# **ORIGINAL RESEARCH**



# THE RELATIONSHIP BETWEEN SPIRITUALITY AND RESILIENCE WITH LEVEL OF DEPRESSION IN MEDICAL STUDENTS

Chintia<sup>1</sup>, Yudhi Nugraha<sup>1</sup>, Hikmah Muktamiroh<sup>1</sup>, Taufiq Fredrik Pasiak<sup>1\*</sup>

<sup>1</sup>Faculty of Medicine, Universitas Pembangunan Nasional Veteran Jakarta, Jakarta – INDONESIA

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# ABSTRACT

**Background:** Depression is a mood disorder that causes distress and affects feelings, thought, and daily activities. Medical students belong to a group that is prone to depression. The high incidence of depression in medical students is caused by stressors in study loads and busy schedules, especially during the COVID-19 pandemic. COVID-19 affects mental health, including a significant increase in depression rates because everyone must adapt to constantly changing situations. Therefore, medical students need the role of spirituality and resilience as protective factors from the occurrence of depression which also allows medical students to rise when faced with difficulties. This study aimed to determine the relationship between spirituality and resilience with the level of depression in medical students.

**Methods:** This research was an observational analytic study with a cross-sectional approach. The research sample was 246 respondents by using the Daily Spiritual Experience Scale (DSES), Connor-Davidson Resilience Scale (CD-RISC), and Beck Depression Inventory (BDI-II) questionnaires.

**Results:** From the results of this study, it was found that the prevalence of depression in respondents was 39%. The bivariate analysis using the Chi-Square test showed a relationship between spirituality with a level of depression (p=0.000) and resilience with a level of depression (p=0.000).

**Conclusion:** The results indicated that there is a significant relationship between spirituality and resilience with a level of depression in medical students. The higher spirituality and resilience, the lower depression level and vice versa. The lower spirituality and resilience, the higher depression level.

Keywords: spirituality, resilience, depression, medical students

# ABSTRAK

Latar belakang: Depresi merupakan gangguan suasana perasaan yang menyebabkan distress sehingga memengaruhi perasaan, cara berpikir, dan mengganggu aktivitas sehari-hari. Mahasiswa fakultas kedokteran termasuk ke dalam kelompok yang rentan mengalami kejadian depresi. Kejadian depresi yang tinggi pada mahasiswa kedokteran disebabkan oleh stresor berupa jadwal yang padat serta beban akademik terutama pada era pandemi COVID-19. COVID-19 memengaruhi kesehatan mental termasuk peningkatan tingkat depresi secara signifikan karena semua orang dituntut agar mampu beradaptasi dalam situasi yang terus menerus berubah. Oleh karena itu, mahasiswa kedokteran memerlukan peran spiritualitas dan resiliensi sebagai faktor protektif dari kejadian depresi yang juga memungkinkan mahasiswa kedokteran untuk bangkit ketika mengalami kesulitan. Penelitian ini bertujuan untuk mengetahui hubungan antara spiritualitas dan resiliensi dengan tingkat depresi pada mahasiswa kedokteran.

<sup>\*</sup>corresponding author, contact: taufiqpasiak@upnvj.ac.id



*Metode:* Jenis penelitian ini merupakan analitik-observasional dengan pendekatan cross-sectional. Besar sampel penelitian sebanyak 246 mahasiswa dengan menggunakan instrumen penelitian berupa kuesioner Daily Spiritual Experience Scale (DSES), Connor-Davidson Resilience Scale (CD-RISC), dan Beck Depression Inventory (BDI-II).

*Hasil:* Hasil penelitian menunjukkan prevalensi depresi pada responden sebesar 39%. Hasil analisis bivariat dengan uji Chi-Square menunjukkan terdapat hubungan antara spiritualitas dengan tingkat depresi (p=0.000) dan resiliensi dengan tingkat depresi (p=0.000).

**Kesimpulan:** Terdapat hubungan yang bermakna antara spiritualitas dan resiliensi dengan tingkat depresi pada mahasiswa fakultas kedokteran, yaitu semakin tinggi spiritualitas dan resiliensi maka semakin rendah tingkat depresi serta sebaliknya semakin rendah spiritualitas dan resiliensi maka semakin tinggi tingkat depresi.

Kata kunci: spiritualitas, resiliensi, depresi, mahasiswa kedokteran

# **PRACTICE POINTS**

- This study analysis various levels of spirituality, resilience, and depression in medical students.
- Medical students need the role of spirituality and resilience as protective factors from depression, which also allows them to rise when experiencing difficulties.

# **INTRODUCTION**

Depression is a mental disorder characterized by loss of pleasure or interest, depressed mood, low self-esteem, feelings of guilt, low concentration, decreased energy and disturbed sleep or appetite. Depression is a severe public health problem and a significant cause of suicide.1 Approximately 62% of Indonesians experience mild to severe depression.<sup>2</sup> Depression is also one of the main concerns of health problems among medical students. The incidence of depression in medical students at one university in Indonesia is 33.3%.3 The high incidence of depression in medical students is caused by stressors in the form of a busy schedule and study load.<sup>4</sup> The Covid-19 pandemic is an unusual situation that becomes an additional stressor in medical students.5 This condition will be different in individuals with good protective factors, namely resilience and spirituality. Good resilience becomes a stress-protective factor because someone resilient can adapt and face various challenges.6,7

PPDGJ-III defines a depressive episode as a mood disorder (mood/affect). Experts define emotions as feelings that are experienced consciously and are complex as they relate to various aspects of the individual. Emotions are divided into the mood and affect. The mood is a feeling that fluctuates or is erratic, and it can also be called a fluctuating symptom. While affect is a temporary feeling and others can identify through speech, body language, attitude, and even facial expressions.<sup>8</sup> Depression is an emotional state that is generally characterized by feelings of guilt and meaninglessness, excessive sadness, withdrawal from others, loss of sexual desire, appetite, happiness, and inability to sleep. Sadock et al.9 mention that several factors have influenced the formation of depression, namely biological, genetic, psychosocial, personality, and psychodynamic factors, with the following explanation. Experts divide depression into three levels: severe, moderate, and mild. The diagnosis of depression severity is carried out for a minimum of two weeks but can be shorter if symptoms progress quickly and are very severe.<sup>10</sup>



Depression has the highest prevalence of all psychiatric disorders, around 17%.<sup>11</sup> By 2020, WHO estimates that depression will be the most significant contributor to the world's health burden and the second leading cause of functional disability. The Southeast Asian region has the highest incidence of depression, about 27% (86.94) of 322 billion individuals. Indonesia occupies the fifth position with a prevalence of depression of 3.7%. Based on the 2018 RISKESDAS report, 6,1% people over 15 years old was depressed, with a higher prevalence of 12.3% in the province of Central Sulawesi.<sup>12</sup>

Resilience is a person's ability to overcome, survive, and even thrive amid adversity.13 Factors that have an essential role in adapting and learning in stressful situations, prevailing when facing them, and defending themselves in these circumstances are resilience. Resilience has a positive impact because resilience can improve an individual's life. A resilient person can deal with trauma and difficulties experienced. One of the factors that can influence and develop resilience is environmental factors which include religion and spirituality. Every individual who is religious and explores it owns a good spirituality. A good spirituality will lead the individual's life, which, if firmly rooted, will increase its influence in the formation of attitudes and controlling behavior. Individuals with spirituality or spiritual intelligence can control behavior and attitudes and overcome and deal with problems. Spiritual intelligence is the ability to judge an individual's way of life or actions as having more meaning. The ability to solve and deal with problems of value and purpose is the ability to put life and behavior in a more affluent and broader context of values.14 Therefore, medical students need the role of spirituality and resilience as protective factors from depression that also enable medical students to rise when experiencing difficulties.

Resilience in the learning process is called academic resilience, which is a process that reflects the ability and strength of students to rise from adverse emotional events when overcoming difficulties that interfere with learning activities. A resilient person can rise from pressure or circumstances that are not happy in his life.<sup>15</sup> One of the individual student factors that can encourage students to have academic resilience is a clear vision and mission in the educational field, an aspect of spirituality (spiritual intelligence). A person's spirituality dramatically affects his ability to overcome any academic challenges.<sup>16</sup> Students are better able to overcome challenges if they have good spirituality. Pustakasari's research,<sup>17</sup> shows a causal relationship between spirituality and resilience that helps people deal with stress and provides protection when dealing with stress or depression. This study aims to analyze the relationship between spirituality and resilience with a level of depression in medical students.

# **METHODS**

The method in this study is an analytic observational study using a cross-sectional approach. The research was conducted in November-December 2021 at one of the Faculty of Medicine in Jakarta. The population in this study was all students in first semester and 7th semester undergraduate medical students, which amounted to 296 people. The sampling method used a simple random sampling technique. The number of respondents for the research sample was 246 people. The first semester was taken because, according to Idham's research, on medical students, the highest prevalence of depression was during the first semester.<sup>3</sup> The seventh semester was taken to reduce bias in the study results and as a comparison. The first semester has just experienced online learning (because of social restrictions in the Covid pandemic), while the seventh semester has experienced offline learning before the pandemic. The research has passed the ethical test from the Health Research Ethics Committee of the Universitas Pembangunan Nasional Veteran Jakarta with document number, 460/XI/2021/KEPK.

The instruments in this study were the Daily Spiritual Experience Scale (DSES), The Connor-Davidson Resilience Scale (CD-RISC), and the Beck Depression Inventory (BDI-II) to measure the level of spirituality, resilience, and depression. The DSES questionnaire contains 16 statements about spiritual experiences that individuals usually do in



their daily lives. DSES questionnaire's validity and reliability have been tested and declared valid with an r count ranging from 0.36 to 0.83 with an r table value of 0.2104 and declared reliable with a value of 0.79.18 The CD-RISC questionnaire contains 25 statements which are divided into five aspects. Their validity and reliability have been tested, declared valid with an r count ranging from 0.309-0.547, and declared reliable with a value of 0.833.19 The BDI-II questionnaire contains 21 statements that are most used instrument to measure the level of depression. Its validity and reliability have been tested declared reliable with a value of 0.896.20 The type of data collected is data obtained directly from each respondent, referred to as primary data. The primary data taken are the level of spirituality, resilience, and depression by using a questionnaire in the google form. The collected data is then verified and entered into a database to be processed and analyzed.

# **RESULTS AND DISCUSSIONS**

# **Respondent characteristics**

Based on Table 1, it was found that the majority of research respondents were 18 years old, as many as 83 people (33.7%). The majority of the research respondents were female, as many as 185 people (75.2%), and the majority of respondents were the 2021 batch, which amounted to 148 people (60.2%). The majority of respondents' spirituality is high, which is 175 people (71.1%), and the resilience of respondents is dominated by high resilience, with a total of 146 people (59.3%). The majority of respondents did not experience depression, as many as 150 people (61.0%).

The results showed that many medical students had a high level of spirituality. It is in line with Saputra who found that most students have high spirituality (94.7%).<sup>21</sup> Research conducted by Burke, Flowers, Furr Graham shows that the higher an individual's spirituality, the more capable the individual will face the difficulties experienced.<sup>22</sup> Everyone has a sense of comfort and calm in life, including medical students with high spirituality, so they can rise from all challenges and overcome all problems.

Ch	Ν	%	
Age	17 years	22	8.9
	18 years	83	33.7
	19 years	31	12.6
	20 years	24	9.8
	21 years	69	28.0
	22 years	15	6.1
	23 years	2	0.8
Gender	Female	185	75.2
	Male	61	24.8
Semester	1st	148	60.2
	7th	98	39.8
Spirituality	Low	5	2.0
	Medium	66	26.8
	High	175	71.1
Resilience	Low	100	40.7
	High	146	59.3
Level of	Not Depressed	150	61.0
Depression	Mild Depression	50	20.3
	Moderate Depression	37	15.0
	Severe Depression	9	3.7

#### Table 1. Respondent Characteristics

Medical students have a high level of resilience. Some factors affect student resilience, such as stress due to adapting to a new environment when being a first-year student and lecture problems. It is in line with Utami,<sup>23</sup> who found that academic factors cause stress to students, and students who can cope with stress and survive are students who mostly have moderate or high levels of resilience. It is also supported by Uyun,<sup>24</sup> who states that Individuals with high resilience have the main characteristics, namely optimal self-confidence and self-concept, developing self-esteem, and good problem-solving skills. The inhibition of the formation of the meaning of life with better quality, delays in the development process, easily despair and slumps when facing problems will occur in individuals who are not resilient.



The study results on medical students showed that the dominant category of depression level was not depressed. The results of this study are in line with Wiranata,<sup>25</sup> who showed that 1% of students who were respondents experienced severe depression, 3% of respondents experienced moderate depression, 25% of respondents experienced mild depression, and 71% of other respondents did not experience depression.

Things that can affect depression in medical students are violence against students, death and suffering, lack of sleep, financial problems, academic burden, and gender. The failure of students to adapt in the field of education can cause students to suffer from psychological disorders, one of which is stress. Ongoing and unresolved stress can lead to depression. Depression in medical students is a complex problem. Therefore, educational institutions need to develop stress management programs that inform students about the physiological and psychological effects of stress to plan, prioritize, identify sources of stress, and deal with stress. Another strategy is to increase the role of academic supervisors in recognizing symptoms of depression in students.<sup>26</sup>

# The relationship between spirituality with level of depression

In the Chi-Square test, the output results are 41.7% (>20%). Therefore, cell merging was carried out, and the analysis results can be seen based on Table 2. Based on table 2, we can analyze that in students with low to medium spirituality, six respondents (2.5%) had severe depression, 19 respondents (7.7%) had moderate depression. Eleven respondents (4.5%) had experienced mild depression, and 35 respondents (14.2%) did not experience depression. Meanwhile, students with high spirituality tend not to experience depression, as many as 115 respondents (46.8%). Students with high spirituality as many as three respondents (1.2%) had severe depression, 18 respondents (7.3%) had moderate depression, and 39 respondents (15.8%) had mild depression. The bivariate analysis results obtained a p-value of 0.000 (p < 0.05).

This study shows a significant relationship between spirituality and the level of depression in college students. It is in line with research by Arung & Aditya. Based on the results of their research, Arung and Aditya analyzed that spirituality is related to subjective well-being, including students' mental health.27 Adami found that individuals with good spirituality will be better able to face the difficulties they experience.28 These results align with Sari research, which showed that spirituality is related to resilience that provides protection and helps individuals when experiencing stress and depression.<sup>29</sup> Severe depression in the first semester was 2.4%, while in the seven semesters was 1.2%. Depression is a multifactorial disorder in people with various risk factors related to multiple aspects. The increased risk of depression can be due to personality, early parenting and genetics and the episodes that appear depend on the level of chronic or acute stress. Neurobiological learning methods regarding mood disorders have been remarkably developed. Currently, several experts are conducting research through the translation of transcripts and proteomic genes. The neuroimaging strategy at rest and during provocative challenges can be done with rough measurements of regional brain function, such as patterns of electroencephalographic (EEG) activity during sleep and wakefulness or recordings of evoked potentials. Symptoms of major depressive episodes can be caused by changes in neural activity and information processing efficiency in each of the eleven brain regions, namely the cerebellum, spinal cord, brain stem neurotransmitter centers, hippocampus, amygdala, hypothalamus, thalamus, nucleus accumbens, striatum, basal forebrain and prefrontal cortex. Functionality in each brain region is hypothetically associated with different symptoms. There is a malfunction of the primary central nervous system (CNS) processes involving multiple information processing disorders related to subjective experiences, symptoms, and signs of depression. The majority of people with depression automatically summarize the experience from an opposing point of view to access to negative memories.<sup>11</sup>

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Spirituality	Level of Depression										
	Not Depressed		Mild Depression		Moderate Depression		Severe Depression		Total		p-value
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	
Low-Medium	35	14.2	11	4.5	19	7.7	6	2.5	71	28.9	0.000
High	115	46.8	39	15.8	18	7.3	3	1.2	175	71.1	
Total	150	61	50	20.3	37	15	9	3.7	246	100	

Table 2. Metacognitive Learning Strategies Application by All of the Respondents

Research conducted by Wiranata states that the value of spiritual well-being has a significant relationship with the level of depression (p = 0.000). The relationship is negative and robust (r = -0.533).<sup>25</sup> Research by Wahyuni & Bariyyah explains that spirituality plays a role in influencing the level of mental health in students.<sup>30</sup> The results of this study are also supported by research by Weber & Pargament,<sup>31</sup> which states that spirituality can predict mental health. Previously, religion and spirituality contributed to mental illness. Still, after developing spirituality, they made a positive contribution to improving the quality of life of a happy, emotional, social well-being, and mental health in clinical psychology. This explanation is based on research by Koenig,<sup>32</sup> which shows that religious beliefs and spirituality affect the mental health of sufferers of stress, depression and can reduce suicidal ideation.

Spirituality is a factor that can affect the level of mental health, including the incidence of depression in the younger generation. Several studies show that young people with solid religion and spirituality are relatively happier and have the ability to deal with life's problems and have better mental health.<sup>33</sup>

In the academic field, the level of spirituality also affects institutions, not just individuals. High spirituality affects mental health, including the level of depression in students. Students with good mental health show favorable behavioral, cognitive, and emotional conditions. Based on research, experts prove that increased monitoring and attention to mental health in academics contributes to academic success and student development. Mental health has a substantial impact on institutional, interpersonal and individual levels in campus life.<sup>34</sup>

# The relationship between resilience with level of depression

Based on table 3, we can analyze that student with the low resilience variable category tend to experience mild depression, as many as 50 respondents (20.3%). In students with low resilience, nine respondents (3.7%) had severe depression, 37 respondents (15%) had moderate depression, and four respondents (1.6%) did not experience depression. Meanwhile, all respondents with the high resilience variable category did not experience depression, as many as 146 respondents (59.4%). The bivariate analysis results showed a p-value of 0.000 (p <0.05).

	Level of Depression										
Resilience	Not Depressed		Mild Depression		Moderate Depression		Severe Depression		Total		p-value
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	
Low	4	1.6	50	20.3	37	15	9	3.7	100	40.6	0.000
High	146	59.4	0	0	0	0	0	0	146	59.4	
Total	150	61	50	20.3	37	15	9	3.7	246	100	

The results of this study also show a significant relationship between spirituality and the level of depression in students. It is in line with research by Amanda in one of the Faculty of Psychology. The study concluded that resilience has an effect of 46.9% on the level of depression in students.<sup>35</sup>

Resilience is a process of adjusting well to events, tragedies or traumatic conditions that can cause other stress. Resilience involves actions, thoughts, or behavior that anyone can learn so that it is not a personality trait. There are two concepts associated with resilience: resilience as a process and a result. Resilience as a process is a factor that influences or can have negative or positive effects. While resilience as a result usually compares two groups. development. Group one is defined as a group with positive result, namely having a healthy relationship, academic achievement, and resilient. Group two is defined as a group with poor outcomes, namely alcohol and drug abuse, teenage pregnancy, and crime.<sup>19</sup>

Panel Research by Amelia about resilience in the first batch of medical students showed that most respondents had a moderate level of resilience.<sup>36</sup> This result is supported by Roellyana's research,<sup>37</sup> which shows that optimism or positive thinking and belief in getting good results significantly affect students' resilience as much as 12.3% so that they have more ability to overcome the problems they experience.

The strength of this study is on topics related to resilience, a behavioural attitude that becomes even more important after the experience of the pandemic. The limitation of this study related to resilience because it is not a static behaviour attitude, so if the measurement takes place only once, it may cause a bias in resilience study.

# CONCLUSION

Based on the research and discussion results, it can be concluded that there is a significant relationship between spirituality and depression levels in medical students with a p-value of 0.000. There is also a significant relationship between resilience and depression levels in medical students, with a p-value of 0.000. Therefore, it can be concluded that there is a significant relationship between spirituality and resilience with a level of depression in medical students.

# RECOMMENDATION

There is a need for further research in the broader scope and the institution is expected to pay more attention to and monitor student's mental health if they experience depression through academic supervisors. In addition, students are advised to be able to control stressors with adequate rest, exercise, consumption of balanced nutritious food intake and perform suitable coping mechanisms and be able to develop spirituality and resilience well by always believing in transcendent power, believing in yourself, optimistic about achieving specific goals, relate well to the environment and other people to be able to overcome all the problems experienced.

### **COMPETING INTEREST**

The authors declare that there are no competing interests related to the study.

#### LIST OF ABBREVIATIONS

- PPDGJ : Pedoman dan Penggolongan Diagnosis Gangguan Jiwa (Guidelines and Classification of Mental Disorder Diagnosis)
- RISKESDAS: Riset Kesehatan Dasar (Basic Health Research)

#### **AUTHORS' CONTRIBUTION**

- *Chintia* developing research proposal, collecting data, data analysis, writing also finalizing the manuscript, and submits
- *Yudhi Nugraha* developing research proposal, giving feedback on research plans, and proofread the manuscript
- *Hikmah Muktamiroh* developing research proposal, proofread the manuscript, helping on composing the manuscript, and giving feedback on manuscript finalization
- *Taufiq Fredrik Pasiak* developing research proposal, proofread the manuscript, and giving feedback on manuscript finalization





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