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Risk Factors Associated with Burnout among Medical Faculty: A Systematic Review

Czynniki ryzyka związane z wypaleniem zawodowym wśród pracowników akademickich wydziałów medycznych: systematyczny przegląd piśmiennictwa

Maryam Alvandi[A-I,K-L], **Jenna Davis**[B,E-I,K]

School of Nursing and Health Professions, York College of Pennsylvania, United States

CORRESPONDING AUTHOR:
Maryam Alvandi
York College of Pennsylvania, Department of Health Professions, Diehl Hall, Room 208
441 Country Club Road, York, PA, United States 17403
e-mail: malvandi@ycp.edu

A – Development of the concept and methodology of the study/Opracowanie koncepcji i metodologii badań; B – Query - a review and analysis of the literature/Kwerenda – przegląd i analiza literatury przedmiotu; C – Submission of the application to the appropriate Bioethics Committee/Złożenie wniosku do właściwej Komisji Biotycznej; D – Collection of research material/Gromadzenie materiału badawczego; E – Analysis of the research material/Analiza materiału badawczego; F – Preparation of draft version of manuscript/Przygotowanie roboczej wersji artykułu; G – Critical analysis of manuscript draft version/Analiza krytyczna roboczej wersji artykułu; H – Statistical analysis of the research material/Analiza statystyczna materiału badawczego; I – Interpretation of the performed statistical analysis/Interpretacja dokonanej analizy statystycznej; K – Technical preparation of manuscript in accordance with the journal regulations/Opracowanie techniczne artykułu zgodne z regulaminem czasopisma; L – Supervision of the research and preparation of the manuscript/Nadzór nad przebiegiem badań i przygotowaniem artykułu

STRESZCZENIE

CZYNNIKI RYZYKA ZWIĄZANE Z WYPALENIEM ZAWODOWYM WŚRÓD PRACOWNIKÓW AKADEMICKICH WYDZIAŁÓW MEDYCZNYCH: SYSTEMATYCZNY PRZEGLĄD PIŚMIENNICTWA

Cel pracy. Zespół wypalenia zawodowego u pracowników naukowych zawodów medycznych niekorzystnie wpływa na ich samopoczucie i wydajność w pracy oraz jest uważany za powszechny na całym świecie. Celem tego systematycznego przeglądu była identyfikacja czynników wypalenia zawodowego wśród akademickiej kadry wydziałów lekarskich.

Materiał i metody. Wyszukiwania elektroniczne przeprowadzono w Citations and Abstracts for Literature of Nursing and Allied Health (CINAHL) Plus z pełnym tekstem, MEDLINE z pełnym tekstem, Academic Search Complete i PsycInfo zgodnie z wytycznymi Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Po wykluczeniu duplikatów i artykułów, które nie spełniały kryteriów włączenia, do ostatecznej analizy włączono 17 badań. Do oceny jakości metodologicznej włączonych badań wykorzystano listę kontrolną Quality Index opracowaną przez Downs & Black. W naszym obszarze zainteresowań nie ma randomizowanych badań kontrolowanych, a badania nierandomizowane uzyskały niski wynik.

Wyniki. Łącznie 17 badań (7056 uczestników) w sześciu krajach spełniało kryteria włączenia. Do głównych czynników powiązanych z wypaleniem zaliczały się cechy społeczno-demograficzne i związane z pracą; czynniki charakteryzujące lekarza (wiek, przynależność do mniejszości płciowej, niepełnosprawność, chęć zmniejszenia obciążenia pracą) i kultura pracy; czynniki demograficzne, w tym: płeć, pochodzenie etniczne/rasa, lata doświadczenia, specjalność i czynniki związane z pracą; brak czynników instytucjonalnych, takich jak: mentoring, możliwości współpracy, poczucie siły, wartości i wsparcie dobrego samopoczucia; złe relacje między wykładowcami i zachowania zawodowe; postrzegane czynniki stresogenne, wsparcie współmałżonka/partnera, poczucie własnej skuteczności i depresja; długie godziny pracy, interakcje interpersonalne między współpracownikami, czynniki rodzinne i społeczne, w tym wyzwania dotyczące głównie kobiet, wyzwania związane z uczuciami i emocjami oraz cechami osobistymi; duże obciążenie pracą, ograniczony czas wolny, charakter pracy, stygmatyzacja/kultura wokół wypalenia zawodowego, obciążenie administracyjne, brak autonomii i częste informacje zwrotne na temat wyników; duże niedopasowanie harmonogramu; nieodpowiednie spełnienie zawodowe, kultura dobrego samopoczucia, samodzielność osobista i efektywność praktyki; brak sprawiedliwości organizacyjnej i satysfakcji z pracy; oraz poziom lęku i depresji.

Wnioski. Wśród akademickiej kadry lekarskiej występowało znaczne rozpowszechnienie wypalenia zawodowego, które może być wyniszczające. Wypalenie zawodowe wśród akademickiej kadry lekarskiej pozostaje największym zagrożeniem dla rozwoju i sukcesu instytucji.

Słowa kluczowe: wypalenie zawodowe, powiązane czynniki, rozpowszechnienie, wydział medyczny, systematyczny przegląd

ABSTRACT

RISK FACTORS ASSOCIATED WITH BURNOUT AMONG MEDICAL FACULTY: A SYSTEMATIC REVIEW

Aim. Burnout syndrome in academicians of healthcare professions adversely affects their well-being and performance during work, and it is considered common worldwide. The aim of this systematic review was to identify burnout factors among medical faculty.

Material and methods. Electronic searches were conducted in Citations and Abstracts for Literature of Nursing and Allied Health (CINAHL) Plus with full text, MEDLINE with full text, Academic Search Complete, and PsycInfo following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. After excluding duplicates and articles, which did not meet the inclusion criteria, 17 studies were included in the final analysis. The Quality Index checklist developed by Downs & Black was used to evaluate the methodological quality of the included studies. There are no randomized controlled trials in our area of interest, and non-randomized studies scored low.

Results. A total of 17 studies (7,056 participants) across six countries were compatible with the inclusion criteria. Main associated factors of burnout included socio-demographic and work-related characteristics; physician factors (age, gender minority status, disability, desire to reduce the workload) and workplace culture; demographic factors, including sex, ethnicity/race, years of experience, specialty, and work-related factors; lack of institutional factors, such as mentorship, collaboration opportunities, feelings of empowerment, value, and support of well-being; poor faculty relationships and professional behaviors; perceived stressors, spousal/partner support, self-efficacy, and depression; long working hours, interpersonal interactions among the colleagues, family and social factors, including challenges related specifically to women, feelings and emotions, and personal qualities; high workload, limited time off, nature of work (high stake job), stigma/culture around burnout, administrative burden, lack of autonomy, and frequent performance feedback; high schedule misalignment; inadequate professional fulfillment, culture of wellness, personal reliance, and efficiency of practice; lack of organizational justice and job satisfaction; and anxiety-depression levels.

Conclusions. There was a considerable prevalence of burnout among medical faculty, which can be debilitating. Burnout among medical faculty remains the greatest threat to institutional growth and success.

Key words: burnout, associated factors, prevalence, medical faculty, systematic review

INTRODUCTION

The concept of burnout was first introduced in literature in the 1970s by Freudenberger [1]. Burnout is defined as a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishments, and it is of particular concern among individuals who are exposed to long-term occupational stress [2-4]. Burnout refers to an occupational phenomenon, which poses significant threat professionally and personally [4].

Among medical faculty, burnout is associated with deterioration in clients' quality of care and services, increased absenteeism and reduced staff retention, low morale, and personal distress [5]. The prevalence of burnout among academic professors in healthcare professions is of increasing concern. Faculty members have the competing demands of scholarly activities, including publications and grant writing, networking and the pressure of obtaining tenure and promotion, providing service to the institution, providing quality instruction to students, and often also practice clinically in their field. Therefore, junior, or non-tenured, faculty are deemed at high risk for developing burnout [5].

Burnout has an adverse financial impact on practices and organizations [4]. Burnout is also correlated with increased disruptive and unprofessional workplace behaviors, such as intimidation, harassment, and discrimination [6,7]. Burnout among medical faculty is directly associated with an increase in the risk of suicidal ideation, depression, and substance abuse [8]. Medical faculty experiencing burnout have a great potential to leave the medical profession through early retirement and/or career change [8]. It is vital to prevent burnout and promote resiliency to maximize healthcare professionals' wellbeing [9]. The purpose of this systematic review was to evaluate the factors contributing to burnout among medical faculty.

METHODS

A systematic literature search was conducted to identify current research on burnout among medical faculty. The databases used for the sources for this research included Citations and Abstracts for Literature of Nursing and Allied Health (CINAHL) Plus with full text, MEDLINE with full text, Academic Search Complete, and PsycInfo. The search terms included ("burnout, Professional" or "professional burnout") AND factors AND ("faculty, medical" or "medical faculty"). Research articles published in English since 2017 were eligible for inclusion in the review. Exclusion criteria included literature published before 2017; text not published in English; non peer reviewed articles; and books, commentaries, case reports, theses or dissertations, and perspectives. The authors independently extracted the following data from the articles meeting the inclusion criteria: country of study origin, risk factors associated with burnout, study design, study group, age (Total Count), sampling method, data analysis, and results. The abstracts were reviewed, and 17 articles were chosen based on their consistencies surrounding the investigation of burnout in healthcare professions.

Study Quality

Studies were critically appraised based on the Quality Index (QI) checklist [10]. The QI checklist is broadly used for the assessment of the methodological quality of randomized and non-randomized studies of healthcare interventions. The checklist contains 27 items to evaluate reporting, external validity, internal validity (bias and confounding), and power of published articles. All of the items can be scored a zero or a one, except for the item describing the distribution of principal confounders, which can be scored zero, one, or two, and the item on power, which can have a score of zero through five [10]. Scores range from zero to 32 with a higher total score representing a better methodological quality of study [10]. The authors independently appraised the studies, conflicts were resolved by discussion, and consensus was reached.

RESULTS

The literature search generated a total of 104 articles (See Figure 1: Flow Diagram of the Search Strategy). After excluding duplicates and those not directly related to the topic, a total of 34 articles were reviewed in-depth for analysis. After screening and further application of inclusion and exclusion criteria, a total of 17 studies were included in the final analysis.

The majority of the studies were conducted in the United States (65%, n = 11), followed by Turkey (11.7%, n = 2), and Hungary (5.8%, n = 1), Canada (5.8%, n = 1),

Tab. 1. Summary of Factors Related to Burnout in Medical Faculty

Authors/ Year/ Location	Variables	Study Design	Study Group (n)	Age (T/C)	Sampling Method	Data Analysis	Results	Quality Index
Adam et al., 2018 Hungary	Socio-demographic and work-related characteristics	Cross-sectional study	350 GPs and residents	25-79	Maslach Burnout Inventory Human Services Survey	Linear regression	The results demonstrated a significantly higher level of depersonalization among male physicians was found compared to female physicians. Age negatively correlated with both emotional exhaustion and depersonalization among female physicians ($rS = -0.193$, $p < 0.01$; $rS = -0.220$, $p < 0.001$), male physicians ($rS = -0.206$, $p < 0.01$; $rS = -0.191$, $p < 0.05$), and in the total sample ($rS = -0.186$, $p < 0.01$; $rS = -0.198$, $p < 0.001$), respectively. Age correlated positively with personal accomplishment among female physicians ($rS = 0.358$, $p < 0.001$) and the total sample ($rS = 0.234$, $p < 0.001$) but not among male physicians.	6
Burns et al., 2021 Canada	Physician factors (age, gender minority status, disability, desire to reduce the workload) and workplace culture	Cross-sectional study	419 full-time clinical faculty members	≤ 50, 51-60, 1-70, >70 years	Survey	Multivariable linear regression	Physician factors and organizational culture had an impact on burnout	6
del Carmen et al., 2019 USA	Demographic factors, including sex, ethnicity/race, years of experience, specialty, and work-related factors	Quantitative study	1774 physicians in 2014 and 1882 physicians in 2017	Not reported	Survey	Multivariable logistic regression	Burnout increased from 40.6% to 45.6% between the 2 points. The increased rate was associated with an increase in exhaustion (from 52.9% in 2014 to 57.7% in 2017; difference, 4.8%; 95% CI, 1.6%-8.0%; P = .004) and cynicism (from 44.8% in 2014 to 51.1% in 2017; difference, 6.3%; 95% CI, 3.1%-9.6%; P < .001). Compared with midcareer physicians (11-20 years since training), early-careER physicians (≤10 years since training) were more susceptible to burnout (odds ratio, 1.36; 95% CI, 1.05-1.77), while physicians in their late career (>30 years since training) were less vulnerable (odds ratio, 0.59; 95% CI, 0.40-0.88). Among work-related factors, satisfaction with workflow, relationship with colleagues, time and resources for continuing medical education, opportunity to affect decision making, workload, and having a trusted advisor were associated with low likelihood of burnout.	7
Duke et al., 2020 USA	Institutional factors, such as mentorship, collaboration opportunities, feelings of empowerment, value, and support of well-being	Cross-sectional study	90 Assistant Professors	Not reported	Survey	Pearson correlation coefficients and logistic regression models	Institutional characteristics significantly reduced all dimensions of burnout	5
Dyrbye et al., 2021 USA	Faculty-resident relationships, faculty professional behaviors, and satisfaction with autonomy	Cross-sectional study	762 Residents		Survey	Multivariable logistic and linear regression analysis	Faculty-resident relationships and faculty professional behaviors and their satisfaction with autonomy were associated with resident burnout.	8
Gabbe et al., 2018 USA	Perceived stressors, spousal/partner support, self-efficacy, and depression,	Cross-sectional study	84 Academic leaders	54-64	Survey	Logistic regression	High Job stressors, spousal support, self-efficacy, and depression are important in preventing burnout	6

cont. Tab. 1. Summary of Factors Related to Burnout in Medical Faculty

Authors/ Year/ Location	Variables	Study Design	Study Group (n)	Age (T/C)	Sampling Method	Data Analysis	Results	Quality Index
Grover et al., 2018 India	Long working hours and negative patient-related outcomes, adverse doctor – patient interactions, and interpersonal interactions among the colleagues.	Cross-sectional study	514 Resident doctors and faculty	The mean age of the residents was 28.93 years and that of faculty was 46.36 years	Email survey	Chi-square test, t-test, Mann-Whitney U-test, and Fisher's exact test.	More than 90% of the participants reported some level of burnout. Compared to faculty, higher proportion of the residents reported stress, depression, and burnout. Presence of depression, stress, or burnout was associated with lower indulgence in recreational activities, experiencing verbal or physical abuse in the hand of patients/caregivers, feelings that seniors do not show empathy toward patients, and seniors do not show empathy toward them.	7
Hashmi, A. M. (2021). Pakistan	Work-related factors; family and social factors, including challenges related specifically to women; feelings and emotions; and personal qualities	An explanatory sequential mixed method	203 teaching faculty of basic and clinical science	25-60	Survey	Inferential statistical analysis was done via Pearson's Chi-square test and Independent t-test.	About 38.9% of respondents scored high on the Emotional Exhaustion subscale and 31.5% scored high on the Depersonalization subscale. There were statistically significant differences on the mean Emotional Exhaustion scores ($p < 0.001$) between Basic and Clinical Sciences Departments with respondents from the Clinical Departments having higher scores (7.84 ± 4.32).	9
Ironside et al., 2019 USA	High workload, limited time off, nature of work (high stake job), stigma/culture around burnout, administrative burden, lack of autonomy, and frequent performance feedback	Qualitative study	120 Residents and faculty	Not reported	Focus groups	Framework approach	Lacking a sense of meaning at work, fatigue and exhaustion, cultural norms, steep learning curve, social relationships at and outside work contributed to burnout	1
Ko et al., 2020 USA	High schedule misalignment	Cross-sectional study	103 faculty physicians	Not reported	Maslach Burnout Inventory online survey	Paired-sample t tests were used to measure significant differences across the 5 categories of activity to identify patterns in faculty preference. Analyses were conducted using IBM SPSS Statistics	On average they engaged in their preferred amount of time on direct patient care (30% of their time) and administrative duties (15%). Meanwhile, faculty preferred to increase time spent teaching (37% to 41%, P¼.002) and conducting research (4% to 7%, $P \leq .001$), while reducing time spent on non-direct clinical duties (14% to 7%, $P < .001$). Those with higher misalignment in their weekly schedules reported higher levels of professional burnout and occupational stress.	6
Lee et al., 2021 USA	Grit and resilience	Cross-sectional study	335 Residents, fellows, and faculty from 14 academic medical centers	32-60	Email-based survey	Multivariable linear regression	Grit and resilience were negatively correlated with burnout	7

cont. Tab. 1. Summary of Factors Related to Burnout in Medical Faculty

Authors/ Year/ Location	Variables	Study Design	Study Group (n)	Age (T/C)	Sampling Method	Data Analysis	Results	Quality Index
Ofei-Dodoo et al., 2018 USA	Job satisfaction, work-related burnout	Nonexperimental, cross-stectional national study using the Professional Quality of Life Scale version 5	307 family medicine resident coordinators	Not reported	Voluntary Response via e-mail to all members of Assocation of Family Medicine Administration	Chi-square tests, Pearson's r correlations, and multiple linear regression	28% coordinators reported high, 46% moderate, and 26% low job satisfaction. There was a significantly negative relationship between job satisfaction and work-related burnout, r (306)=-.638, P<0.001. Regression explained 42% of variance in job satisfaction, and showed that burnout (β=-.62) and years on the job (β=.15) were significant predictors of job satisfaction (R=0.64; F [5, 277]=40.28, P<.001).	8
Ofei-Dodoo et al., 2019 USA	Burnout, wellness	Mixed-methods	439 residents and core faculty members	Not reported	Voluntary response via e-mail invitation	Kruskal-Wallis and Fisher exact tests and an immersion-crystallization approach	43% of respondents met criteria for burnout. Rates of burnout among residents were higher than core faculty members (51% vs. 31%, p<.05)	8
Purvis & Saylor, 2019 USA	Burnout, resiliency	Cross-sectional survey	65 neuroscience critical care staff		Convenience	Chi-square test, Mann-Whitney U test, independent samples t-test	Catholicism was independently associated with higher personal accomplishment scores, onger time working was associated with higher emotional exhaustion scores, older age was independently associated with higher resiliency scores	6

India (5.8%, n = 1), and Pakistan (5.8%, n = 1). There were no randomized controlled trials found in the literature search, and non-randomized studies had lower QI scores due to the nature of the questions on the checklist (Tab. 1).

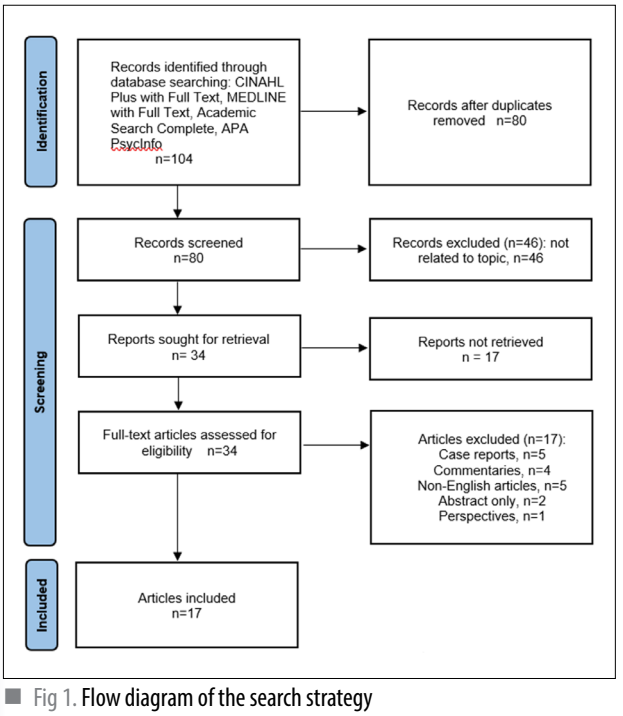

Fig 1. Flow diagram of the search strategy

Factors associated with burnout

Gender was associated with burnout, with females reporting a higher level of burnout [1, 11, 12]. Furthermore, age was associated with burnout as well, with female physicians reporting a higher level of depersonalization and emotional exhaustion [11]. Spousal support has an inverse relationship with burnout levels [2, Table 1].

Physician employment location had an impact on burnout [1, 4, 5]. For example, working in the emergency department was associated with a higher reported level of burnout [4]. However, physicians with misaligned schedules, or those who felt a higher strain to decrease time spent teaching and conducting research to provide direct patient care, reported an increased level of burnout [13, Table 1].

The stage of the physicians' career was also a factor. Physicians who were in their late career (>30 years of training) reported lower levels of burnout in comparison to physicians early in their career (≤10 years of training) [4,14]. Similarly, resident physicians reported burnout association with faculty-resident relationships and level of autonomy [15]. This may be due to a limited experience level or a decrease in the individual's level of grit and resilience as those factors were negatively correlated with burnout [7,9]. Either way, rates of burnout among resident physicians were higher than core faculty members [8,15, Table 1]. Job stressors in general have been reported as increasing burnout rates]2,3,16,17]. (Lacking a sense of meaning at work is associated with burnout [18]. Experiencing verbal or physical abuse at the hand of patients has led to an increased reported level of burnout, with more than 90% of survey participants reporting some level of burnout [3]. Comparably, organizational culture had an impact on burnout [6]. Work-related burnout had a significantly negative relationship with job satisfaction [14, Table 1].

DISCUSSION

This systematic review examined factors associated with burnout among medical faculty. Many limitations exist, many of the studies (35%, n = 6) had a setting outside of the United States, studies were conducted using convenience sampling, and the prevalent study design was a cross-sectional survey, leading to poor quality index ratings on the Downs & Black checklist.

Factors associated with burnout in the reviewed studies include gender, age, spousal support, employment location, career length, and job stressors, including lacking a sense of meaning, experiencing abuse at work, and organizational culture. Our review found that the reported prevalence estimates of burnout among medical faculty varied substantially across studies, with Grover et al. (2018) finding more than 90% of participants reported some level of burnout (Tab. 1).

Future directions for research and practice

Further research examining factors influencing burnout in medical faculty is needed. Specifically, more rigorous studies, larger sample sizes, multi-site studies, and more conducted within the United States are needed before widespread recommendations can be made.

Administrators in academic medical centers should include efforts to minimize burnout of medical faculty. Burnout has significant effects, including leaving the profession in serious cases. Improving work conditions, work-life balance, supporting medical faculty's research endeavors, and clearly defining roles and expectations are some suggestions from existing literature to reduce burnout levels.

CONCLUSIONS

As faculty shortages continue, burnout is predicted to remain among medical faculty. Understanding the factors associated with burnout can assist in identifying strategies to decrease burnout and retain qualified medical faculty. Further research is needed with more rigorous study designs, larger sample sizes, and more settings in the United States for the findings to be generalizable and specific recommendations for decreasing burnout among medical faculty.

ORCID

Maryam Alvandi https://orcid.org/0009-0003-8233-1451

REFERENCES

1. Hashmi AM. The challenge of burnout in public medical teachers in Pakistan: A mixed methods study. Pakistan Journal of Medical Sciences. 2021;37(5):1268-1275. https://doi-org.ezproxy.ycp.edu:8443/10.12669/pjms.37.5.4429.
2. Gabbe SG, Hagan Vetter M, Nguyen MC, et al. Changes in the burnout profile of chairs of academic departments of obstetrics and gynecology over the past 15 years. American Journal of Obstetrics & Gynecology. 2018,219(3):303.e1-303.e6. https://doi-org.ezproxy.ycp.edu:8443/10.1016/j.ajog.2018.06.012.
3. Grover S, Sahoo S, Bhalla A, et al. Psychological problems and burnout among medical professionals of a tertiary care hospital of North India: A cross-sectional study. Indian Journal of Psychiatry. 2018;60(2):175-188. https://doi-org.ezproxy.ycp.edu:8443/10.4103/psychiatry.IndianJPsychiatry_254_17.
4. Del Carmern, MG, Herman J, Rao S, et al. Trends and factors associated with physician burnout at a multispecialty academic faculty practice organization. JAMA Network Open. 2019; 2(3): e190554. https://doi-org.ezproxy.ycp.edu:8443/10.1001/jamanetworkopen.2019.0554
5. Duke, NN, Gross A, Moran A, et al. Institutional factors associated with burnout among assistant professors. Teaching & Learning in Medicine. 2020; 32(1): 61-70. https://doi.org/10.1080/10401334.2019.1638263
6. Burns KEA, Pattani R, Lorens E, et al. The impact of organizational culture on professional fulfillment and burnout in an academic department of medicine. PloS One. 2021; 16(6): e0252778. https://doi-org.ezproxy.ycp.edu:8443/10.1371/journal.pone.0252778
7. Lee DH, Reasoner K, Lee D, et al. Is grit associated with burnout and well-being in orthopaedic resident and faculty physicians? A multi-institution longitudinal study across training levels. Clinical Orthopaedics and Related Research. 2021; 479(12): 2576-2586. https://doi-org.ezproxy.ycp.edu:8443/10.1097/CORR.0000000000001987
8. Ofei-Dodoo S, Callaway P, Engels K. Prevalence and etiology of burnout in a community-based graduate medical education system: A mixed-methods study. Family Medicine. 2019; 51(9): 766-771. https://doi-org.ezproxy.ycp.edu:8443/10.22454/FamMed.2019.431489
9. Purvis TE, Saylor D. Burnout and resilience among neurosciences critical care unit staff. Neurocritical Care. 2019; 31(2): 406-410. https://doi-org.ezproxy.ycp.edu:8443/10.1007/s12028-019-00822-4
10. Downs SH, Black N. The feasibility of creating a checklist for the assessment of the methodological quality both of randomised and non-randomised studies of health care interventions. Journal of Epidemiology & Community Health. 1998;52(6):377-384. http://refhub.elsevier.com/S1360-8592(16)30099-7/sref8
11. Adam S, Mohos A, Kalabay L, et al. Potential correlates of burnout among general practitioners and residents in Hungary: The significant role of gender, age, dependent care and experience. BMC Family Practice. 2018; 19(1): 193. https://doi-org.ezproxy.ycp.edu:8443/10.1186/s12875-018-0886-3
12. Rotenstein L, Harry E, Wickner P, et al. Contributors to gender differences in burnout and professional fulfillment: A survey of physician faculty. Joint Commission Journal on Quality & Patient Safety. 2021;47(11):723-730. https://doi-org.ezproxy.ycp.edu:8443/10.1016/j.jcjq.2021.08.002
13. Ko S, Guck A, Williamson M, et al. Family medicine faculty time allocation and burnout: A residency research network of Texas study. Journal of Graduate Medical Education. 2020; 12(5): 620-623. https://doi-org.ezproxy.ycp.edu:8443/10.4300/JGME-D-19-00930.1
14. Ofei-Dodoo S, Scripter C, Kellerman R, et al. Burnout and job satisfaction among family medicine residency coordinators: Results From a national survey. Family Medicine. 2018; 50(9): 679-684. https://doi-org.ezproxy.ycp.edu:8443/10.22454/FamMed.2018.921094
15. Dyrbye LN, Leep Hunderfund AN, Moeschler S, et al. Residents' perceptions of faculty behaviors and resident burnout: A cross-sectional survey study across a large health care organization. Journal of General Internal Medicine. 2021;36(7):1906-1913. https://doi-org.ezproxy.ycp.edu:8443/10.1007/s11606-020-06452-3
16. Topbaş E, Bay H, Turan BB, el al. The effect of perceived organisational justice on job satisfaction and burnout levels of haemodialysis nurses. Journal of Renal Care. 2019; 45(2): 120-128. https://doi-org.ezproxy.ycp.edu:8443/10.1111/jorc.12271
17. Yilmaz A. Burnout, job satisfaction, and anxiety-depression among family physicians: A cross-sectional study. Journal of Family Medicine & Primary Care. 2018;5:952-956. https://doi-org.ezproxy.ycp.edu:8443/10.4103/jfmpc.jfmpc_59_18
18. Ironside K, Becker D, Chen I, et al. Resident and faculty perspectives on prevention of resident burnout: A focus group study. The Permanente Journal. 2019;23(3):18-185. https://doi.org/10.7812/TPP/18-185.

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