

# Burnout Prevalence in PA Students

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## Introduction

There is increasing evidence to show high rates of burnout among medical students, residents, and practicing physicians. Studies among medical students have suggested that students who experience burnout may have higher rates of dropping out of training, depression, substance abuse, and suicidal ideation. Burnout may even cloud a student's professional judgment, contribute to poor decision making, and lead to medical errors.

## Purpose

There are no published studies evaluating burnout in physician assistant (PA) students. The researchers conducted this study to examine the prevalence of burnout in PA students, as well as other factors that may influence burnout.

## Methodology

A random sample of 1200 student members of the Student Academy of the American Academy of Physician Assistants (n=9,557) were sent a modified Maslach Burnout Inventory (MBI) via email and their results were submitted anonymously. The MBI is a widely accepted, reliable, and validated survey instrument that is often used to measure three aspects of professional burnout: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). Each variable is considered separately as burnout is conceptualized as a continuum ranging from low to high degrees of each variable. The survey was modified to include basic demographic information including age, sex, relationship status, whether or not students had children living at home, and year in PA training. Results were then analyzed using standard statistical methodology including t-test, Chi-square, and Spearman Correlation Coefficient.

Table 1: Overall MBI "Medicine" Subscale

| Overall MBI<br>"Medicine" sample | Low<br>(lower third) | Average<br>(middle third) | High<br>(upper third) |
|----------------------------------|----------------------|---------------------------|-----------------------|
| EE                               | ≤18                  | 19-26                     | ≥27                   |
| DP                               | ≤5                   | 5-7                       | ≥8                    |
| PA                               | ≥40                  | 39-34                     | ≤33                   |

EE = Emotional Exhaustion; DP = Depersonalization; PA = Personal Accomplishment

Table 2: Our "PA Student" sample results

| Our sample | average result ± SD | scale result |
|------------|---------------------|--------------|
| EE         | 19.37 ± 9.91        | average      |
| DP         | 5.69 ± 4.95         | average      |
| PA         | 41.25 ± 5.66        | low          |

## Results

The survey response rate was approximately 19.17% (230/1200). Using the MBI scoring system for medical professionals, the three burnout variable mean scores were examined. Overall, physician assistant students were found to have EE and DP means in the average range which indicate an average degree of burnout, and PA scores in the low range which indicate a high degree of burnout.

Chi Square results indicated that the PA scores of clinical year students were significantly lower than that of didactic year students ( $p < 0.0106$ ). Using Spearman Correlations, there was no observed relationship between the EE, DP, and PA scores with respect to gender or relationship status. However, the results did indicate a relationship between higher DP scores and students who are younger ( $r = -0.166$ ,  $p < 0.0114$ ) and those who have children living at home ( $r = 0.158$ ,  $p < 0.0163$ ).

Table 3: Correlation between higher DP score, age, and PA students with or without children

| Spearman Correlation Coefficients, N = 230<br>Prob >  r  under H0: Rho=0 |                    |                                 |                    |
|--------------------------------------------------------------------------|--------------------|---------------------------------|--------------------|
|                                                                          | EE average         | DP average                      | PA average         |
| Year in training                                                         | -0.10184<br>0.1236 | 0.05616<br>0.3966               | 0.10168<br>0.1242  |
| Sex                                                                      | 0.05142<br>0.4377  | -0.07764<br>0.2408              | 0.06672<br>0.3137  |
| Marital status                                                           | -0.07672<br>0.2465 | -0.10711<br>0.1052              | 0.07174<br>0.2786  |
| ± Children                                                               | 0.06585<br>0.3201  | <b>0.15821</b><br><b>0.0163</b> | -0.09346<br>0.1577 |
| Age                                                                      | -0.09076<br>0.1701 | <b>-0.1665</b><br><b>0.0114</b> | 0.0276<br>0.6771   |

## Conclusion

Results of the analysis demonstrate that PA students as a group appear to have less burnout than medical students. However, PA students who are younger, are in their clinical year of training or who have children living at home demonstrated a higher degree of burnout when compared to the rest of the group. This indicates that those individuals may need additional support during physician assistant training. This initial study of burnout in PA students raises important questions about what student attributes may indicate a greater risk of burnout. The related risks to both student and patient are potentially significant, ranging from poor decision making to substance abuse and suicidality. Future studies will be needed to further investigate this important issue.

## References

- Maslach C, Jackson S, Leiter M, *Maslach Burnout Inventory Manual*. 3<sup>rd</sup> edition. Menlo Park, CA: Mindgarden Inc.; 1996.
- Drybye L, West C, Satele D, et al. Burnout among US medical students, residents, and early career physicians relative to the general US populations. *Academic Med* 2014;89:443-451.
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