

ŻAK, Julia, CZERWIEC, Bartłomiej, WASINIEWSKA, Weronika, BARAŃSKI, Marcin, NOVIK, Lizaveta, OLKOWSKI, Bartosz, ŚLIŻ, Daniel and BASKA, Alicja. Personality at Work: How It Shapes Job Satisfaction in Doctors. *Journal of Education, Health and Sport*. 2025;83:61751. eISSN 2391-8306.

<https://doi.org/10.12775/JEHS.2025.83.61751>

<https://apcz.umk.pl/JEHS/article/view/61751>

The journal has had 40 points in Minister of Science and Higher Education of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of 05.01.2024 No. 32318. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical culture sciences (Field of medical and health sciences); Health Sciences (Field of medical and health sciences).

Punkty Ministerialne 40 punktów. Załącznik do komunikatu Ministra Nauki i Szkolnictwa Wyższego z dnia 05.01.2024 Lp. 32318. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu). © The Authors 2025;

This article is published with open access at Licensee Open Journal Systems of Nicolaus Copernicus University in Torun, Poland

Open Access. This article is distributed under the terms of the Creative Commons Attribution Noncommercial License which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author (s) and source are credited. This is an open access article licensed under the terms of the Creative Commons Attribution Non commercial license Share alike.

(<http://creativecommons.org/licenses/by-nc-sa/4.0/>) which permits unrestricted, non commercial use, distribution and reproduction in any medium, provided the work is properly cited.

The authors declare that there is no conflict of interests regarding the publication of this paper.

Received: 31.05.2025. Revised: 30.06.2025. Accepted: 05.07.2025. Published: 08.07.2025.

## Personality at Work: How It Shapes Job Satisfaction in Doctors

Julia Karolina Żak<sup>1</sup>, ORCID 0009-0008-3383-8025, <https://orcid.org/0009-0008-3383-8025>, [julia.karolina.zak@gmail.com](mailto:julia.karolina.zak@gmail.com)<sup>1</sup> Medical University of Warsaw, Warsaw, Poland, Scientific Group of Lifestyle Medicine, 3rd Department of Internal Medicine and Cardiology

Bartłomiej Czerwiec<sup>1</sup>, ORCID 0009-0002-4207-2531, <https://orcid.org/0009-0002-4207-2531>, [bartek.czerwiec3@onet.pl](mailto:bartek.czerwiec3@onet.pl), <sup>1</sup> Medical University of Warsaw, Warsaw, Poland, Scientific Group of Lifestyle Medicine, 3rd Department of Internal Medicine and Cardiology

Weronika Wasiniewska<sup>1</sup>, ORCID 0009-0001-9263-5710, <https://orcid.org/0009-0001-9263-5710>, [wasiwer@gmail.com](mailto:wasiwer@gmail.com), <sup>1</sup> Medical University of Warsaw, Warsaw, Poland, Scientific Group of Lifestyle Medicine, 3rd Department of Internal Medicine and Cardiology

Marcin Barański<sup>1</sup>, ORCID 0009-0003-7792-5837, <https://orcid.org/0009-0003-7792-5837>, [baranskimarcin23@gmail.com](mailto:baranskimarcin23@gmail.com), <sup>1</sup> Medical University of Warsaw, Warsaw, Poland, Scientific Group of Lifestyle Medicine, 3rd Department of Internal Medicine and Cardiology

Lizaveta Novik<sup>1</sup>, Inovik84@gmail.com,<sup>1</sup> Medical University of Warsaw, Warsaw, Poland, Scientific Group of Lifestyle Medicine, 3rd Department of Internal Medicine and Cardiology

Bartosz Olkowski<sup>2</sup>, ORCID:0009-0007-8668-1036, <https://orcid.org/0009-0007-8668-1036>, bartosz.olkowski@icloud.com, <sup>2</sup> Medical University of Warsaw, Warsaw, Poland, Scientific Club by the Department of Transplantation, Immunology, Nephrology and Internal Medicine

Daniel Śliż<sup>3</sup>, ORCID: 0000-0001-5917-8119, <https://orcid.org/0000-0001-5917-8119>, [slizdaniel@gmail.com](mailto:slizdaniel@gmail.com), <sup>3</sup> Medical University of Warsaw, Warsaw, Poland, 3rd Department of Internal Medicine and Cardiology

Alicja Baska<sup>4</sup>, ORCID: 0000-0001-8887-7453, <https://orcid.org/0000-0001-8887-7453>, [alicebaska@gmail.com](mailto:alicebaska@gmail.com), <sup>4</sup> Medical University of Warsaw, Warsaw, Poland, School of Public Health, Medical Center for Postgraduate Education

**Corresponding author:** Julia Żak, [julia.karolina.zak@gmail.com](mailto:julia.karolina.zak@gmail.com)

## Abstract

**Background.** Future doctors should be able to choose a specialization that aligns with their personality, allowing them to achieve the highest levels of job satisfaction and avoid burnout.

**Aim.** The aim of the study is to assess the correlation between job satisfaction and specific personality traits, and to evaluate burnout across different medical specialties.

**Material and methods.** 297 Polish doctors, comprising 73.5% women and 26.8% men from various specialties, were assessed using the Five Factor Big Five model, the Maslach Burnout Inventory, and a job satisfaction scale.

**Results.** Results reveal that the following personality traits: extraversion, agreeableness, and conscientiousness positively correlate with higher job satisfaction, while neuroticism significantly reduces it. For instance, agreeableness boosts job satisfaction for Internists, Surgeons, Orthopedists, and Anesthesiologists, while extraversion is especially beneficial for Anesthesiologists. Neuroticism, on the other hand, contributes to lower satisfaction across all specialties. Physicians experiencing emotional exhaustion and depersonalization often reported reduced satisfaction.

**Conclusions.** The findings indicate that extraversion, agreeableness, and conscientiousness can promote job satisfaction, while neuroticism diminishes it. Additionally, the role of openness in job satisfaction remains unclear, requiring further research. Burnout, driven by workplace stress, may significantly hinder doctors' job satisfaction, underscoring the need for better work conditions and support mechanisms.

**Key words:** Big five, Five Factor Big Five model, personality, job satisfaction, burnout

## Content

|                                            |    |
|--------------------------------------------|----|
| 1. Abstract.....                           | 2  |
| Key words .....                            | 2  |
| 1. Introduction.....                       | 3  |
| Research Objective .....                   | 5  |
| Research Problems.....                     | 5  |
| Research Hypotheses .....                  | 5  |
| 2. Research materials and methods .....    | 5  |
| 2.1. Participants .....                    | 5  |
| 2.2. Procedure .....                       | 5  |
| 2.3. Data Collection and Analysis .....    | 6  |
| 2.3.1. Statistical Software .....          | 6  |
| 2.3.2. AI .....                            | 6  |
| 2.3.3. Statistical Methods.....            | 6  |
| 3. Research results .....                  | 8  |
| 4. Discussion. ....                        | 12 |
| 4.1. Limitations.....                      | 14 |
| 5. Conclusions.....                        | 15 |
| Disclosure.....                            | 16 |
| Supplementary                              |    |
| Materials.....                             | 16 |
| Author                                     |    |
| Contributions.....                         | 16 |
| Funding.....                               | 16 |
| Institutional Review Board Statement ..... | 16 |
| Informed Consent Statement.....            | 16 |
| Data Availability Statement.....           | 16 |
| Acknowledgements.....                      | 16 |
| Conflict of Interest.....                  | 16 |
| References.....                            | 17 |

## 1.Introduction

Greater emphasis is now placed on the importance of professional satisfaction, which we define as the positive emotions individuals experience due to favorable circumstances related to one's job. Many factors influence overall satisfaction, with professional fulfillment being particularly significant. However, there is still a limited understanding of how personality and character traits influence job satisfaction, especially in Poland. The career path to becoming a doctor involves a six-year medical education followed by a postgraduate internship. Upon completion, doctors must choose a specialization, which varies in duration from four to six years depending on the field selected. Research indicates that the choice of specialization is often influenced by experiences during medical studies [1]. Individual personality traits may determine how content we are with our work, therefore it is important to assist future doctors in selecting specializations [2,3]. Numerous studies have identified factors that may influence doctors' choice of specialization [1,4], including work-related factors, time management, career aspirations, and patient-oriented considerations [5]. However, numerous studies underscore the strong correlation between personality traits and job satisfaction.

If our professional satisfaction is inadequate, we may face various issues, including professional burnout, which has become an increasingly significant concern among doctors today [6]. Personality has a strong relationship with burnout, which is particularly influenced by neuroticism [7]. For this reason, we seek to explore personality in more detail, focusing on Polish doctors, and investigate how burnout relates to the other factors of the Big Five personality traits. To date, the most comprehensive studies have frequently utilized the Five Factor Big Five model (FFM) developed by Costa and McCrae [8], which was also employed in our research. The Big Five personality test derives its name from the five components: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. While these five traits provide a general framework, it is important to recognize that personality is a complex construct. To analyze it effectively, we classify respondents into specific groups based on data from the full Big Five questionnaire. This method enables us to break down the broad concept of personality into smaller, more manageable groups for detailed analysis [9].

To assess the current state of burnout among Polish doctors, we used the Maslach Burnout Inventory (MBI). Existing scientific evidence, including a Canadian study, suggests that personality significantly impacts the degree of burnout, with younger individuals experiencing lower burnout rates compared to their older colleagues [10]. We did not find any papers verifying whether it is also true that personality and choice of specialization among Polish doctors impact burnout, which can be interesting and innovative research.

Professional satisfaction might be related to specific personality traits, which could affect the risk of occupational burnout. Our research focuses on how these traits affect job satisfaction and burnout, aiming to help future doctors choose specializations that align with their personalities, thereby reducing burnout risk. While factors like age, gender, work environment, and years of service can also affect job satisfaction, our study specifically targets

personality traits and burnout scores. Undoubtedly, without addressing the current lack of scientific evidence, burnout rates will continue to rise in Polish doctors.

**Research Objective.** To evaluate the relationship between personality traits, medical specialization, and the level of burnout among Polish doctors, and to determine whether these factors influence burnout

**Research Problems.** Despite the influence of factors such as age, gender, work environment, and years of service on job satisfaction and burnout, this study specifically investigates the relationship between personality traits and burnout scores among Polish doctors.

**Research Hypotheses.** Professional satisfaction might be related to specific personality traits, which could affect the risk of occupational burnout. Our research focuses on how these traits affect job satisfaction.

## **2. Research materials and methods**

### **2.1. Participants.**

The study included 297 Polish medical specialists comprising 73.5% women and 26.8% men.

### **2.2 Procedure**

This study was a retrospective cross-sectional cohort analysis. It was conducted between November 2023 and March 2024, targeting Polish doctors already undergoing or have completed their specialty. The research utilized an anonymous online questionnaire created with Google Forms. The survey was distributed via social media platforms and university email channels. The introduction to the questionnaire included a description of the study and a consent form for participation.

### **Construction of the Questionnaire**

The questionnaire collected demographic and professional details of the respondents, including gender, age, length of employment, type of specialty, primary workplace, and the size of the city where they work. Respondents were then asked to select their specialty from the following options: Anesthesiology and Intensive Care, Orthopedics and Surgery, Internal Medicine, Family Medicine, Gynecology and Obstetrics, Oncology, Pediatrics, Psychiatry, and Dermatology. Additionally, we inquired about the number of specialties each respondent had and the amount of time spent with patients.

### **2.3 Data collection and analysis.**

#### **2.3.1. Statistical Software.**

All calculations, statistical analyses, and graph generation were performed using software such as Excel (Microsoft® Excel® for Microsoft 365 MSO, version 2311, build 16.0.17029.20028, 64-bit) and STATISTICA (version 13.3, StatSoft Polska Sp.z. o.o., Kraków, Poland).

### **2.3.2. AI.**

AI was used solely for linguistic refinement—improving grammar, style, and clarity—strictly under human supervision.

### **2.3.3. Statistical Methods.**

First, we calculated satisfaction levels in five chosen specialties with the highest number of responses - Internal Medicine, Pediatrics, Orthopedics and Surgery, Anesthesiology, and Family Medicine. Second, we assessed the overall results of the Big Five Personality Inventory and explored whether specialties moderated the relationship between personality traits and job satisfaction. For the analysis, participants with more than one specialty were treated as separate respondents. To assess physician burnout across specialties, we used the Maslach Burnout Inventory (MBI) to evaluate Exhaustion (EE), Depersonalization (DP), and Accomplishment (AA). Finally, we explored the relationship between job satisfaction and burnout within these five specialties.

#### **Job satisfaction**

We designed 10 questions related to job satisfaction, addressing aspects such as overall job satisfaction, work environment, relationships with coworkers, satisfaction with salary, and job organization, all rated on a numerical scale from 1 to 5. Participants were also asked to rate the importance of each aspect on the same scale. Job satisfaction was then calculated as the arithmetic mean of the scores from these 10 questions. The data distribution was tested using the Shapiro-Wilk test.

#### **Personality traits**

To assess personality traits, we used the 50-item FFM, which has five key dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism. Extraversion involves a predisposition to feel positive emotions and relates to warmth, sociability, assertiveness, and high energy. Conscientiousness is characterized by a sense of duty, organization, and a focus on achievement. Openness to experience is linked with curiosity, sensitivity, and a receptiveness to new experiences. Agreeableness includes a tendency towards cooperation, honesty, and altruism. Neuroticism is associated with the tendency to experience negative emotions, featuring traits such as anxiety, self-consciousness, impulsivity, and vulnerability [11]. Each dimension is assessed with ten items on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) [12].

The traits were standardized and analyzed separately with the Shapiro-Wilk test.

#### **Burnout**

To assess burnout across different specialties, we used the Maslach Burnout Inventory, which evaluates burnout levels in three areas: emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion lowers the capacity for engagement and involvement in work. Depersonalization refers to a cynical and negative attitude toward others, often resulting in emotional detachment and disconnection. Reduced personal accomplishment involves a tendency to undervalue one's work, leading to feelings of ineffectiveness and

diminished self-worth [13]. Each area is assessed through 7 questions, which evaluate how frequently participants experience situations related to these dimensions [13]. The data distribution was tested using the Shapiro-Wilk test.

### 3. Research results

The study included 297 Polish medical specialists comprising 73.5% women and 26.8% men. The male participants had an average age of 41, while the female participants had an average age of 30, as determined by the U-Mann Whitney test. The respondents included: Internal Medicine (23%), Pediatrics (15%), Surgery and Orthopedics (9%), Anesthesiology (8%), Family Medicine (6%), Gynecology and Obstetrics (6%), Psychiatry (5%), Radiology (5%), Neonatology (3%), and other fields (19%).

Job satisfaction was evaluated for medical specialties with the most number of responses: Internal Medicine (median = 4.00, N = 68, SD = 0.45), Pediatrics (median = 4.10, N = 45, SD = 0.39), Surgery and Orthopedics (median = 3.89, N = 28, SD = 0.46), Anesthesiology (median = 4.05, N = 25, SD = 0.45), and Family Medicine (median = 3.93, N = 19, SD = 0.58).

As shown in Figure 1, the analysis revealed significant correlations between job satisfaction and Agreeableness (A) among Internal Medicine specialists (Pearson's  $r = 0.3117$ ,  $p = 0.0097$ ). Additionally, a positive correlation was observed between Conscientiousness (C) and job satisfaction in this group (Spearman's  $r = 0.3032$ ,  $p = 0.0120$ ) as presented in Figure 3. There were no significant correlations with Extraversion (E) ( $r = 0.0691$ ,  $p = 0.5752$ ) or Openness (O) ( $r = -0.0747$ ,  $p = 0.5449$ ). A negative correlation was found between Neuroticism (N) and job satisfaction (Pearson's  $r = -0.2993$ ,  $p = 0.0131$ ) within this group (see Figure 4.).

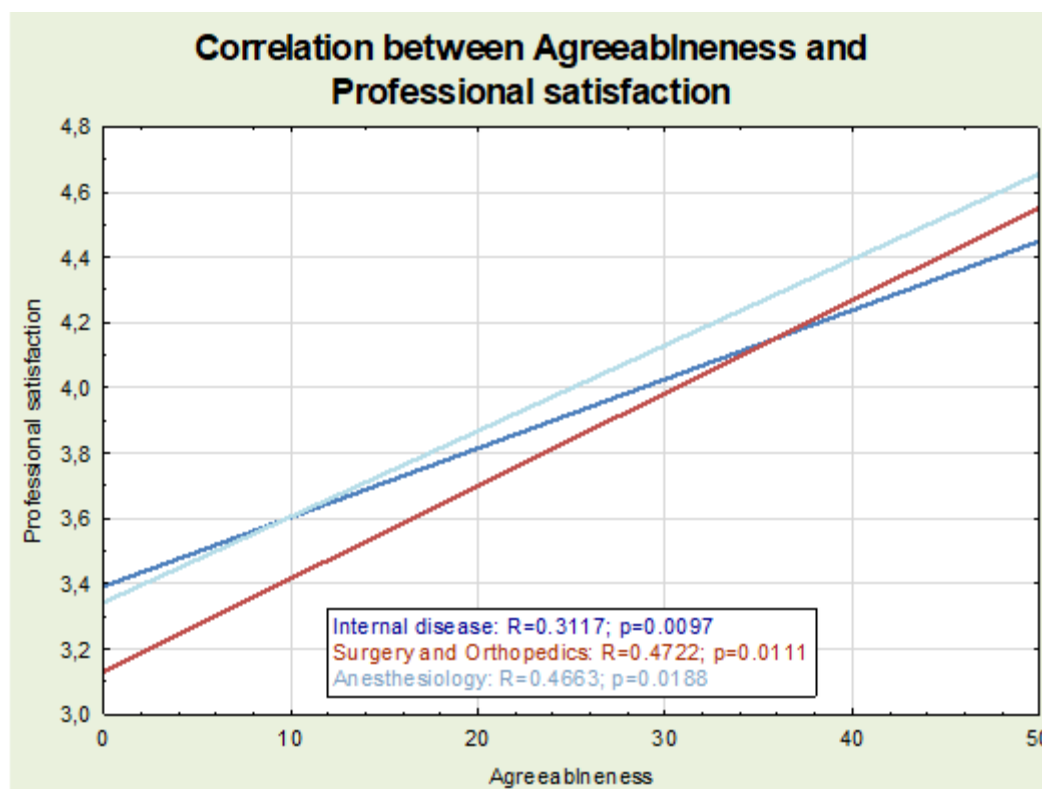
In Pediatric specialties, job satisfaction did not show significant correlations with Agreeableness (Spearman's  $r = 0.2690$ ,  $p = 0.0739$ ), Extraversion (Pearson's  $r = 0.1435$ ,  $p = 0.2470$ ), Openness (Spearman's  $r = -0.1273$ ,  $p = 0.4046$ ), or Neuroticism (Pearson's  $r = -0.2784$ ,  $p = 0.0641$ ). Although the association between Conscientiousness and job satisfaction was positive, it was not statistically significant (Spearman's  $r = 0.3429$ ,  $p = 0.0211$ ) (see Figure 3.).

In the Surgical and Orthopedic group, there was observed a positive correlation between job satisfaction and Agreeableness ( $r = 0.4722$ ,  $p = 0.0111$ ) (see Fig.1) and negative with Neuroticism ( $r = -0.4474$ ,  $p = 0.0170$ ) (see Fig.4). No significant correlations were found with Openness ( $r = -0.0456$ ,  $p = 0.8180$ ), Extraversion ( $r = 0.3729$ ,  $p = 0.0501$ ), or Conscientiousness ( $r = -0.0044$ ,  $p = 0.7363$ ).

In Anesthesiologists, job satisfaction showed significant positive correlations with Agreeableness (Pearson's  $r = 0.4663$ ,  $p = 0.0188$ ) and Extraversion (Pearson's  $r = 0.5045$ ,  $p = 0.0101$ ), which are shown in Fig.1 and Fig.2, and a negative correlation with Neuroticism (Pearson's  $r = -0.4940$ ,  $p = 0.0121$ ) (see Fig.4). There were no significant correlations with Conscientiousness (Spearman's  $r = -0.1075$ ,  $p = 0.6092$ ) or Openness (Pearson's  $r = 0.0426$ ,  $p = 0.3225$ ).

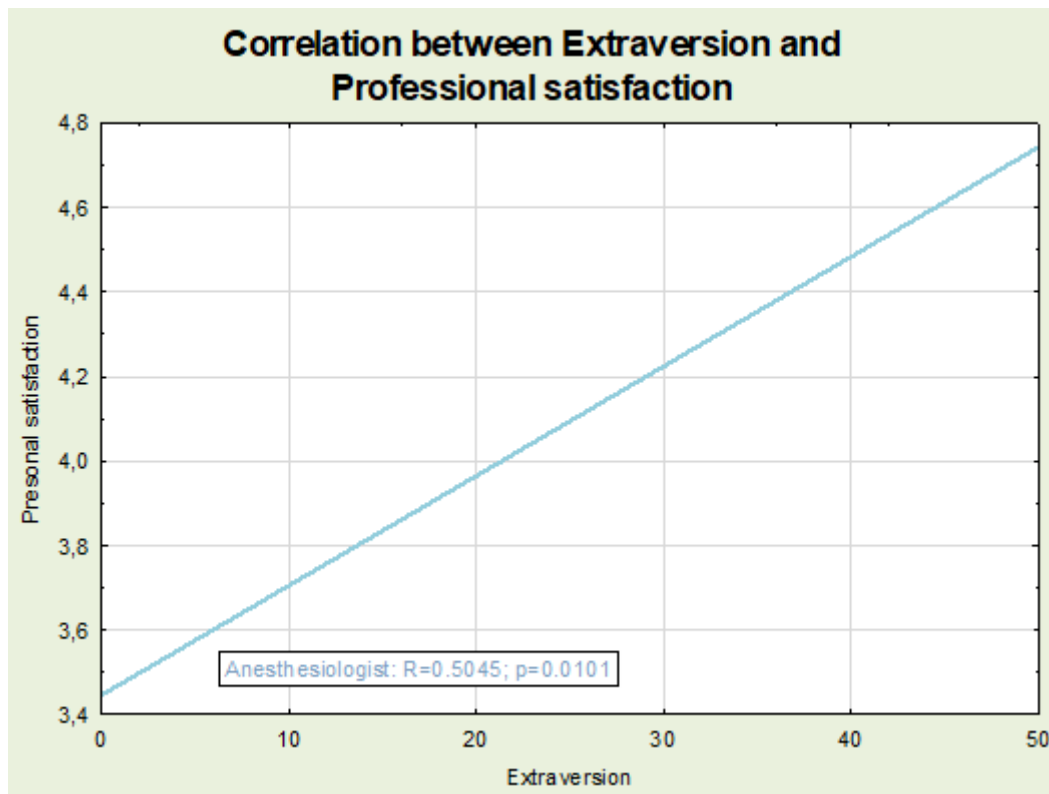
In Family Medicine specialists, correlation between job satisfaction and Agreeableness (Spearman's  $r = 0.3284$ ,  $p = 0.1698$ ), Extraversion (Pearson's  $r = 0.0016$ ,  $p = 0.9947$ ), Neuroticism (Spearman's  $r = -0.2155$ ,  $p = 0.3753$ ), Conscientiousness (Spearman's  $r = -0.0396$ ,  $p = 0.8721$ ), or Openness (Pearson's  $r = 0.0240$ ,  $p = 0.9922$ ) was not found.

To assess physician burnout across specialties, we evaluated Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (AA). Significant negative correlations were found between EE and DP with job satisfaction across several medical specialties. Among internal medicine specialists, EE had a Pearson correlation of  $r = -0.4812$  ( $p < 0.001$ ) and DP had a Spearman correlation of  $r = -0.3990$  ( $p < 0.001$ ). For Pediatricians, the Pearson correlation for EE was  $r = -0.5641$  ( $p < 0.001$ ), while DP had a Spearman correlation of  $r = -0.3455$  ( $p = 0.0201$ ). In Surgery and Orthopedics, the Pearson correlation for EE was  $r = -0.7119$  ( $p < 0.001$ ) and for DP it was  $r = -0.6515$  ( $p < 0.001$ ). Among Anesthesiologists, the Pearson correlation for EE was  $r = -0.6309$  ( $p < 0.001$ ) and for DP it was  $r = -0.4918$  ( $p = 0.0125$ ). Positive correlations were found between job satisfaction and AA across several specialties. Among Internal Medicine specialists, the Spearman correlation was  $r = 0.4566$  ( $p < 0.001$ ). For Pediatricians, the Pearson correlation was  $r = 0.4553$  ( $p = 0.0017$ ), and for Anesthesiologists, the Spearman correlation was  $r = 0.4429$  ( $p = 0.0266$ ). However, among Family Medicine specialists, no significant correlations were observed between job satisfaction DP ( $r = -0.3873$ ,  $p = 0.1013$ ) or AA ( $r = -0.3873$ ,  $p = 0.7273$ ). Similarly, no significant correlation was found between job satisfaction and AA among Surgeons and Orthopedics ( $r = 0.2839$ ,  $p = 0.1432$ ).

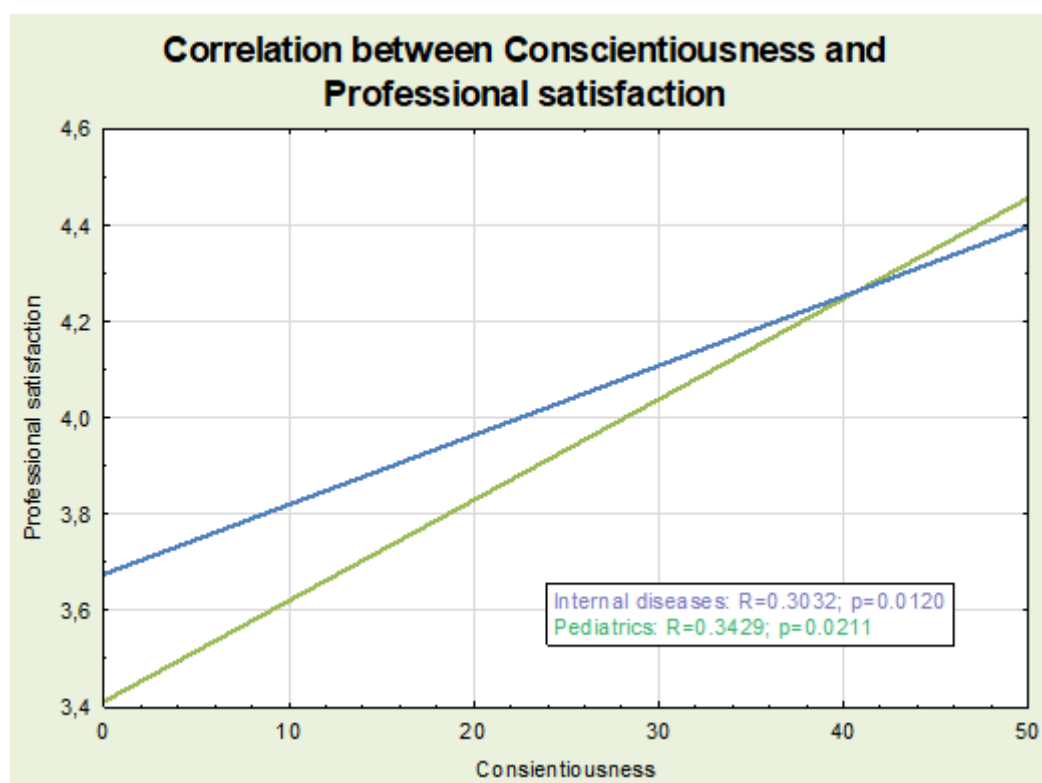


**Fig.1.** Correlation between Agreeableness and Professional satisfaction for Internal diseases, Surgery and Orthopedics, and Anesthesiology.

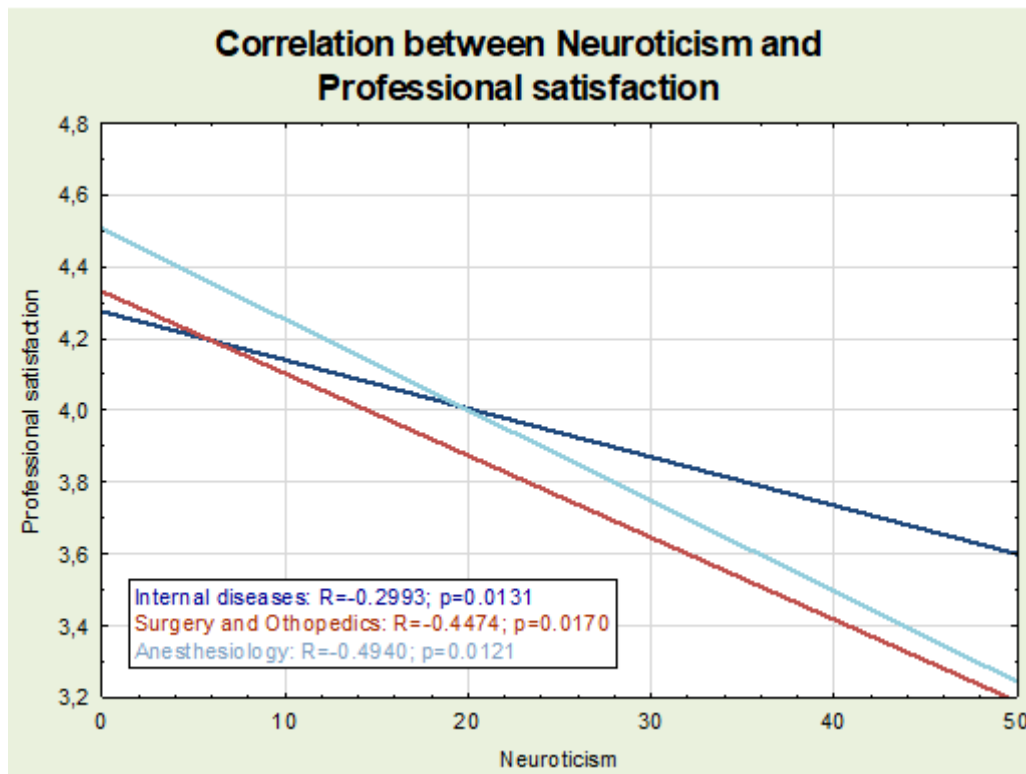




**Fig. 2.** Correlation between Extraversion and Professional Satisfaction for Anesthesiologists.



**Fig. 3.** Correlation between Conscientiousness and Professional satisfaction for Internal diseases and Pediatrics.



**Fig. 4.** Correlation between Neuroticism and Professional satisfaction for Internal diseases, Surgery and Orthopedics; Anesthesiology.

#### 4. Discussion

For patient care to be effective, doctors must derive satisfaction from their work. Doctors who experience dissatisfaction with their careers are more likely to encounter difficulties in patient care [14]. A decline in the quality of patient care can exacerbate feelings of guilt, negatively impact self-esteem, and lead to further job dissatisfaction. This growing frustration may result in a change of specialization or even a decision to leave the profession entirely [15]. Such issues could be particularly problematic given the increasing demand for medical professionals, especially as we are already witnessing a situation where the number of patients exceeds the capacity of medical centers. The shortage of doctors makes it more difficult to access medical care [16,17]. Enhancing professional satisfaction can improve overall well-being among doctors, positively influencing their mental and physical health, which may, in turn, help reduce the risk of professional burnout [15,18]. This approach could also decrease the likelihood of medical errors, which are more common among individuals facing these challenges [19]. To ensure doctors carry out their responsibilities effectively and passionately, we have explored the impact of specific personality traits on job satisfaction and occupational burnout.

Horst KVD, Siegrist M, Orlov P, and Giger M found that several factors influence doctors' choice of specialization, including work environment, time commitment, career opportunities, and patient orientation [1,4,5]. Empirical studies involving medical students have illuminated the relationship between personality traits and potential career choices [1]. However, the findings from these studies vary significantly, highlighting the need for further research.

Conscientiousness, in particular, has been identified as a crucial factor influencing job satisfaction within the medical field [20]. In contrast to existing research, our study establishes a connection between specific personality types and satisfaction levels within distinct medical specialties.

Our research shows that three personality traits—extraversion, agreeableness, and conscientiousness—are generally associated with higher job satisfaction, specifically in Internal Medicine, Pediatrics, Orthopedics and Surgery, Anesthesiology, and Family Medicine. The analysis of the relationship between personality traits and medical specialties—revealed that higher agreeableness is linked to greater job satisfaction in Internal Medicine, Surgery and Orthopedics, and Anesthesiology. This finding aligns with the fact that agreeable individuals are more trusting, affectionate, altruistic, and generally have more prosocial behaviors [21]. In a people-oriented field like Internal Medicine, agreeableness may enhance physician-patient relationships. Additionally, workplaces with a predominance of agreeableness are likely to experience fewer conflicts [22]. Our study, conversely, shows that higher neuroticism reduces job satisfaction among specialists in Internal Medicine, Surgery and Orthopedics, and Anesthesiology, which is consistent with a study of Dutch anesthesiologists [7]. Due to limitations in our current data, we did not determine the impact of openness on physicians' job satisfaction. This could suggest that openness may not significantly influence job contentment.

Physicians most satisfied in person-oriented specialties, such as Internal Medicine and Pediatrics, tend to score highest in conscientiousness. The self-regulation and impulse control associated with this trait are crucial for building patient trust, which is vital to the therapeutic process. Additionally, Magnus K et al. suggest that highly conscientious workers are more success-oriented and exhibit behaviors that enhance work efficiency—an essential quality in demanding fields like Internal Medicine and Pediatrics. This focus on efficiency and positive outcomes leads to both intrinsic and extrinsic rewards, which, in turn, contribute to greater job satisfaction [23].

Higher extraversion is associated with greater job satisfaction among anesthesiologists. This specialty is particularly stressful, involving a constantly changing environment that requires both calmness and empathy from physicians. Our study found that extroverts are the most satisfied in this field. Extraversion promotes approachability and general sociability, advantageous for physicians navigating new and challenging work environments. Additionally, higher extraversion appears to be a protective factor against psychological distress, helping to guard against burnout in this demanding specialty [24].

In contrast, higher levels of neuroticism are associated with lower satisfaction in Internal Medicine, Pediatrics, Orthopedics and Surgery, Anesthesiology [7], and Family Medicine. Individuals with higher neuroticism place themselves in situations that amplify negative emotions and experience events more negatively [7,23,25,]. It could consequently have serious implications for doctors' well-being, given the emotionally demanding nature of medicine [26].

It is important to recognize that each personality trait, including those within the Big Five, may have potential downsides. For instance, a highly passionate and committed individual with excellent patient rapport might struggle more when delivering difficult news to patients. Every advantageous trait may carry underlying complexities [27].

An analysis of burnout levels using the Maslach Burnout Inventory (MBI) across various medical specialties focused on three key dimensions: emotional exhaustion, depersonalization, and personal accomplishment. The findings revealed Surgeons and Orthopedic Surgeons were identified as having a high degree of depersonalization, while Pediatricians fell into the moderate degree group. This suggests that surgeons may be particularly vulnerable to occupational burnout. Our study shows that higher levels of emotional exhaustion and depersonalization are associated with lower job satisfaction among specialists in Internal Medicine, Pediatrics, Surgery and Orthopedics, and Anesthesiology. For family doctors, only higher emotional exhaustion was found to reduce job satisfaction. Higher personal accomplishment, conversely, is related to greater job satisfaction in Internal Medicine, Pediatrics, and Anesthesiology, which aligns with the understanding that higher scores in emotional exhaustion and depersonalization reflect greater burnout and higher scores in personal accomplishment are linked to lower burnout [28]. Occupational burnout resulting from chronic workplace stress that hasn't been successfully managed might be the reason for lower job satisfaction in these groups of specialists. Lower job satisfaction may result not only in psychological stress and burnout but also it may even lead to depression, which may be the subject of further scientific work analysis.

While the data collected in our research should be expanded, our study does identify positive correlations between personality traits and job satisfaction within specific specialization groups. Future research with larger datasets could yield more accurate and conclusive results, which would be particularly valuable for aspiring doctors.

#### **4.1. Limitations**

Our research has several limitations that should be considered. Firstly, we did not collect as much data as expected due to limited access to a research group. We analyzed the responses of a group of medical specialists comprising 73.5% women and 26.8% men. Since the groups were not equally numerous, the measurements were of different accuracy for men and women. Moreover, the Big Five questionnaire and the Maslach Burnout Inventory are subjective self-assessment tools. In future studies, multimethod approaches, such as integrating structured interviews, could help mitigate these issues.

Additionally, our study collected data only between November 2023 and March 2024. To effectively evaluate the impact of personality traits on job satisfaction, longer-term follow-ups are necessary, as job satisfaction may change over time. While this study focuses on the correlation between personality traits, job satisfaction, and burnout, other factors such as tenure, education, and occupational differences were not investigated. To assess what influences job satisfaction and occupational burnout we did not include the length of employment, primary workplace, and the size of the city. Future research could adopt a more integrative approach by exploring these elements.

Furthermore, the generalizability of our findings to medical specialists in other countries should be approached with caution, given the differences in healthcare systems across nations. Finally, we hope that with more extensive data and results, personality traits can be a useful determinant in helping young people choose the most suitable specialization.

#### **5. Conclusions**

Choosing a specialization that matches one's personality traits can boost job satisfaction and reduce burnout risk. Traits like extraversion, agreeableness, and conscientiousness enhance job satisfaction, while neuroticism diminishes it. Among Internists, Surgeons, Orthopedists, and Anesthesiologists, higher agreeableness is associated with increased satisfaction, whereas neuroticism leads to lower satisfaction. Extraversion also positively influences satisfaction among Anesthesiologists. The effect of openness on job satisfaction across specialties remains unclear. Higher emotional exhaustion and depersonalization, key burnout components, are linked to lower job satisfaction. It is important to note that, among others, social factors such as income, and work environment could also play a significant role in job satisfaction and burnout, making it challenging to fully isolate the impact of personality traits on job satisfaction among physicians. Personality is only one of many factors affecting job satisfaction and burnout. Larger studies within the Polish population would be beneficial for gaining a deeper understanding of this topic.

### **Disclosure**

The authors report no disclosures relevant to the content of this manuscript

### **Supplementary Materials**

None

### **Author Contributions**

Research concept: Julia Karolina Żak

Research methodology: Julia Karolina Żak, Bartłomiej Czerwec, Weronika Wasiniewska, Marcin Barański

Collecting material: Julia Karolina Żak, Alicja Baska, Daniel Śliż, Bartłomiej Czerwec, Weronika Wasiniewska, Marcin Barański, Lizaveta Novik

Statistical analysis: Bartłomiej Olkowski

Interpretation of results: Julia Karolina Żak, Weronika Wasiniewska, Lizaveta Novik, Marcin Barański, Bartłomiej Czerwec

References: Marcin Barański, Weronika Wasiniewska

### **Funding**

No funding received.

### **Institutional Review Board Statement**

According to the Act of 5 December 1996 on the professions of physicians and dentists (Journal of Laws of 2021, item 790 as amended), the presented study was not a medical experiment. The study adheres to the guidelines set by the Institutional Ethics Committee and the Helsinki Declaration of 1964. It was approved by the Bioethical Commission of the Medical University of Warsaw (AKBE/79/2024), and permission to carry out the research was granted by the Head of the Department of Internal Diseases and Cardiology at MUW.

## **Informed Consent Statement**

Consent for publication was obtained from all participants.

## **Data Availability Statement**

The datasets generated and/or analysed during the current study are available from the corresponding author on request.

## **Acknowledgements**

None

## **Conflicts of Interest**

The authors declare that they have no competing interests.

## **References**

Woolf K, Elton C, Newport M. The specialty choices of graduates from Brighton and Sussex Medical School: a longitudinal cohort study. *BMC Med Educ* [Internet]. 2015;15(1):46. Available from: <http://dx.doi.org/10.1186/s12909-015-0328-z>

Hsieh JY. Impact of individual and organizational factors on job satisfaction: A comparison of multilevel models and multiple regression models using different data arrangements. *J Manag Organ* [Internet]. 2013;19(1):44–59. Available from: <http://dx.doi.org/10.1017/jmo.2013.3>

Judge TA, Heller D, Mount MK. Five-factor model of personality and job satisfaction: A meta-analysis. *J Appl Psychol* [Internet]. 2002;87(3):530–41. Available from: <http://dx.doi.org/10.1037/0021-9010.87.3.530>

Wasserstrum Y, Magnezi R, Tamir O, Koren S, Lotan D, Afek A. The role of direct single monetary grants in residents' choice of field of residency. *Med Teach* [Internet]. 2017;39(5):548–54. Available from: <http://dx.doi.org/10.1080/0142159X.2017.1297891>

Horst K, Siegrist M, Orlov P, Giger M. Residents' reasons for specialty choice: influence of gender, time, patient and career. *Med Educ*. 2010;44(6):595–602.

McManus IC, Keeling A, Paice E. Stress, burnout and doctors' attitudes to work are determined by personality and learning style: a twelve year longitudinal study of UK medical graduates. *BMC Med*. 2004 Aug 18;2:29. <https://doi.org/10.1186/1741-7015-2-29>. PMID: 15317650; PMCID: PMC516448.

van der Wal RAB, Bucx MJL, Hendriks JCM, Scheffer G-J, Prins JB. Psychological distress, burnout and personality traits in Dutch anaesthesiologists: A survey. *Eur J Anaesthesiol* [Internet]. 2016;33(3):179–86. Available from: <http://dx.doi.org/10.1097/eja.0000000000000375>.

Widiger TA, Costa PT. Personality disorders and the five-factor model of personality: Rationale for the third edition. In: *Personality disorders and the five-factor model of personality* (3rd ed). Washington: American Psychological Association; 2012. p. 3–11.

John OP, Srivastava S. The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In: Pervin LA, John OP, editors. *Handbook of Personality*. New York: The Guilford Press; 1999. p. 102–38.

Li H, Dance E, Poonja Z, Aguilar LS, Colmers-Gray I. Agreement between the Maslach Burnout Inventory and the Copenhagen Burnout Inventory among emergency physicians and trainees. *Acad Emerg Med* [Internet]. 2024; Available from: <http://dx.doi.org/10.1111/acem.14994>

Matthews G, Deary IJ, Whiteman MC. *Personality Traits* [Internet]. 2nd ed. Cambridge, England: Cambridge University Press; 2012. Available from: <http://dx.doi.org/10.1017/cbo9780511812736> Ori.org. [cited 2024 Aug 15]. Available from: [https://ipip.ori.org/new\\_ipip-50-item-scale.htm](https://ipip.ori.org/new_ipip-50-item-scale.htm)

Researchgate.net. [cited 2024 Aug 15]. Available from: [https://www.researchgate.net/publication/277816643\\_The\\_Maslach\\_Burnout\\_Inventory\\_Manual](https://www.researchgate.net/publication/277816643_The_Maslach_Burnout_Inventory_Manual)

DeVoe J, Fryer GE Jr, Hargraves JL, Phillips RL, Green LA. Does career dissatisfaction affect the ability of family physicians to deliver high-quality patient care? *J Fam Pract*. 2002;51(3):223–8.

Kravitz RL. Physician job satisfaction as a public health issue. *Isr J Health Policy Res* [Internet]. 2012;1(1):51. Available from: <http://dx.doi.org/10.1186/2045-4015-1-51>

Hoyler M, Finlayson SRG, McClain CD, Meara JG, Hagander L. Shortage of doctors, shortage of data: a review of the global surgery, obstetrics, and anesthesia workforce literature. *World J Surg* [Internet]. 2014;38(2):269–80. Available from: <http://dx.doi.org/10.1007/s00268-013-2324-y>

Cooper RA, Getzen TE, McKee HJ, Laud P. Economic and demographic trends signal an impending physician shortage. *Health Aff (Millwood)* [Internet]. 2002;21(1):140–54. Available from: <http://dx.doi.org/10.1377/hlthaff.21.1.140>

Cooper CL. Mental health, job satisfaction, and job stress among general practitioners. In: *Managerial, Occupational and Organizational Stress Research*. Routledge; 2018. p. 193–7.

Williams ES, Konrad TR, Scheckler WE, Pathman DE, Linzer M, McMurray JE, et al. Understanding physicians' intentions to withdraw from practice: the role of job satisfaction, job stress, mental and physical health. 2001. *Health Care Manage Rev* [Internet]. 2010;35(2):105–15. Available from: <http://dx.doi.org/10.1097/01.HMR.0000304509.58297.6f>

Furnham A, Eracleous A, Chamorro-Premuzic T. Personality, motivation and job satisfaction: Herzberg meets the Big Five. *J. Manag. Psychol*. 2009;24(8): 765–779.

Habashi MM, Graziano WG, Hoover AE. Searching for the prosocial personality: A Big Five approach to linking personality and prosocial behavior: A Big Five approach to linking personality and prosocial behavior. *Pers Soc Psychol Bull* [Internet]. 2016;42(9):1177–92. Available from: <http://dx.doi.org/10.1177/0146167216652859>

Jensen-Campbell LA, Gleason KA, Adams R, Malcolm KT. Interpersonal conflict, agreeableness, and personality development. *J Pers* [Internet]. 2003;71(6):1059–86. Available from: <http://dx.doi.org/10.1111/1467-6494.7106007>

Magnus K, Diener E, Fujita F, Pavot W. Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis. *J Pers Soc Psychol* [Internet]. 1993;65(5):1046–53. Available from: <http://dx.doi.org/10.1037/0022-3514.65.5.1046>.

Mullola S, Hakulinen C, Ruiz De Porras G, Plessieu D, Jokela J, Vänskä M. Medical specialty choice and well-being at work: Physician's personality as a moderator. *Archives of Environmental & Occupational Health*. 2018;74:115–29

Emmons RA, Diener E, Larsen RJ. Choice of situations and congruence models of interactionism. *Pers Individ Dif* [Internet]. 1985;6(6):693–702. Available from: [http://dx.doi.org/10.1016/0191-8869\(85\)90080-7](http://dx.doi.org/10.1016/0191-8869(85)90080-7)

Marley J, Carman I. Selecting medical students: a case report of the need for change. *Med Educ* [Internet]. 1999;33(6):455–9. Available from: <http://dx.doi.org/10.1046/j.1365-2923.1999.00345.x>

Ferguson E, Semper H, Yates J, Fitzgerald JE, Skatova A, James D. The “dark side” and “bright side” of personality: when too much conscientiousness and too little anxiety are detrimental with respect to the acquisition of medical knowledge and skill.

West CP, Dyrbye LN, Sloan JA, Shanafelt TD. Single item measures of emotional exhaustion and depersonalization are useful for assessing burnout in medical professionals. *J Gen Intern Med* [Internet]. 2009;24(12):1318–21. Available from <https://doi.org/10.1007/s11606-009-1129-z>