Quantitative Survey of Burnout Among Neurology Advanced Practice Providers (Physician Assistants and Nurse Practitioners) and Clinical Pharmacists in the United States

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RESEARCH IN CONTEXT

1. **There is a high prevalence of burnout and job stress among APPs and CPs in neurology in the US.**
2. **Understanding the prevalence and potential risks associated with burnout may facilitate changes to support these groups in providing best patient care.**

OBJECTIVES

To establish the prevalence of burnout (long-term job-related stress leading to exhaustion, detachment from job responsibilities, and a sense of lack of accomplishment)[1] among neurology advanced practice providers (APPs; comprising physician assistants [PAs] and nurse practitioners [NPs]) and clinical pharmacists (CPs) in the United States (US) and identify potential risks associated with burnout for further investigation.

INTRODUCTION

Burnout among APPs and CPs is a well-recognized crisis across various disciplines as encountered by the US healthcare system.

The prevalence of burnout among PAs, NPs, and CPs was reported to be 35%, 37%, and ≥60%, respectively;[2-4] and their respective American associations have issued a call for action.

To the best of our knowledge, data on burnout rate among neurology APPs and CPs in the US has not been published.

METHODS

- A 25-question quantitative survey was sent to neurology APPs and CPs which included a validated 10-question Mini Z inventory (v3.0)[5] assessing work life and wellness. Information on demographics, professional information, work environment, and level of support were also collected.
- The survey was sent out to 3,630 APPs and CPs working in neurology.
- All data were analyzed descriptively.

RESULTS

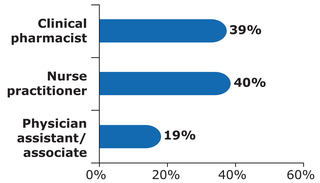
Figure 1. Demographic data and professional information of neurology APPs and CPs

Characteristics, (%)	N = 104
Age	
<30 years	3%
30-39 years	34%
40-49 years	36%
50-59 years	19%
>60 years	9%

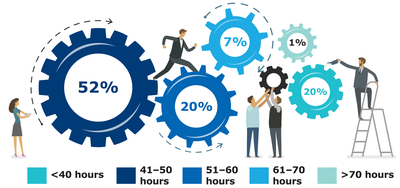
Characteristics, (%)	N = 104
Ethnicity	
White	82%
Black or African American	6%
Hispanic or Latino	5%
Asian	9%
Other*	6%

*Other included: American Indian or Alaska Native and Native Hawaiian or other Pacific Islander 1% each; Middle Eastern or North African, 4%.
APP, advanced practice providers; CP, clinical practitioners

Professional credentials (N=101)*



Hours worked per week (N=101)

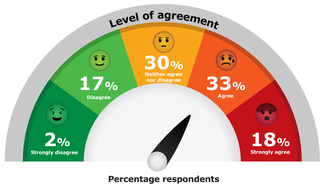


*104 completed up to Q13; 101 completed the full survey (Q1-10 – Mini Z inventory V3.0; Q11-13 – Demographics; Q14-22 – Professional information).

Figure 2. Prevalence of burnout and job-related stress among neurology APPs and CPs

Self-assessed prevalence of burnout (N=104)

I feel a great deal of stress because of my job (N=104)



APP, advanced practice providers; CP, clinical practitioners

Table 1. Mini Z Inventory 3.0 scoring results

Total score	≥40*	20–39	10–19
Mini Z 3.0 Range 10–50, n (%)	12 (12)	85 (82)	7 (7)
Score (Q1–Q7)	**≥28†**	**18–27**	**7–17**
Supportive work environment (subscale 1; Range 7–35), n (%)	18 (17)	67 (64)	19 (18)
Score (Q8–Q10)	**≥12‡**	**8–12**	**3–7**
EMR stress (subscale 2; Range 3–15), n (%)	17 (16)	52 (50)	35 (34)

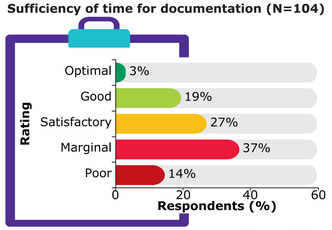
N=104; *≥40 is a joyful workplace; †≥28 is a highly supportive workplace;‡≥12 is a workplace with manageable EMR stress.

The Mini Z Inventory[5] instrument allows the assessment of 3 parameters by scoring the first 10 survey questions. The total score (Mini Z 3.0) indicates whether the workplace is joyful. The first subscale is calculated by scoring questions 1–7 and measures how supportive the work environment is. The second subscale looks at EMR stress and is calculated by adding the scores of questions 8–10.

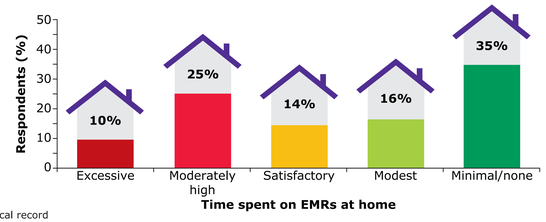
Note: Only the upper boundaries are defined by the Mini Z inventory. EMR, electronic medical record

Figure 3. EMRs contribute to burnout among neurology APPs and CPs

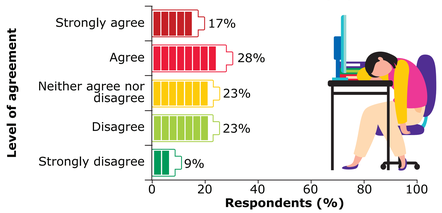
Sufficiency of time for documentation (N=104)



Respondent view of time spent on EMRs at home (N=104)



Do EMRs add to the frustration of the day? (N=104)



APP, advanced practice providers; CP, clinical practitioners; EMR, electronic medical record

- Overall, 83% (101/121) of responders completed the survey; 97% (101/104) were >30 years old. Majority were white and predominantly female (**Figure 1**). 20% of respondents had received fellowship training in neurology.
- Most APPs and CPs were either working in an academic medical center (49%), general neurology practice (31%), or were employed by a hospital (12%)(**Supplementary Figure 1**). Around a third (28%) of respondents worked >50 hours in an average week, with only 8% working >60 hours (**Figure 1**).
- Electronic medical records (EMR) were cited as a source of frustration by 45% of respondents with 34% of respondents reporting a high degree of EMR-related stress; 51% noted documentation time as marginal or poor, and 35% reported spending a moderately high or excessive amount of time on EMRs at home (**Table 1** and **Figure 3**).
- Overall, 57% responded that they were burned out or starting to burnout, and 51% of respondents experienced high level of job stress (**Figure 2**). Please refer to (**Supplementary Table 1**) for information on prevalence of burnout by profession (APP and CP).
- 17% and 12% of respondents indicated workplace as highly supportive and joyful respectively (**Table 1**).
- While 73% of respondents said they were satisfied with their current job, 57% of respondents had considered changing career/leaving the field due to burnout or related issues in the past year. Most of these (43.1%) were from academic medical centers.

APP, advanced practice providers; CP, clinical practitioners

CONCLUSIONS

- **Although job satisfaction remained high, >50% of respondents were planning a change in field due to burnout/related issues.**
- **Despite a relatively small sample size, this survey provides key insights on the high prevalence of burnout among neurology APPs and CPs in the US.**
- **Results from this study can guide further research to improve the quality of life in neurology APPs and CPs and further enhance patient care.**

SCAN FOR AFFILIATIONS, DISCLOSURES, AND SUPPLEMENTARY MATERIALS

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