychomotor activities, and social isolation. Sleep disorders, decreased appetite, and decreased sexual arousal also often occur in individuals who experience depression. In severe cases of depression, individuals can feel frustrated and desperate, even ideas arise to hurt themselves or commit suicide. Data from WHO shows that suicide rates due to depression can reach around one million cases per year worldwide, showing very alarming conditions.[29]

STUDENT ACHIEVEMENT

According to the Big Indonesian Dictionary (2018), achievement is the result that has been obtained from the actions or efforts that have been carried out. Sardiman (2001) explains that achievement is a real ability that arises from

interactions between various factors, both internal and external individuals, in the learning process. Student achievement is the recognition or achievement in academic and non-academic aspects obtained by students both individually and as part of the group or team as long as they are still registered as active students. Academic achievement involves a learning process that results in changes in knowledge, understanding, applications, analysis, synthesis, and evaluation. According to Bloom, student academic achievement involves efforts to achieve academic goals, such as grades, which are focused during the study period. Suryabrata (2006) explains academic achievement as an assessment of educational outcomes that measure the extent to which students have learned and practiced. Hipjillah (2015) added that academic achievement includes changes in various aspects of knowledge and understanding, which are evaluated through tests, evaluations, or tests of each subject, with the results are expressed objectively in the form of numbers or sentences.[35]

Then the learning process, according to Slameto (2003) and Johnson (2007), resulted in changes in knowledge, understanding, values, attitudes, and skills. Evaluation is generally carried out through tests, which provide data on student achievement in the form of grades, such as the Cumulative Achievement Index (GPA) that reflects the ability of students in a certain period. Meanwhile, non-academic achievements include extracurricular activities, as explained by Mulyono (2008), is an activity outside of class hours aimed at developing the potential, interests, talents, and hobbies of students. In tertiary institutions, these activities are often known as the Student Activity Unit (UKM), which helps students develop their abilities and characters to compete in the era of globalization. Student organizations on campus and college also play a role in student self-development. Student Activity Unit becomes a forum for developing student interests, talents, and skills, as well as to instill scientific attitudes and increase cooperation.[35]

STUDY GROUP INTERACTION

Humans, basically, have the nature of individuals, social, and religious creatures. As social beings, humans are in a relationship with each other and with other groups in their lives. This means that every individual needs to be involved in social interaction.[33] The term "interaction" itself comes from the combination of the word "inter" which means between, and "action" which refers to action. Interaction between students in peer groups is one of the external factors that influence student learning achievement. According to Shaw, social interaction is an exchange between individuals that influence one another's behavior in their presence, where every behavior has an impact on other individuals. Ivor Morish also stated that "a peer is an equal person, and peer groups consist of equal individuals." In other words, peers are those who have similarities, and peer groups consist of similar individuals.[33,38]

In social interaction between peer groups, the behavior of one child can influence, change, or improve the behavior of other children, and vice versa. This happens between children with relatively the same or the same age. In the context of learning, social interaction in peer groups has an important role in changing, influencing, or improving student behavior during the learning process.[38] The results of research conducted by Jinho Kim in a journal entitled "The Quality of Social Relationships in Schools and Adult Health: Differential Effects of Student-Student versus Student-Teacher Relationships" shows that students who lack good relationships or interactions with friends, especially With the teacher, it tends to experience deviant behavior such as smoking and drinking. Social interaction is often the focus of research related to mental disorders.[33]

First, when a person experiences emotional disorders, it can result in a decrease in social interaction, which is reflected in regression behavior as a result of mental health disorders. For example, when someone feels in a bad mood and is invited to communicate or discuss with others, they tend to be easily angry and offended by small things, which can lead to feelings of hate of their interlocutors. This can stretch relationships and influence social interaction. Second, low social interaction can also cause mental health problems. For example, living in a remote place of residence from

the community can isolate a person socially, causing feelings of isolation and difficulty in various ways, maybe even triggers harassment behavior that results in stress and mental health problems. The quality of the surrounding environment also plays an important role in one's mental health. Various case studies show that increasing social interaction can help improve mental health. Thus, the better a person's social interaction, the better his mental health, and vice versa, the more isolated his social interaction, the greater the risk of experiencing mental health disorders. It can be concluded that there is a relationship between social interaction and mental health. [33]

CONCLUSION

Based on this review it can be concluded that the factors related to depression in medical students are gender, age, parenting, education level, academic achievement, marriage status, personality, socioeconomic, and interaction in learning groups. In addition, the factors relating to the achievements of medical students are physiological conditions in general, psychological, the condition of the five senses, intelligence, talent, motivation, the environment and other supporting matters. In addition, the factors that influence the interaction of learning groups include imitation, suggestion, identification, sympathy, motivation and empathy.

REFERENCES

1. Karin, Ns Putu Ayu Emmy Savitri. "Gambaran Risiko Bunuh Diri pada Mahasiswa Baru di Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Udayana."

2. World Health Organization (WHO). Depression. World Health Organization. 2021.

3. Djohan, S. E., Lestari, R. D., Lestari, E., & Napitu, I. C. "Gangguan mental emosional dan depresi pada remaja." HealthCare Nursing Journal. 2022;4(2):429-434.

4. Kementerian Kesehatan Republik Indonesia (Kemenkes RI). "Minimnya Kesadaran Masyarakat terhadap Mental Health." Kementerian Kesehatan Republik Indonesia. 2022. [https://yankes.kemkes.go.id/view_artikel/974]

5. Muhamad, -. "Hubungan Aktivitas Fisik Dengan Tingkat Depresi pada Mahasiswi Perguruan Tinggi di Provinsi Banten." S1 thesis, Universitas Pendidikan Indonesia. 2020.

6. Pham, T., et al. "The prevalence of depression and associated risk factors among medical students: An untold story in Vietnam." PLoS One. 2019;14(8):1–17.

7. Rotenstein, L. S., et al. "Depression, Depressive Symptoms, and Suicidal Ideation Medical Students: A Systematic Review and Meta-Analysis." J Interv Radiol. 2014;17(1):1–43.

8. Hariyanto, A. D., & Hariyanto, A. D. "Prevalensi Depresi dan Faktor yang Mempengaruhi pada Mahasiswa Fakultas Kedokteran Universitas Katolik Indonesia Atma Jaya Angkatan 2007." Fakultas Kedokteran Universitas Katolik Indonesia Atma Jaya. 2010.

9. Ayu Rachmawati, A., egsaugm. "Darurat Kesehatan Mental bagi Remaja – Environmental Geography Student Association." 2020. [https://egsa.geo.ugm.ac.id/2020/11/27/darurat-kesehatan-mental-bagi- remaja/]

10. Jones, R. W. "Learning and teaching in small groups: characteristics, benefits, problems and approaches." Anaesth Intensive Care. 2007;35(4):587-592.

11. Rahmawati, S., & Indriayu, M. "Pengaruh tekanan akademik terhadap prestasi

akademik mahasiswa pendidikan ekonomi fakultas keguruan dan ilmu pendidikan Universitas Sebelas Maret." Jurnal Pendidikan Bisnis Dan Ekonomi. 2017;3(2).

12. Halodoc R. "Mahasiswa ITB Bunuh Diri, Stres Belajar Bikin Depresi?" halodoc. [https://www.halodoc.com/artikel/mahasiswa-itb-bunuh-diri-stres-belajar- bikin-depresi/]

13. Vos et al., "Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease

Study 2019," Lancet, vol. 396, no. 10258, pp.

[Online]. https://www.sciencedirect.com/science/article/pii/S0140673620309259.

14. GBD 2019 Mental Disorders Collaborators, "Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019," The Lancet Psychiatry, vol. 9, no. 2, pp. 137–150, Feb. 2022, doi: 10.1016/S2215-

0366(21)00395-3.

15. S. P. Chand and H. Arif, Depression. Florida: StatPearls Publishing, 2022.

16. Provinsi Mana yang Memiliki Angka Depresi Tertinggi? | Databoks [Internet].

[cited 2024 Mar 28]. Available from: https://databoks.katadata.co.id/datapublish/2019/10/09/provinsi-mana-yang-memiliki-angka-depresi-tertinggi

17. Hadi I, Wijayati F, Usman RD, Rosyanti L. Gangguan Depresi Mayor: Mini Review. Health Inf J Penelit [Internet]. 1 Juni 2017 [dikutip 28 Maret 2024];9(1):34-49. Tersedia pada: https://myjurnal.poltekkes-kdi.ac.id/index.php/hijp/article/view/102

18. S. A. M. Jafri, E. Zaidi, I. S. Aamir, H. W. Aziz, Imad-ud-Din, and M. A. H. Shah, 2017. Stress Level Comparison of Medical and Non-medical Students: A Cross Sectional Study done at Various Professional Colleges in Karachi, Pakistan. Acta Psychopathology. pp. 1–6.

19. Depression - StatPearls - NCBI Bookshelf [Internet]. [cited 2024 Mar 28]. Available from: https://www.ncbi.nlm.nih.gov/books/NBK430847/

20. Disruptive Mood Dysregulation Disorder: The Basics - National Institute of Mental Health (NIMH) [Internet]. [cited 2024 Mar 28]. Available from: https://www.nimh.nih.gov/health/publications/disruptive-mood-dysregulation-disorder

21. Malhi GS, Mann JJ. Depression. Lancet. 2018 Nov 24;392(10161):2299-2312. doi: 10.1016/S0140-6736(18)31948-2. Epub 2018 Nov 2. PMID: 30396512.

22. Bains N, Abdijadid S. Major Depressive Disorder. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cited 2024 Mar 28]. Available from: http://www.ncbi.nlm.nih.gov/books/NBK559078/

23. Rhebergen D, Graham R. The re-labelling of dysthymic disorder to persistent depressive disorder in DSM-5: old wine in new bottles? Curr Opin Psychiatry. 2014 Jan;27(1):27-31. doi: 10.1097/YCO.0000000000000022. PMID: 24270481.

24. Freeman HL. Historical and nosological aspects of dysthymia. Acta Psychiatr Scand Suppl. 1994;383:7-11. doi: 10.1111/j.1600-0447.1994.tb05877.x. PMID: 7942068.

25. Brieger P, Marneros A. Dysthymia and cyclothymia: historical origins and

10.1016/s0165-0327(97)00053-0. PMID: 9298424.

26. Brieger P , Marneros A. Das Dysthymiekonzept: Aktuelles und

Geschichtliches--ein Uberblick [The dysthymia concept: current and historical aspects--an overview]. Fortschr Neurol Psychiatr. 1995 Oct;63(10):411-20. German. doi: 10.1055/s-2007-996643. PMID: 8529990.

27. Yonkers KA, O'Brien PM, Eriksson E. Premenstrual syndrome. Lancet. 2008 Apr 5;371(9619):1200-10. doi: 10.1016/S0140-6736(08)60527-9. PMID: 18395582; PMCID: PMC3118460.

28.Kedang E, Nurina R, Tallo Manafe D. Analisis Faktor Resiko yang Mempengaruhi Kejadian Depresi pada Mahasiswa Fakultas Kedokteran Universitas Nusa Cendana. CMJ [Internet]. 1Jul.2020 [cited 28Mar.2024];8(2):87-5. Available from: https://ejurnal.undana.ac.id/index.php/CMJ/article/view/3352

29. Direktorat Jenderal Pelayanan Kesehatan [Internet]. [cited 2024 Mar 28]. Available from: https://yankes.kemkes.go.id/view_artikel/1450/depresi-dan- bunuh-diri

30. Giena, Vike P. "Hubungan Status Perkawinan dengan Depresi pada Wanita Bekerja di Wilayah Kerja Puskesmas Betungan Kota Bengkulu." Jurnal Ners Lentera, vol. 8, no. 1, 2020, pp. 25-34.

31. Pratiwi SE, Rozalina R, Sukmawati F, Nisa K. Hubungan antara kepribadian dan tingkat gejala depresi pada mahasiswa tahun kedua Program Studi Pendidikan Dokter Fakultas Kedokteran Universitas Tanjungpura. Jurnal Kesehatan Khatulistiwa. 2015 Jul 1;1(3):185–95.

32. Dewi Y, Relaksana R, Siregar AYM. Analisis Faktor Socioeconomic Status (SES) Terhadap Kesehatan Mental: Gejala Depresi di Indonesia. Jurnal Ekonomi Kesehatan Indonesia [Internet]. 2021 May 31 [cited 2024 Mar 28];5(2). Available from: https://journal.fkm.ui.ac.id/jurnal- eki/article/view/4125.

33. Sari, W. R. (2022). Pengaruh Proses Belajar dan Interaksi Sosial terhadap Kesehatan Mental Siswa di MTs Ma'arif Balong Ponorogo(Doctoral dissertation, IAIN PONOROGO).

contemporary development. J Affect Disord. 1997 Sep;45(3):117-26.