Burnout and engagement are multidimensional states that influence academic performance.1

Burnout measures unsolvable stress, while engagement measures feelings of positivity and fulfillment.2

Several studies have investigated the prevalence of burnout and engagement among healthcare clinicians, academic faculty, and graduate students, but few have related these scales to academic performance or self-perception of academic ability and achievement. There have not been any reports examining burnout and engagement specifically in Doctor of Pharmacy (PharmD) students.3, 4

Objectives:

- To describe the stress and sense of fulfillment of students in a PharmD program by surveying students using the Utrecht Work Engagement Scale (UWES-9) and the Maslach Burnout Inventory (MBI)
- To describe self-perception of academic performance of students in a PharmD program by surveying students using the Student Attitudes Assessment Survey (SAAS)
- To investigate whether students’ self-perception of academic performance is positively associated with engagement and negatively associated with burnout.

Methodology

A four-part Qualtrics survey, consisting of demographic questions and three validated scales, was administered in May 2017 (after final exams) to first and second year pharmacy students enrolled in didactic coursework at Touro University California-College of Pharmacy.

- Participant recruitment: The research team targeted every student via email.
- Participant demographics: 162 participants agreed to complete the survey. Overall, the sample consisted of 104 females (64.2%), 58 (35.8%) males, 114 (70.4%) Asian/Pacific Islander, 11 (19.1%) Caucasian, 10 (7.4%) African American, and 11 (6.8%) Latino or Hispanic. The mean age was 25 ± 3.1 years.
- Survey validity: Cronbach’s alpha was set at 0.05.

Participants’ engagement within their studies and academic self-perception were measured using the UWES and the MBI respectively.

- UWES: Emotional exhaustion (p < 0.001) and reversed professional efficacy (rPE) had significant associations.
- MBI: Emotional exhaustion (p < 0.001) and reversed professional efficacy (rPE) were used as predictors of academic self-perception scores in the total sample population. There was a significant correlation between academic self-perception and dedication scores (p = 0.003).

The effect of reversed professional efficacy on academic self-perception was also presented using logistic regression.

Results

<table>
<thead>
<tr>
<th>MBI Descriptive Statistics</th>
<th>UWES Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scale Range</strong></td>
<td><strong>Average</strong></td>
</tr>
<tr>
<td>MBI-EE</td>
<td>0.30 to 3.78</td>
</tr>
<tr>
<td>MBI-C</td>
<td>0.30 to 1.88</td>
</tr>
<tr>
<td>MBI-PE</td>
<td>0.36 to 3.91</td>
</tr>
</tbody>
</table>

- The effect of reversed professional efficacy on academic self-perception was also presented using logistic regression.

Discussion

- In the subpopulation that self-reported their GPA, we found a significant difference in cynicism between those who self-reported a GPA above 3.5 and those with GPA above 3.5. However, there were no differences in any of the other burnout measures (MBI-EE, MBI-PE).
- A logistic regression showed that two subscales of burnout (EE, rPE) did not have any related differences when students reported their GPA with a cutoff of 3.5. However, those reporting higher cynicism reported a GPA below 3.5. Similarly, those reporting higher dedication (UWES subscale) also reported a GPA above 3.5. Vigor, another subset of engagement, showed a negative association with self-reported GPA which differs from published literature.
- A linear regression of our total population showed that there is a negative correlation between two subscales of burnout (MBI-EE, MBI-PE) and academic self-perception (measured with SAAS). Conversely, only the dedication subscale of engagement (UWES-D) showed a positive correlation with academic self-perception.
- Limitations of the study include small sample size. Self-reporting also increases the probability of inaccurate reporting.

Conclusions

- This is the first study examining burnout in pharmacy students.
- Previous studies have shown that academic performance is positively associated with engagement and negatively associated with burnout.
- This study examined pharmacy students’ subjective view of their academic performance to determine if the same association can be applied.
- The results showed that subjective perception of academic performance in pharmacy students largely correspond to the associations shown in previous studies.
- Future studies can further explore the same relationship by including other pharmacy schools. Instead of measuring self-reported GPA, objective academic success should be measured by obtaining de-identified GPA from the school’s registrar.

Acknowledgments

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References