Open Access

Original Article

Effect of Personality on Burnout in Dental Health Professionals

Mehwish Khan, Sanaa Ahmed, Sadia Khalil, Jamshed Ahmed, Mehmood Hussain, Muhammad Khalil Khan

Department of Dentistry, Jinnah Sindh Medical University Karachi Pakistan

ABSTRACT

Objective: To evaluate the prevalence of burnout among dental professionals using the Copenhagen Burnout Inventory (CBI) and to examine the association between personality traits and burnout among dental professionals.

Study Design: Analytical cross-sectional study

Place and Duration of Study: Public and private sector universities of Karachi Pakistan from Jan to Jun 2025.

Methodology: A study was conducted among 384 dental professionals from different teaching institutions. Burnout was assessed using the Copenhagen Burnout Inventory, and personality traits were measured using the Ten-Item Personality Inventory.

Results: Among 384 participants, 286(74.5%) were females, 328(85.4%) were aged 20–30 years, and 226(58.9%) were house officers. The Median CBI score was 49.90(17.36), indicating relatively low burnout levels. Significant differences among professional groups were observed in personal, patient-related, and overall burnout (p = 0.022, p = 0.003, and p = 0.009, respectively) with house officers exhibiting higher level of burnout scores across all domains. Spearman's correlation demonstrated weak negative associations of overall burnout with conscientiousness (ρ = −0.187), emotional stability (ρ = −0.209), and openness (ρ = −0.146).

Conclusions: House officers experienced significantly higher levels of burnout than other professional groups, despite relatively low overall burnout scores. Various personality domains showed weak negative associations with burnout levels. These findings suggest that professional designation and personality characteristics may contribute to variations in burnout and highlight the potential value of targeted wellbeing and resilience-building strategies, particularly among early-career dental professionals.

Keywords: Burnout, Dental Professional, Emotional Exhaustion, Extraversion, Mental Health, Neuroticism, Psychological.

How to Cite This Article: *Khan M, Ahmed S, Khalil S, Ahmed J, Hussain M, Khan MK. Effect of Personality on Burnout in Dental Health Professionals. Pak Armed Forces Med J 2026; 76(Suppl-10): S1634-S1639. DOI: https://doi.org/10.51253/pafmj.v76i6.14338*

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (https://creativecommons.org/licenses/by-nc/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Burnout is a psychological syndrome resulting from chronic workplace stress and is characterized by emotional exhaustion, fatigue, depersonalization, and reduced professional satisfaction.[1] Among healthcare professionals, burnout prevalence in Asian countries ranges from 21.3% to 92.2%, with comparatively higher rates reported than in Europe and North America.[2] Heavy workload, prolonged working hours, poor work–life balance, and academic stress have been identified as major contributing factors, particularly among residents and early-career healthcare professionals.[2,3]

Postgraduate residents and house officers are especially vulnerable to burnout because of demanding clinical responsibilities and increased occupational pressure.[3,4] Burnout among dental professionals is also increasingly recognized due to its association with medical errors, reduced patient satisfaction, and impaired clinical decision-making, ultimately affecting patient safety and training quality.[3] Although data regarding burnout in dentistry remain limited, a recent study from Turkey reported that 75.4% of postgraduate dental trainees met criteria for high burnout, with substantial levels of anxiety and depression observed among trainees.[5]

Recent research has focused on identifying predictive factors associated with burnout, including personality traits.6 The Five-Factor Model categorizes personality into neuroticism, extraversion, openness, agreeableness, and conscientiousness.[7] Previous studies have shown that neuroticism is positively associated with burnout, whereas conscientiousness and emotional stability may provide protective effects.[8,9] However, evidence regarding the relationship between personality traits and burnout among dental health professionals especially fresh graduates and postgraduate trainees remains limited, particularly in Pakistan. Exploring this association may help identify the individual house officers and

Correspondence: Dr Mehwish Khan, Department of Dentistry, Jinnah Sindh Medical University Karachi Pakistan

Received: 11 Apr 2026; revision received: 17 Sep 2026; accepted: 18 Sep 2026

residents at risk of burnout and support the development of targeted educational and psychological support strategies within undergraduate and postgraduate dental training programs. Therefore, the objectives of this study are (a) to evaluate the prevalence of burnout syndrome among dental health professionals using the Copenhagen Burnout Inventory (CBI) and (b) to examine the association between personality traits and burnout among dental health professionals in order to assess whether or not certain personality traits can be used as predictive factors for vulnerability to burnout among dental health professionals.

METHODOLOGY

This Analytical cross-sectional study was conducted after obtaining approval from the Institutional Review Board (JSMU/IRB/2024/868) dated 20th June 2024, adhering to guidelines in the Declaration of Helsinki, participants' consent was obtained in writing after they agreed. The study was conducted from January to June 2025. A convenience (non-probability) sampling technique was employed to select the participants fulfilling the inclusion criteria. Sample size was calculated using WHO sample size calculator taking confidence level 95%, margin of error 5%, reported prevalence of burnout to be 51.1% based on the study of Ahmed *et al*.[4] The estimated sample size came out to be 384 participants.

Inclusion Criteria: Dentists of either gender working as postgraduate residents, house officers, and faculty members of Teaching hospitals in Karachi, two public sector and two private sector dental teaching hospitals were included in the study.

Exclusion Criteria: Undergraduate dental students and faculty members with less than two years of working experience in their respective institutes were excluded from the study. Incomplete questionnaire responses were also excluded from the final analysis.

Incomplete form submissions were avoided by marking all questions as compulsory in the electronic questionnaire. Participants were contacted through sharing a QR code and email to fill out an electronic questionnaire after giving consent. The questionnaire was designed to assess the burnout scores along with the personality assessment. For the evaluation of burnout, the Copenhagen Burnout Inventory (CBI) was utilized whereas, Ten Item Personality Questionnaire (TIPI) was used for the assessment of personality traits.[10,11] A compiled questionnaire consisting of three parts; part A includes demographic information consisting of 5 items (age, gender, marital status, designation, residency year and institute), Part B consists of the Copenhagen burnout inventory (CBI) questionnaire and part C consists of TIPI. The both questionnaires were in English language. 10 The CBI questionnaire comprises 19 questions that are grouped into three dimensions (a) Personal burnout (BO), (b) Work-related burnout (c) Client-related burnout scored on a 5-point Likert scale. Twelve questions have responses in terms of frequency (always, often, sometimes, seldom, never/almost never). The remaining seven questions have responses in terms of degrees (very high degree, high degree, somewhat, to a low degree, to a very low degree). In work related burnout, Item 07 reverse coding was applied due to its negative wording. The scoring used is as follows: a very high degree = 100%, high degree = 75%, Somewhat = 50%, to a low degree = 25%, and a very low degree = 0%. Scores below 50 are considered as no or low burnout, scores of 50 to 74 are considered moderate, scores of 75-99 are high and score of 100 is considered as severe burnout.[12,13] If a respondent answered fewer than 3 questions, they were classified as a non-responder. The total score was divided by relevant items to measure the average perception of the participant. The three-factor model (CFI=.94; TLI=.93; RMSEA=.09; SRMR=.04) was used to measure the Copenhagen Burnout Inventory subscales on CFA. All items on each CBI subscale had substantial loading (p<0.001) (PB: loading range=.67-1.02; WB: loading range=.59-1.03; CB: loading range=.7-1.02). For all CBI measures, Cronbach's α was excellent (Total:.96; PB:.92; WB:.91; CB:.90), and item-total correlations were optimal (Total:.51-.84; PB:.74-.88; WB:.59-.83; CB:.56-.83).[2]

The other instrument TIPI is a personality assessment tool that is divided into five personality traits including neuroticism(N), extraversion (E), openness (O), agreeableness(A), and Conscientiousness (C).[14,15] Each of these traits is evaluated using 12 items per domain, each with a Likert scale of five points (1= strongly disagree to 5= strongly agree). TIPI does not have specific cut-off values but instead has scores ranging from 1-7 with higher scores indicating higher levels of the trait being measured in the individual. The total score for the personality domain is the sum of the scores earned for the 12 items of that domain.[16]

Data were analyzed using IBM Statistical Package for Social Sciences (SPSS) version 26 (IBM Corp.,

Armonk, NY, USA). Both the scales used in the study were already tested for validity and reliability. Furthermore, a pilot study was done on 30 participants of the same institute to evaluate the estimated time taken in completing the questionnaire and provide comments on clarity and relevance of different items of questionnaire. Minor changes in the demographics and instructions related to individual items were made in light of the results of the pilot study. Cronbach alpha calculated for the different domains of burnout and TIPI was excellent; Personal BO = 0.81, Work-related BO = 0.80, Patient-related BO = 0.82 and TIPI scores for five personality domains = 0.63. The Shapiro–Wilk test for normality showed non-normal distribution across multiple quantitative variables of burnout scores and TIP domains. As the data were not normally distributed, non-parametric tests were applied. Medians and interquartile range (IQR) were reported. Frequencies and percentages were calculated for categorical variables, including age group, gender, marital status, professional designation, dental specialty, and type of institution. Differences among the three professional designation were assessed using the Kruskal–Wallis H test. Significant results were followed by Mann–Whitney U tests with Bonferroni correction for pairwise comparison across groups. Spearman's rank correlation coefficient was used to identify the association of various personality traits with the overall burnout score. A p-value ≤ 0.05 was considered statistically significant for all analyses with the Bonferroni-adjusted significance level kept at $p < 0.01$ for multiple group comparison.

RESULTS

Three hundred and eighty-four participants who were included in the study. Among them 286(74.5%) were females and 98(25.5%) were males with most of them belonging to 20–30 years of age 328(85.4%). The most common professional group comprised of house officers 226(58.9%) (Table-I).

Table-I: Participant characteristics by Professional Designation (n=384)

Characteristic	Dental faculty	Postgraduate residents	House officers	Total n (%)
Age (years)				
20–30	28(7.36%)	75(19.70%)	225(59.20%)	328(85.40%)
31–40	36(9.47%)	9(2.37%)	1(0.26%)	46(12.00%)
41–50	10(2.63%)	0(0%)	0(0%)	10(2.60%)
Gender				
Female	52(6.58%)	61(4.21%)	173(45.52%)	286(74.50%)
Male	22(5.79%)	23(6.05%)	53(13.94%)	98(25.50%)
Marital status				
Married	42(11.05%)	19(5.00%)	15(3.95%)	76(19.80%)
Unmarried	32(8.42%)	65(17.10%)	211(55.52%)	308(80.20%)
Total n(%)	74(19.30%)	84(21.90%)	226 (58.90%)	384(100.00%)

The overall Copenhagen Burnout Inventory (CBI) score was Median (IQR) = 49.90(17.36), indicating a low overall level of burnout. The median scores for the personal, work-related, and patient-related burnout domains were 54.16(20.83), 46.42(21.43), and 45.83(20.83), respectively. No statistically significant differences were observed in the overall CBI score or the five personality domains across dental specialties, institution type, or gender (all $p > 0.05$). Table-II highlights significant differences among the three professional designation groups for several burnout domains. Pairwise comparisons with Bonferroni adjustment (α = 0.0167) showed significant differences between house officers and post graduate residents for patient-related and overall burnout scores. Faculty and house officers differed significantly for consciousness and emotional stability whereas, faculty and post graduate residents differed significantly for all personality domains except Extraversion (Table-III).

Table-II: Comparison of Burnout Scores across Professional Designations (n=384)

Burnout domain (CBI)	Dental faculty Median (IQR)	Residents Median (IQR)	House officers Median (IQR)	*p*-value
Personal burnout	50(20.8)	50(20.8)	58.3(20.8)	0.022
Work-related burnout	46.4(26.7)	42.8(27.6)	50(17.8)	0.064
Patient-related burnout	41.6(21.8)	41.6(25.0)	45.8(16.6)	0.003
Overall burnout	46.8(20.5)	45.9(23.0)	50.3(14.9)	0.009

*CBI = Copenhagen Burnout Inventory; SD = standard deviation. * Kruskal–Wallis test was used for overall group comparisons. Pairwise comparisons were performed using Bonferroni correction, with an adjusted significance level of p<0.05.*

Table-III: Comparison of Various Personality Traits Across Professional Designations (n=384)

Personality trait (TIPI)	Faculty Median (IQR)	Residents Median (IQR)	House officers Median (IQR)	*p*-value*
Extraversion	4.0 (1.50)	4.0 (1.38)	4.0 (1.50)	0.054
Agreeableness	5.0 (1.13)	4.50 (1.50)	4.50(1.00)	0.014*
Conscientiousness	5.25 (1.50)	4.50 (1.50)	4.50 (1.50)	<0.001*
Emotional stability	4.50 (1.50)	4.0 (1.50)	4.0 (1.50)	<0.001*
Openness to experience	5.25 (2.00)	5.0 (1.50)	4.50 (1.50)	0.003*

TIPI = Ten-Item Personality Inventory; SD = standard deviation. * Kruskal–Wallis test was used for overall group comparisons. Pairwise comparisons were performed using Bonferroni correction, with an adjusted significance level of p<0.01.*

Spearman's rank correlation analysis (Table-IV) showed statistically significant but weak negative associations for three personality traits; Conscientiousness, Emotional stability and Openness) with overall burnout after adjustments for multiple comparisons. Additionally, Agreeableness and Extraversion traits showed very weak negative correlations but these associations were not statistically significant.

Table-IV: Relationship between personality traits and overall burnout levels (n=384)

Personality trait	Spearman's ρ	p value
Extraversion	−0.094	0.06
Agreeableness	−0.104	0.04
Conscientiousness	−0.187	<0.001*
Emotional stability	−0.209	<0.001*
Openness	−0.146	0.004*

** p value < 0.01 was considered statistically significant after bonferroni adjustments for multiple comparisons.*

DISCUSSION

The present findings showed that house officers had the highest median overall burnout score [50.3 (14.9)], followed by dental faculty [46.8 (20.5)] and postgraduate residents [45.9 (23.0)], with a statistically significant difference among professional designations (p = 0.009). This finding is broadly consistent with previous studies reporting higher burnout among early-career dental professionals and trainees.[10,12–16] The higher burnout observed among house officers may reflect the challenges associated with transitioning into clinical practice, including increased clinical responsibilities, workload, and adaptation to professional environments. However, the magnitude and statistical significance of differences across professional groups may vary between studies because of differences in study populations, institutional settings, and assessment methods.

Personal burnout was also highest among house officers [58.3 (20.8)], compared with faculty [50.0 (20.8)] and postgraduate residents [50.0 (20.8)], with a statistically significant difference among groups (p = 0.022). Similarly, patient-related burnout was higher among house officers [45.8 (16.6)] than faculty [41.6 (21.8)] and postgraduate residents [41.6 (25.0)], with a significant difference across professional designations (p = 0.003). In contrast, work-related burnout did not differ significantly among house officers [50.0 (17.8)], faculty [46.4 (26.7)], and postgraduate residents [42.8 (27.6)] (p = 0.064). Thus, the present findings indicate that differences between professional groups were more evident for personal, patient-related, and overall burnout than for work-related burnout.

The higher burnout observed among house officers is consistent with literature suggesting that early-career professionals may experience greater psychological demands during the transition to clinical practice.[10,12–16] Burnout has also been associated with reduced engagement in learning activities, impaired concentration, and difficulties in benefiting from formative feedback and assessment.[17,18] Within competency-based postgraduate education, these effects may potentially interfere with skills acquisition, reflective practice, and professional development. The relatively higher burnout observed among house officers therefore highlights the importance of structured induction, appropriate clinical supervision, graduated clinical responsibility, and accessible well-being support during the early stages of dental training.

In recent years, the exploration of burnout has expanded beyond organizational stressors to include individual-level factors that may influence vulnerability.[19,20] In this context, the present study demonstrates that personality traits are meaningfully associated with burnout among dental trainees and faculty. Faculty members demonstrated higher median scores for most personality traits compared with postgraduate residents and house officers. Significant differences among professional designations were observed for agreeableness, conscientiousness, emotional stability, and openness to experience, whereas extraversion did not differ significantly between groups (p = 0.054). Faculty had higher median scores for agreeableness [5.0 (1.13)], conscientiousness [5.25 (1.50)], emotional stability [4.50 (1.50)], and openness to experience [5.25 (2.00)] compared with postgraduate residents [4.50 (1.50), 4.50 (1.50), 4.0 (1.50), and 5.0 (1.50), respectively] and house officers [4.50 (1.00), 4.50 (1.50), 4.0 (1.50), and 4.50 (1.50), respectively]. These findings suggest that personality characteristics may vary according to professional designation, potentially reflecting differences in professional experience, role demands, and adaptation to educational and clinical environments.

Importantly, Spearman's correlation analysis demonstrated weak but statistically significant negative associations between overall burnout and conscientiousness (ρ = −0.187, p < 0.001), emotional stability (ρ = −0.209, p < 0.001), and openness to experience (ρ = −0.146, p = 0.004) after Bonferroni adjustment. In contrast, agreeableness (ρ = −0.104, p = 0.04) and extraversion (ρ = −0.094, p = 0.06) showed very weak negative associations that did not meet the adjusted significance threshold. The inverse associations observed for conscientiousness and emotional stability are broadly consistent with previous evidence linking these traits with adaptive coping, emotional regulation, and resilience.[20,21] However, the correlations in the present study were weak, indicating that personality traits account for

only a limited component of the variation in burnout and should not be interpreted as independent predictors. Overall, these findings suggest that individual personality characteristics may influence how dental professionals perceive and respond to educational and clinical demands, while other occupational and environmental factors are also likely to contribute substantially to burnout.

Evidence from nursing and medical education further supports the predictive role of personality traits in burnout. Studies by Grigorescu et al. and Divinakumar et al. identified neuroticism and negative self-evaluation as contributors to burnout vulnerability, whereas extraversion, conscientiousness, and agreeableness acted as protective factors.[19,20] The present findings align with this literature, particularly in highlighting emotional stability as a protective trait with the predictive association. Within postgraduate dental education, this has implications for faculty development, as supervisors who recognize individual differences may better tailor mentoring, supervision, and feedback approaches to support trainee well-being and learning.[21]

The educational relevance of these findings lies in their application to postgraduate support systems. Although personality traits are relatively stable, educational interventions can strengthen coping strategies and resilience among trainees who may be more susceptible to burnout.[22,23] Structured mentoring programs, resilience and stress-management training, and accessible pastoral support may be particularly beneficial during the early phases of training. Faculty development initiatives that enhance awareness of burnout indicators and promote supportive supervisory practices may also contribute to psychologically safe learning environments that encourage help-seeking and sustained engagement.

At an institutional level, learning environmental factors including workload allocation, autonomy, assessment burden, and organizational culture require attention.[13–16,20,24] Aligning service demands with educational objectives, protecting learning time, and promoting work–life balance through institutional policies may help mitigate burnout while supporting both trainee development and patient safety. These considerations are especially relevant in resource-constrained settings, where trainees often experience disproportionate service pressures.

This study contributes novel evidence from addressing a gap in burnout research within dental education in low- and middle-income countries. Nevertheless, several limitations should be acknowledged. The cross-sectional design limits causal inference, and reliance on self-reported measures may introduce response bias. The sample was restricted to postgraduate dental professionals in urban teaching hospitals, which may limit generalizability to other health professions, undergraduate learners, or rural settings. Additionally, institutional workload variations and personal stressors were not assessed, which may influence burnout among early-career trainees.[23,25] Future research should adopt longitudinal designs with larger sample size to examine burnout trajectories across various personalities, training stages and to evaluate how educational interventions, learning environments, and faculty practices interact with individual characteristics over time.[22]

Conflict of Interest: None.

Funding Source: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

MK & SA: Data acquisition, data analysis, critical review, approval of the final version to be published.

SK & JA: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

MH & MKK: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

REFERENCES

1. Maslach C. Burnout: a multidimensional perspective. In: Schaufeli WB, Maslach C, Marek T, editors. Professional burnout: recent developments in theory and research. Philadelphia: Taylor & Francis; 1993.
2. Siddiqui M, Bajwa N, Awais M, Rasool A, Akhtar M, Shahzad F, et al. Prevalence and factors associated with burnout among healthcare professionals in Asian countries. J Soc Prev Advocacy Res King Edward Med Univ 2023; 2(3): 170-182.
3. Rodrigues H, Cobucci R, Oliveira A, Cabral JV, Medeiros L, Gurgel K, et al. Burnout syndrome among medical residents: a systematic review and meta-analysis. PLoS One 2018; 13(11): e0206840. http://doi.org/10.1371/journal.pone.0206840
4. Ahmad W, Ashraf H, Talat A, Khan AA, Baig AA, Zia I, et al. Association of burnout with doctor-patient relationship and stressors among postgraduate trainees and house officers. PeerJ 2018 ;6: e5519. http://doi.org/1010.7717/peerj.5519

5. Alpay S, Cakilkaya E, Dagdelen B, Arslan D. The hidden cost of specialization: a mixed-methods study on burnout, mental health, and financial instability in dental trainees. BMC Med Educ 2026; 26(1): 229. http://doi.org/1010.1186/s12909-026-08584-2
6. McKenzie MC. The imperative for identifying personality traits in healthcare professionals, allied healthcare professionals, and first responders: a profiling perspective. Am J Appl Psychol 2026; 15(1): 1-26. http://doi.org/1010.11648/j.ajap.20261501.11
7. Costa PT Jr, McCrae RR. Revised NEO Personality Inventory (NEO-PI-R). In: Boyle GJ, Matthews G, Saklofske DH, editors. The SAGE handbook of personality theory and assessment. London: SAGE; 2008.
8. Alarcon G, Eschleman KJ, Bowling NA. Relationships between personality variables and burnout: a meta-analysis. Work Stress 2009; 23(3): 244-263. http://doi.org/1010.1080/02678370903282600
9. Melchers MC, Plieger T, Meermann R, Reuter M. Differentiating burnout from depression: personality matters. Front Psychiatry 2015; 6: 113.
10. Maslach C, Jackson SE, Leiter MP. Maslach Burnout Inventory manual. 3rd ed. Palo Alto (CA): Consulting Psychologists Press 1996.
11. Gosling SD, Rentfrow PJ, Swann WB Jr. A very brief measure of the Big-Five personality domains. J Res Pers 2003; 37: 504-528.
12. Kamran R, Bari A, Zaheer N, Maliha S. Prevalence of burnout among dentists in Lahore, Pakistan. Adv Bioresearch 2020; 11(6): 164-169.
13. Anzar W, Qureshi A, Afaq A, Alkahtany MF, Almadi KH, Ben Gassem AA, et al. Occupational stress, burnout, and job satisfaction among dental practitioners. Bangladesh J Med Sci 2022; 72(1): 323-331. http://doi.org/1010.3233/WOR-210555.
14. MacAulay R, Morash J, Kenwell LS, Haslam SK. Burnout in oral health students: a scoping review. J Dent Educ 2023; 87(4): 471-496. http://doi.org 10.1002/jdd.13143
15. Joseph A, Finkelman MD, Khoynezhad S, Bordin TB. Correlates of burnout in predoctoral dental students in the United States. J Dent Educ 2023;87(8):1142-1152. http://doi.org 10.1002/jdd.13230
16. Henry AD, Salter RO, Young DL, Leavell J. Burnout among early career faculty in US dental schools. J Dent Educ 2023; 88(3): 295-303. http://doi.org 10.1002/jdd.13423
17. Nimer A, Naser S, Sultan N, Alasad RS, Rabadi A, Abu-Jubba M, et al. Burnout syndrome during residency training in Jordan: prevalence, risk factors, and implications. Int J Environ Res Public Health 2021; 18(4): 1557. http://doi.org 10.3390/ijerph18041557
18. Alqahtani SM, Chaturvedi S, Hezam AA, Alshahrani A, Alkhurays M, Al Moaleem MM, et al. Prevalence of burnout and practice-related risk factors among Saudi Board dental residents using the Copenhagen Burnout Inventory: a survey-based cross-sectional study. Medicine 2023; 102(43): e35528. http://doi.org 10.1097/MD.0000000000035528
19. Grigorescu S, Cazan AM, Grigorescu OD, Rogozea LM. Role of personality traits and work characteristics in predicting burnout among nurses. EPMA J 2018; 9(4): 355-365. http://doi.org 10.1007/s13167-018-0151-9
20. Divinakumar KJ, Bhat PS, Prakash J, Srivastava K. Personality traits and burnout in female nurses. Indian J Psychiatry 2019; 28: 24-28. http://doi.org 10.4103/ipj.ipj_52_19
21. Hendrikx K, Van Ruysseveldt J, Otto M. Personality and burnout complaints: mediating role of proactive prevention behaviors. Scand J Psychol 2024; 65(4): 592-606. http://doi.org 10.1111/sjop.13005
22. van der Wal RA, Bucx MJ, Hendriks JC, Scheffer GJ, Prins JB. Psychological distress, burnout, and personality traits in anesthesiologists. Eur J Anaesthesiol 2016; 33(3): 179-186. http://doi.org 10.1097/EJA.0000000000000375
23. Rink LC, Oyesanya TO, Adair KC, Humphreys JC, Silva SG, Sexton JB. Stressors among healthcare workers: a content analysis. Glob Qual Nurs Res 2023; 10: 23333936231161127. http://doi.org 10.1177/23333936231161127
24. Caesar B, Barakat A, Bernard C, Butler D. Evaluation of physician burnout using the Copenhagen Burnout Inventory. Ir J Med Sci 2020; 189(4): 1451-1456. http://doi.org 10.1007/s11845-020-02223-5
25. Zhou H. Relationship between empathy and burnout among clinical nurses: a systematic review. BMC Nurs 2025; 24: 38. http://doi.org 10.1186/s12912-025-02701-0