Abstract

- The Accreditation Council for Pharmacy Education mandated measurement of perceived stress in Student Pharmacists as related to its impact on professional and academic performance.
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Evaluation of Stress, Anxiety, and Relaxation Techniques in First Semester Pharmacy Students

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Background

- The Accreditation Council for Pharmacy Education mandated measurement of perceived stress in Student Pharmacists as related to its impact on professional and academic performance.
- In 2015, Burgess et al. found a significant effect of power posing (P < 0.01) as a physiological indicator of mental empowerment; testosterone decreased after female students conducted low power poses and increased following the high power poses.
- This study expanded upon the potential of using physical poses to impact mental status, by introducing Student Pharmacists to power posing and relaxation techniques to reduce levels of stress and anxiety over the course of a semester.

Objectives

- Primary outcomes: To compare the effects of power posing and relaxation techniques over the course of a semester on perceived stress and anxiety.
- Secondary outcomes: To evaluate Student Pharmacist opinions of the usefulness, ease, likeability, and longevity of conducting power posing and relaxation techniques.

Methods

- Population: 41 Student Pharmacists (22 females and 19 males) were recruited from students entering into the first year/first semester of pharmacy school.
- Treatments used to measure primary and secondary outcomes:
  - Power Posing (initial n = 10) – Holding an open pose
  - Three relaxation techniques:
    - Body Scan Meditation (n = 10) – Systematically relaxing muscles
    - Mindfulness Meditation (n = 11) – Focusing on the sound of a bell
    - 4 x 4 Meditation (n = 10) – Counting breaths
- Protocol:
  - Day 0 (September 16, 2015):...Collect saliva sample
  - Days 24 to 58 (October 10 to November 13, 2015):...Collect saliva sample
  - Days 59 – 79 (November 14 to December 3, 2015):...Collect saliva sample
- Analysis:
  - Preliminary data analysis were conducted utilizing descriptive statistics, dependent t tests, and ANOVA of treatment means at each date utilizing Microsoft Excel.
  - We expect relaxation techniques to lower stress and anxiety levels in Student Pharmacists more than the power pose. Accordingly, we expect them to like and use the power pose more than the other relaxation techniques.

Results

Stress and anxiety in Student Pharmacists since starting pharmacy school:

- 18 Student Pharmacists (43.90%) tried other techniques during Phase II, and went on to (46.34%) change or modify their technique by the end of Phase III. Nine of those subjects (47.37%) were in the Mindfulness Meditation group.
- Overall, stress motivated 39 Student Pharmacists (95.12%) to conduct their treatments, but lack of time (24; 58.54%) and remembering to do it (12; 29.27%) most prevented them from doing so.

Future outlook:

- Although Student Pharmacists did not rate effectiveness and likability of the three relaxation techniques to be better than Power Posing, their involvement in this study introduced them to alternative means of stress reduction and seemed to result in a favorable perception of relaxation techniques.
- Saliva samples will be analyzed for levels of cortisol and alpha-amylase (indicators of stress), and testosterone (indicator of empowerment).
- This research will be repeated in Fall 2016, with protocol changes to promote Student Pharmacists to try the other techniques and to improve compliance.

Conclusions & Future Directions

- 18 Student Pharmacists (43.90%) tried other techniques during Phase II, and went on to (46.34%) change or modify their technique by the end of Phase III. Nine of those subjects (47.37%) were in the Mindfulness Meditation group.
- Overall, stress motivated 39 Student Pharmacists (95.12%) to conduct their treatments, but lack of time (24; 58.54%) and remembering to do it (12; 29.27%) most prevented them from doing so.

References