Association of Socio-Demographic Factors with Perceived Stress in Doctor of Pharmacy Students

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Background
The Guidance Document for Standards 2016 of the Accreditation Council for Pharmacy Education (ACPE) encourages colleges and schools of pharmacy to assess and correct underlying causes of ineffective learning experiences. These assessments include measurements of perceived stress in faculty, staff, and students and an evaluation of stress’ potential for a negative impact on programmatic outcomes and morale. Previous research in Doctor of Pharmacy students has mixed results when evaluating the effect of socio-demographic variables upon perceived stress levels.

The Perceived Stress Scale (PSS-14) is a widely used, psychometrically validated 14-item instrument that measures the degree to which situations in subjects’ lives are rated as stressful. The scale value may be used reliably as an outcome variable that measures a subject's perceived stress level as a function of stressful events and methods of coping. Subjects respond to each of the 14 items by indicating how often they felt or thought a particular way in the past month using a 5-point scale (0 = never; 4 = very often).

Objective
To evaluate the relationship between socio-demographic factors and perceived stress among Doctor of Pharmacy students at the University of Louisiana at Monroe.

Methods
This project was approved by the Institutional Review Board of the University of Louisiana at Monroe.

Doctor of Pharmacy students were emailed invitations to participate in perceived stress surveys administered at the beginning (baseline), midpoint, and end of the fall 2014 semester. Students completed the 14-item Perceived Stress Scale (PSS-14) and provided socio-demographic information including:
- Age, gender, ethnicity, marital status, children
- Major, semesters completed, and GPA
- Involvement in student organizations
- Alcohol use, smoking status, exercise habits

The association between socio-demographic factors and PSS-14 scores was tested statistically using Mann-Whitney U tests or Kruskal-Wallis tests.

Results
Respondents included 120 students at baseline (BL), 100 students at midpoint (MP), and 90 students at the end of the semester (EOS).

Overall, PSS-14 scores were lower at baseline than either midpoint or end of the semester.

Married students had higher stress levels at the end of the semester than students who were never married or were separated/divorced.

Differences in stress levels were present for time of semester, age, P1/P2 vs P3/P4, and gender (see graphs).

No significant differences were present for the following variables:
- Grade Point Average
- Repeated Courses
- Previous Degrees
- Parenting children under 18 years old
- Involvement in student organizations
- Ethnicity
- Average commute time
- Employment obligations

Limitations
As this is a single-site study, results may not be generalizable to other institutions.

When comparing results to other institutions, methods of curricular delivery between institutions should be considered.

Logistical and software issues prevented longitudinal analysis of data throughout the semester; the three administration times of the survey represent point estimates of student stress.

Implications
Information on perceived stress and socio-demographic characteristics may help identify students at risk for poor academic outcomes.

Future student interventions on stress management could be developed to target issues affecting various socio-demographic groups.

Future research could explore whether the factors identified in student groups continue after they become pharmacists and/or correlate with stress and burnout in practicing pharmacists.

Factors contributing to stress in student pharmacists could be used to develop preceptor training sessions to help address stress management in this population.

References