



The Correlation Between Big Five Personality Profile and Burnout Incidence in Medical Students

Reza Ramadani^{1*}, Duddy Fachruddin², R.Vivi Meidianawaty³

Universitas Swadaya Gunung Jati, Cirebon, Indonesia^{1,2,3}

Email: Rezarama089@gmail.com

KEYWORDS	ABSTRACT
Burnout, Personality, Big Five personality theory	Burnout is a syndrome of emotional, physical, and mental exhaustion caused by excessive stress, commonly experienced by medical students. Contributing factors include lifestyle and personality. The Big Five Personality Theory (neuroticism, extraversion, openness, agreeableness, conscientiousness) helps explain individual personality traits. This study aims to determine the relationship between the Big Five personality traits and burnout among medical students. An observational analytical approach with a cross-sectional design was used, targeting fourth-year medical students at Swadaya Gunung Jati University in 2024. Consecutive sampling was employed, and data were analyzed using the C contingency coefficient test. Data collection involved a questionnaire. Results indicated that 15 out of 68 students (22.1%) experienced burnout, with most students falling into the openness and agreeableness categories. The analysis revealed a significant relationship between personality traits and burnout ($p = 0.003$; $p < 0.05$), with students exhibiting openness experiencing burnout more frequently than those with agreeableness traits. Specifically, 48.5% of students in the openness category, 38.2% in agreeableness, 10.3% in conscientiousness, and 2.9% in neuroticism experienced burnout. The findings demonstrate a correlation between personality traits and the occurrence of burnout.

DOI: 10.58860/ijsh.v3i10.250

Corresponding Author: Reza Ramadani*

Email: Rezarama089@gmail.com

INTRODUCTION

Burnout is a syndrome characterized by emotional, physical, and mental exhaustion, often resulting from excessive stress. It leads to decreased productivity, feelings of helplessness, despair, and irritability (Shankar, 2023). Burnout can arise from various factors, such as lifestyle, personality traits, and work environment. Students, especially those in medical programs, are particularly vulnerable to burnout. A study conducted by the Mayo Clinic Department of Medicine, involving more than 2,000 students, found that approximately 50% of medical students experience burnout. This condition can negatively impact a person's professional values, including integrity, self-control, and empathy, as well as cause emotional exhaustion, negative self-perception, and cynicism toward others, which ultimately diminishes professionalism and passion for work (Kiser, 2024).

Several studies have found that medical students tend to experience higher stress levels than non-medical students, often leading to burnout (Ansari et al., 2025). For instance, in a study involving 249 medical students, moderate to severe levels of burnout were prevalent. Research also indicates that burnout rates among medical students tend to increase over the course of their education. A U.S. study showed that approximately 49% of medical students experience burnout, while in Australia, the burnout rate ranges from 28% to 61%. This variance highlights the influence of different academic environments

on student well-being. Factors contributing to burnout include high academic pressure, a competitive educational environment, and an intensive curriculum (Bedir, 2023).

Moreover, personality traits play a critical role in the incidence of burnout. Numerous studies have examined the connection between personality traits and burnout, particularly focusing on the Big Five Personality traits (Kim et al., 2019). Individuals with high levels of neuroticism, a trait characterized by emotional instability and susceptibility to negative emotions such as worry and low self-esteem, are at higher risk of burnout. In contrast, traits like extroversion and conscientiousness, which involve higher levels of energy, optimism, and self-discipline, are often associated with lower burnout rates. Costa and McCrae’s Big Five Personality theory, as described by Feist and Feist, identifies neuroticism, extraversion, openness, agreeableness, and conscientiousness as key dimensions influencing how individuals manage stress and burnout.

For instance, individuals with neuroticism are more prone to psychological distress and have difficulty managing negative emotions, such as fear and anxiety, particularly in demanding environments like medical school. In contrast, students who score high on traits such as conscientiousness or agreeableness may have better coping strategies, helping them manage the demands of their education more effectively (Douglas et al., 2016).

This study seeks to examine the relationship between personality profiles, specifically using the Big Five Personality framework and the incidence of burnout among medical students at the UGJ Faculty of Medicine. Understanding how personality traits contribute to burnout can help develop effective prevention strategies and interventions (Kumar, 2016). By identifying high-risk individuals based on their personality profiles, educators and administrators can implement targeted strategies to mitigate burnout, ultimately enhancing both student well-being and professional development.

METHOD

The research currently conducted is research with an Observational Analytical research method that uses a cross-sectional approach to analyze the relationship between personality and burnout in final-year UGJ Faculty of Medicine students. The affordable population in this study is level 4 students at FK UGJ Cirebon in 2024.

Research Sample

1. 4th-year student of the Medical Education Study Program at Swadaya Gunung Jati University.
2. Individuals who do not have a history of severe mental health disorders that may affect the outcome of the study (e.g., schizophrenia, bipolar disorder) will be excluded from this study.

Data Analysis

The data from the research results that will be carried out using data is processed with software. The data is presented using simple statistics in two forms, namely, the form of a table and the form of a narrative. The presentation of data in the form of tables is used to facilitate data reading. The presentation of data in the form of a narrative is used to explain the data presented in the form of a table.

RESULT AND DISCUSSION

Characteristics of Research Respondents

Table 1.
Frequency Distribution of Burnout Occurrences

No.	Variable	N	%
Gender			
	Man	36	52,94
	Woman	32	47,06

Total	68	100,0
Age		
21 Years	17	25,00
22 Years	21	30,88
23 Years	25	36,76
24 Years	5	7,35
Total	68	100,0

Remarks: n = amount, % = percentage

The table above shows that the majority of respondents in this study are male, as many as 36 (52.94%) out of 68 respondents. and the majority of research respondents were 23 years old, namely 25 people (36.76%)

Univariate Analysis Results

Table 2.
Frequency Distribution of Burnout Occurrences

Burnout	f	%
No Burnout	53	77,9
Burnout	15	22,1
Total	68	100,0

The results showed that 4th level students of the Gunung Jati Independent Faculty of Non-Help from 68 were used as a sample in this study. Respondents who experienced burnout were 15 people (22.1%), while students who did not experience burnout were 53 people (77.9%).

Table 3.
Big Five Personality Frequency Distribution

Big Five Personality	f	%
Extraversion	0	0,0
Agreeableness	26	38.2
Conscientiosness	7	10.3
Neuroticism	2	2.9
Openness	33	48.5
Total	68	100,0

The results showed that 4th level students of the Gunung Jati Independent Faculty of Non-Help 68 were used as a sample in this study. A total of 33 people (48.5%) were included in the openness personality category, 26 people (38.2%) were included in the agreeableness personality category, 7 people (10.3%) were included in the conscientiousness personality category, 2 people (2.9%) were included in the neuroticism personality category and there were no students who were included in the extraversion personality category.

Table 4.
Burnout Distribution by Gender

		gender		Total
		woman	Man	
Burnout	No Burnout	28	25	53
	Burnout	4	11	15
Total		32	36	68

The results showed that as many as 36 respondents had burnout, the majority of which occurred in men out of 36 respondents who experienced burnout as many as 11 respondents (30.57%). In comparison, in women there were 4 respondents who experienced burnout as many as 4 respondents (12.50%).

Results of Bivariate Analysis

The Relationship between Big Five Personality and Burnout Incidence

Table 5.

Bivariate: The relationship between Big Five personality and the incidence of burnout, contingency coefficient test

		Burnout				Total	P value
		No		Burnout			
		N	%	N	%	N	%
Big Five Personality High	extraversion	0	0,0	0	0,0	0	100,0
	agreeableness	26	100.0	0	0.0	26	100.0
	conscientiousness	5	71,4	2	28,6	7	100.0
	Neuroticism	2	100.0	0	0,0	2	100.0
	Openness	20	60.6	13	39,4	33	100.0
Total		53	77,9	15	22,1	68	100.0

Based on Table 8, of the 68 students who experienced burnout, 13 had an openness personality, and 2 had a conscientiousness. Meanwhile, students with agreeableness, neuroticism, and extraversion personalities did not experience burnout. Openness and conscientiousness personalities are more likely to be associated with burnout, although other factors also play a role.

The Relationship between Big Five Personality and Burnout Incidence

This study shows that in the 4th level of FK UGJ, students who experienced burnout out of 68 were used as a sample in this study. Respondents who experienced burnout were 15 people (22.1%). Then, most respondents were included in the category of openness personality, with 33 people (48.5%). The results showed that people with openness and conscientious personality types were more likely to experience burnout events than other personality types, but many other factors could also be related to burnout events.

Previous research has stated that personality is suspected of causing burnout because this condition is in accordance with the theory that burnout arises due to several factors, one of which is individual characteristics; in individual characteristics, there is a personality type. Personality is a characteristic of a person that causes the appearance of consistency of feelings, thoughts, and behaviors (Cervone & Pervin, 2022). The five basic factors of human personality are neuroticism, extraversion, openness, agreeableness, and conscientiousness; among these five factors, humans tend to have one personality type as the dominant factor. The personality type that dominates the personality characteristics of the individual also determines that the level of burnout experienced varies depending on how to control and manipulate stress so that it does not occur. Burnout, so personality type, can also determine how likely an individual is to experience burnout (Yao et al., 2018).

This study's results show a correlation between the big five personality and the incidence of burnout in 4th-year students of FK UGJ. The majority of those who experience burnout have an openness personality type; from the results of previous studies, it was also found that the openness personality type can experience burnout. This suggests that certain personality characteristics can affect susceptibility to burnout (Geuens et al., 2015).

The openness personality profile is one of the five main dimensions in the Big Five Personality theory, which reflects how open a person is to new experiences, innovative ideas, and various perspectives. Individuals with this personality have traits such as high imagination, creativity, and deep curiosity. They enjoy exploring new concepts, learning unusual things, and facing change with a positive attitude. However, although openness is often associated with cognitive flexibility and adaptability, this personality can also affect a person's risk of experiencing burnout (Archer et al., 2024).

Individuals with open personalities often have high standards and expectations of themselves and how they want the world around them to function (Tieger et al., 2014). They may have an idealistic vision of personal achievements, social relationships, or professional contributions that they want to make. When reality doesn't match expectations, for example, their creative ideas aren't appreciated, or their proposed innovations aren't accepted, they can experience deep feelings of frustration and disappointment. According to the Self-Determination Theory, individuals with high intrinsic motivation tend to feel satisfied when they can achieve meaningful personal goals. Conversely, a dissonance between hope and reality can trigger feelings of helplessness and exhaustion, which are characteristic of burnout (O'Hana, 2020).

Openness personality profiles can be a risk factor for burnout when faced with unrealistic expectations, excessive creative demands, and a lack of effective coping strategies (Molina-Praena et al., 2018). Understanding how openness characteristics relate to burnout can help individuals and organizations develop more targeted interventions, such as providing space for creative expression without excessive pressure and ensuring there is adequate emotional support. Thus, the risk of burnout can be minimized, and the potential of an open personality can be optimized in a healthier way (Olson et al., 2019).

Personality Profile Conscientiousness reflects traits such as discipline, orderliness, perseverance, responsibility, and an orientation to achievement. Individuals with this personality tend to have high work standards and are highly organized, conscientious, and committed to their tasks. They are often considered reliable hard workers and tend to be rewarded for their perseverance and resilience in facing challenges. However, while conscientiousness is often associated with good work performance and resilience to stress, individuals with this personality can also be prone to burnout due to several factors related to their characteristics (Grigorescu et al., 2018).

One of the main aspects of conscientiousness is the tendency to set very high standards for oneself. Individuals with this trait are often perfectionists, not only in work but also in other aspects of their lives. Perfectionism can be a powerful motivating factor for achieving success, but it can also be a significant source of stress. When a person with the conscientiousness personality profile type constantly strives for perfection, they can get stuck in an overloaded work cycle without adequate rest. Unrealistic expectations and dissatisfaction with imperfect outcomes can lead to emotional and physical exhaustion, which is a hallmark of burnout (McCane, 2022).

Individuals with conscientious personality profiles tend to have a higher risk of burnout when they are caught in a cycle of overwork, perfectionism, and an inability to rest or detach from their tasks. Although they are often seen as resilient hard workers, they can experience emotional, physical, and mental exhaustion without adaptive coping strategies and adequate environmental support (Agarwal et al., 2020). To prevent burnout, it is important for conscientious individuals to learn to set healthy boundaries and seek a better balance between their personal and professional lives. With the right approach, they can harness their personality strengths without sacrificing their health and well-being.

Based on the data, students with agreeableness, neuroticism, and extraversion personalities did not appear to experience burnout. This phenomenon can be explained through personality characteristics and theories, as well as how these factors influence the tendency to burn out (Edú-Valsania et al., 2022). Although some of these personalities have aspects that are usually associated

with the risk of burnout, they seem to have resources or adaptive mechanisms that help them manage stress more effectively. The relationship of each personality with a tendency not to experience burnout:

The agreeableness personality type is characterized by traits such as empathy, cooperation, concern for others, and a desire to please and maintain harmony in interpersonal relationships. Individuals with this personality tend to be sociable and supportive and tend to avoid conflict. In the context of stress and burnout, these traits can serve as a protector due to their ability to form and maintain positive social relationships. Social support is one of the most powerful protective factors against stress and burnout. In accordance with the theory of the Support Buffering Hypothesis, it is stated that social support reduces the impact of stress on mental and physical health (Szkody et al., 2021).

Neuroticism personality is often associated with negative emotions and the risk of burnout. However, the data suggest that students with neuroticism do not experience burnout, likely because they use effective coping strategies or have good social support. Lazarus and Folkman's theories state that coping focuses on emotions and problems to help manage stress (Biggs et al., 2017). Neuroticism individuals may also be more aware of stress and seek solutions, helping to prevent burnout.

With high energy, optimism, and social traits, personality profile extraversion helps prevent burnout. Broaden and Build's theory suggests that positive emotions from extraversion expand personal resources, including coping skills and social support (Cuartero & Tur, 2021). Extraverts often build supportive social networks, see challenges as opportunities, and have more ways to cope with stress, which helps prevent burnout.

While there are certain tendencies between personality types and burnout, it's important to remember that burnout is a multifactorial phenomenon. Other factors, such as the learning environment, academic load, social support, and overall mental health, also play an important role. For example, the Demand Control Model theory explains that burnout can occur when there is an imbalance between the demands faced and the control that individuals have. College students who feel less control over their academic assignments or feel burdened by unrealistic expectations are more susceptible to burnout, regardless of their personality type (Ben-Naim et al., 2019).

Research Limitations

In this study, it is difficult to eliminate the confounding variables of the research because the various confounding variables have been closely attached, and it is impossible to separate them from the research respondents completely. and there are also several other limitations, including:

1. The sample of this study is limited to 4th-level students of FK UGJ, which may not reflect the general publicity.
2. This study has not considered several other factors that may affect burnout, such as age, gender, self-esteem, organizational activity, work pressure, and lack of social support from family and those closest to support.

CONCLUSION

The findings from this study reveal that 22.1% of 4th-level medical students at FK UGJ experience burnout. Additionally, 48.5% of students exhibit an openness personality, 38.2% fall into the agreeableness category, 10.3% display traits of conscientiousness, and 2.9% belong to the neuroticism personality type. The results highlight a significant relationship between the Big Five Personality traits and the incidence of burnout among medical students at Sweadaya Gunung Jati University. These findings underscore the importance of understanding personality profiles in shaping effective strategies to prevent and manage burnout in medical education settings. The study emphasizes

that addressing personality-related factors can play a critical role in fostering mental well-being and enhancing academic performance.

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