







Original Research

Assessment of Behavioral, Social, and Emotional Skills in Medical Students: A Strategy to Improve Mental Health

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Abstracts

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Introduction: Students during college face important phases in their lives, have greater responsibilities, and are required to improve their skills. Of the various types of skills, social skills have a large impact on mental health. This study aimed to determine the behavioral, emotional, and social skills among medical students in South Sumatra, Indonesia. **Methods:** This study is observational with a cross-sectional design. The participants were all students of the Faculty of Medicine in South Sumatra. Descriptive analysis was conducted by presenting the BESSI-45 score data in the median value. **Results:** The number of participants was 702 people, 74,9% female, 17-26 years old, 83,5% lived in South Sumatra, 3,4% had a history of mental disorder, and 4,3% had a history of mental disorders in their family. The largest median value of 73.33 is in the cooperation skills domain, followed by the median value of 71.11 in the self-management domain. The innovation skills and social engagement domains have the lowest median value of 62.22. It was found that 364 participants (51.9%) had scores below the median, while 338 participants (48.1%) had scores above the median. **Conclusions:** The study concluded that the majority of medical students in South Sumatra exhibit moderate levels of behavioral, emotional, and social skills, with the highest scores in cooperation and self-management domains. However, innovation skills and social engagement were identified as areas needing improvement. These findings highlight the need for targeted interventions to enhance the overall social and emotional well-being of medical students.

Keywords: Social-Emotional Skills, Behavioral Skills, Medical Student, Mental Health

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INTRODUCTION

The college period is one of the most important phases in a person's life, as it is also referred to as the transition period from adolescence to adulthood. This period is accompanied by increased responsibilities for an individual. For most students, college is a phase filled with trials and reflections. This transition period is known by the term 'emerging adulthood', which is a unique developmental stage characterized by a period of significant change and exploration that marks the beginning of one's efforts to define their future life, whether in terms of occupation, life partner, or other major aspects [1], [2].

Students who are in the period of 'emerging adulthood' are faced with various career and personal life possibilities. In this phase of life, they are required to make decisions and prepare for their future careers, occupational, educational, and financial matters, which are the main focus of adult life [3]. This phase renders students vulnerable to psychological issues such as anxiety and depression due to the necessity of adapting to a new environment, being apart from family, and engaging in autonomous learning. Many previous studies have suggested a high prevalence of mental-emotional problems in the college student population. A recent study revealed that the prevalence of depressive symptoms in medical students was higher than the prevalence of depressive symptoms in the general population [4]. The prevalence of anxiety symptoms in medical students is also quite high. Based on a meta-analysis, the prevalence of anxiety symptoms in medical students worldwide ranged from 29.2% to 38.7%. This number is also higher than the general population, which is 3% [5], [6]. Another study on the prevalence of anxiety symptoms in medical students in Indonesia showed higher results, with a prevalence of 45-47%. Some contributing factors are the burden of education and the learning process, lack of rest time, financial burden, exposure to patients and death, and

bullying [7]-[10].

During college, apart from mastering cognitive abilities, students are also required to have social skills. Social skills are identified as one of the supporting factors in academic success and thus affect various aspects of students' lives, such as personal, social, and professional [11], [12]. Students need to develop values that support healthy personal development, such as confidence, eagerness to learn new skills, healthy social relationships, ability to control emotions, optimistic thinking, and being involved in various academic and non-academic activities [13], [14]. Social skills are functional capacities and abilities that are acquired and developed through practice and effort. These skills are functional and plastic, meaning the skills are manifested in behavior when the situation requires a person to act [11]-[13], [15]-[17]. Therefore, social skills become crucial at this stage to maximize their potential and support the transition from college into adulthood. As mental health and social skills are equally important in the development of emerging adulthood, the relationship between the two has been elucidated by several previous studies. Some studies suggest that social skills and symptoms of depression and anxiety are negatively correlated; hence, the lower one's social skills, the more likely one is to experience symptoms of depression and anxiety [11], [13]-[15]. This study aimed to determine the behavioral and emotional-social skills as measured by The Behavioral, Emotional and Social Skills Inventory (The BESSI-45) questionnaire among medical students in South Sumatra, Indonesia.

METHODS

Participants and procedure

This study was an observational study with a cross-sectional design. The participants of the study were all students of the Faculty of Medicine in South Sumatra, from the Faculty of Medicine of Sriwijaya University, and Muhammadiyah University Palembang,



who were willing to take part in the study by signing an informed consent form. This study lasted for 8 months and began after obtaining ethical approval from the ethics committee of the Faculty of Medicine of Sriwijaya University and Muhammadiyah University Palembang. Upon receiving an explanation and completing the consent form, participants completed The BESSI-45 questionnaire using a Google Drive link. The questionnaires were distributed anonymously, and the data were stored in a database that could only be accessed by the research team.

Instruments

The BESSI-45

The Behavioural, Emotional, and Social Skills Inventory (The BESSI-45) is an instrument that measures social, emotional, and behavioral skills in a comprehensive, valid, and efficient. This instrument measures five main skills domains; self-management skills, social engagement skills, cooperation skills, emotional resilience skills, and innovation skills. Each BESSI item describes a specific behavior that is relevant to a particular skill. Participants will rate how

well they perform the behavior. The overall results are then averaged to measure these five key skill domains [18].

Data analysis procedure

The collected data were analyzed by Statistical Product and Service Solutions (SPSS). Descriptive analysis was conducted by presenting the BESSI-45 score data in the mean or median value according to normality tests.

RESULTS

The number of participants in this study was 702 people, as per Table 1. The majority of the participants were female, accounting for 526 people (74.9%), from the Faculty of Medicine, Sriwijaya University, with a total of 411 people (58.5%). The participants were in the range of 17-26 years, with 586 (83.5%) of them living in South Sumatra. 24 (3.4%) participants out of a total of 702 participants exhibited mental disorders. Out of a total of 702 participants, 24 (3.4%) of them reported having a history of mental disorders. Thirty participants (4.3%) reported a history of having mental disorders in their family.

Table 1. Characteristic of participants

Variable	Total (n=702)	Percentage (%)
Age	Mean 19.94	
Sex		
Male	176	25.1
Female	526	74.9
University		
Sriwijaya	411	58.5
Muhamadiyah Palembang	291	41.5
History of mental disorder	24	3.4
Family history of mental disorder	30	4.3
Domicile		
South Sumatera	586	83.5
Non South Sumatera	116	16.5
History of organization		
History of organization (+)	501	71.4
History of organization (+)	201	28.6

The Behavioural, Emotional, and Social Skills

The results of the analysis showed that the data were not normally distributed ($p < 0.05$). Thus, the social, emotional, and behavioral skills scores of the participants were presented in median

values as shown in Table 2. The maximum value of the BESSI-45 score was 100, and the median value of the participants' BESSI scores ranged from 62.22 to 71.11. The largest median value of 73.33 is in the cooperation skills domain, followed by the median value of 71.11 in the self-management domain. The innovation skills and social engagement domains have the lowest median value of 62.22.

Table 2. Domain of Behavioral, Emotional, and Social Skills

Domain	N	Median
Self-management	702	71.11
Social engagement	702	62.22
Cooperation skills	702	73.33
Emotional resilience	702	68.89
Innovation skills	702	62.22

Based on the total BESSI-45 score, it was found that 364 participants (51.9%) had scores below the median, while 338 participants (48.1%) had scores above the median. For each BESSI domain, there was no significant difference in the total BESSI score as shown in Table 3.

Table 3. Distribution of participants based on median value

Domain	Below the median		Above the median	
	N	%	n	%
Self-management	333	47.4	369	52.6
Social engagement	329	46.9	373	53.1
Cooperation skills	315	44.9	387	55.1
Emotional resilience	348	49.6	354	50.4
Innovation skills	356	50.7	346	49.3
Total	364	51.9	338	48.1

DISCUSSIONS

Collaborative skills, along with communication and social abilities, are essential competencies for a physician. These skills are considered the core competencies because, as a physician, it is mandatory to be able to communicate well and collaborate with patients and other health workers. Despite its importance, some medical faculties do not provide dedicated training in communication skills, instead integrating them into the broader medical curriculum. This approach often results in impediments to establishing positive patient relationships, ultimately leading to a decline in the quality of healthcare services [19]-[23].

In addition to being one of the competencies in providing healthcare services, social

skills also serve as a protective factor and determinant of life satisfaction. A literature review reveals an association between social skills and symptoms of burnout, depression, and anxiety among medical residents. Residents with high social skills tend to experience lower levels of burnout, depression, and anxiety symptoms. Furthermore, social skills are also linked to burnout and depressive symptoms in students. The research posits that social skills are crucial for individuals to navigate and adapt to social environments. Individuals with low social skills are said to be vulnerable to experiencing anxiety and loneliness. This sense of loneliness makes it difficult for one to obtain peer support, ultimately leading to depressive symptoms [24]-[28].

The high prevalence of mental and

emotional issues among medical students and practitioners underscores the importance of emotional resilience skills. Medical education is a field encompassing vast knowledge, with exceptionally high demands for mastering both theoretical and practical skills. Consequently, medical students are susceptible to distress related to academic pressure, such as heavy study loads, examinations, and anxiety about failure. Beyond academic burdens, other stressors identified in medical students include time management difficulties, sleep deprivation, interpersonal conflicts and relationships with peers, health issues, financial concerns, and more. This diverse array of potential stressors emphasizes the importance of emotional resilience skills, enabling students to adapt to the challenges of their educational environment. Emotional resilience also serves as a safeguard against burnout. It facilitates the establishment of personal boundaries, contributing to the development of mentally and emotionally healthy physicians capable of providing high-quality healthcare services [29]-[31]. Medical education requires students to master a broad range of medical theories, be able to perform various clinical skills, and keep up to date with science and technology. In the future, it is not impossible for a practitioner to be faced with difficult cases, management of an ever-changing work environment, and the development of renewable science and technology. Therefore, self-management and innovation skills are important. Social skills are known to enhance self-confidence and foster a high level of interest in learning, ultimately improving the mental health of university students [32]-[35].

The characteristics of the younger generation, along with changes in the era and immediate environment, play a role in the development of social skills, including aspects of nurturing and education [36],[37]. The advancement of the era has resulted in the digitalization of the current young generation's environment since their childhood. Current medical

students generally come from Generation Z, born between 2000-2012. Students of this generation are children who have grown up and developed under the influence of technology and social media. The increasing dependence on online interactions raises concerns about its impact on social skills. A study among university students showed that frequent users of social media experienced a decline in face-to-face communication skills compared to those who rarely used social media. This implies that dependence on digital activities may hinder social skills and face-to-face communication [38],[39].

Parenting patterns and the role of parents influence the social skills of their respective children, especially in Indonesian culture, which values respecting parents and considering family as a source of happiness and a reference in making important life decisions. Therefore, children tend to emulate their parents. Parents play a significant role in educating and shaping their children's characteristics to cooperate and communicate effectively with others through the freedom given to children with different parenting choices [40]-[42].

Despite the limited understanding of the acquisition of social skills in collegiate settings, educational institutions that offer comprehensive instruction and interaction serve as spaces where students may pursue experiences to equip themselves for adulthood. The medical education curriculum also does not include communication skills, ethics, and professionalism as taught skills, but students learn through role modeling and daily social interactions [43]-[46].

Higher education has been impacted by the COVID-19 pandemic following the implementation of social distancing regulations, and medical education is no exception. Adaptation and the rapid shift of learning methods to an online system were carried out to ensure that lectures continued to take place. This has the potential to reduce direct social interaction and create loneliness problems that risk increasing psychological

issues among students. However, over time, the impact of the COVID-19 pandemic has diminished, and the education system has begun to transition back to face-to-face learning [44],[47].

CONCLUSIONS

The study's findings underscore the critical importance of social skills in medical education, as they directly impact the mental health and professional competence of future physicians. The data revealed that medical students in South Sumatra exhibit moderate levels of behavioral and emotional-social skills, with the highest scores in cooperation and self-management domains. These competencies are essential for effective patient communication, collaboration with healthcare teams, and overall quality of care. However, the lower scores in innovation skills and social engagement highlight areas requiring targeted intervention to prepare students for the demands of their future careers fully.

The high prevalence of mental health issues among medical students further emphasizes the necessity of developing strong emotional resilience and coping mechanisms. The study's results indicate a significant portion of students score below the median in these critical skills, suggesting a vulnerability to stress, burnout, and mental health disorders. By addressing these gaps through enhanced training and support systems, medical faculties can better equip students to handle the rigorous demands of their education and future professional roles, ultimately leading to improved healthcare outcomes.

In conclusion, the study highlights the urgent need for medical education programs to prioritize the development of social and emotional skills alongside technical knowledge and clinical competencies. By fostering these skills, medical schools can ensure that their graduates are not only knowledgeable and skilled practitioners but also resilient and empathetic professionals capable of providing high-quality patient

care. The transition back to face-to-face learning post-COVID-19 presents an opportunity to reintegrate social interactions and enhance these critical skills, thereby addressing the gaps identified in this study and improving the overall well-being and professional readiness of medical students.

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CONFLICT OF INTEREST

None

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