Self-reported levels of Depression, Anxiety, and Stress in medical students during the first 6 months of medical school

A case study at the Medical College of Wisconsin’s Regional Campuses prior to and during the COVID-19 pandemic

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Background

- Survey all Regional Campus Medical Students - 2019-2020 pre-COVID
  - Survey distributed in August, November and February – avoided summative exam periods
  - 45 total, 90% survey return rate at both campuses
  - Survey collection in 2020-2021 influenced by COVID pandemic - return rates only comparable for August and February data sets
    - As such bulk of discussion will only focus on 2019-2020 data except for slides comparing COVID data set to that collected prior to COVID pandemic
- Survey included
  - Self report level of Depression, Anxiety or Stress
  - DASS 21 survey (21 questions) to assess the same
  - Unique non-identifiable linker to view longitudinal progression
- Survey is not clinically diagnostic for Depression, Anxiety or Stress
- Purpose – better understand regional campus student adjustment to medical school
Depression - Population
Comparing Self Assessed to DASS 21

Self-Reported Depression

DASS 21 Depression

% returned surveys (n=43)
Anxiety - Population

Comparing Self Assessed to DASS 21

Self-Reported Anxiety

DASS 21 Anxiety

% returned surveys (n=43)
Stress - Population

Comparing Self Assessed to DASS 21

Self-Reported Stress

DASS 21 Stress

% returned surveys (n=43)
Conclusion #1 (population data)

• Over the first 6 months of medical school at the regional campuses:
  
  • Depression levels across the student population appear low over the first 6 month of medical school (in general)
  
  • Anxiety and Stress level range from low to extremely severe with levels peaking in November in the mild to moderate range
  
  • Student self-reported higher levels of depression, anxiety and stress than those levels measured using the DASS 21 instrument
Profile Analysis - Depression

Depression Profile A (42%)

Depression Profile B (35%)

Depression Profile C (19%)

All scores in the normal/low range

4% data did not fit any profile
Profile Analysis - Anxiety

• Single profile – 73%
  - 27% did not fit any profile

• Scores ranged across mild/moderate to severe with peak always in November
Profile Analysis - Stress

• Scores ranged across mild/moderate to severe

• 15% of data did not fit either profile
Profile Analysis Conclusions

• Not everyone experiences depression, anxiety and stress the same

• Profiles suggest shared experiences with levels of anxiety and stress peaking in November compared to August or February
  • Causes?
    • Seasonal
    • Timing of Survey
    • Normalization of the medical school experience
    • Others
Gender Differences? (Depression)

Depression – Identified as Female

% returned surveys/ gender identification

August November February

Depression – Identified as Male
Gender Differences? (Anxiety)

Anxiety – Identified as Female

Anxiety – Identified as Male

% returned surveys/ gender identification

August November February
Gender Differences? (Stress)

- % returned surveys/ gender identification

<table>
<thead>
<tr>
<th>Gender</th>
<th>Stress Levels</th>
<th>August</th>
<th>November</th>
<th>February</th>
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<tbody>
<tr>
<td>Low</td>
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<td>Extremely Severe</td>
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Depression Pre-COVID and COVID - August Data

Self-Reported Depression Scores

DASS 21 Depression Scores

% returned surveys
Anxiety Pre-COVID and COVID - August Data

Self-Reported Anxiety Scores

DASS 21 Anxiety Scores

% returned surveys

Low  Mild  Moderate  Severe  Extremely Severe

Pre-COVID  COVID
Stress Pre-COVID and COVID - August Data

Self-Reported Stress Scores

DASS 21 Stress Scores

% returned surveys

Pre-COVID COVID
Depression Pre-COVID and COVID - February Data

Self-Reported Depression Scores

DASS 21 Scores

% returned surveys

Pre-COVID COVID
Anxiety Pre-COVID and COVID - February Data

**Self-Reported Anxiety Scores**

- Pre-COVID: Low - 40, Mild - 30, Moderate - 20, Severe - 10, Extremely Severe - 10
- COVID: Low - 30, Mild - 20, Moderate - 10, Severe - 5, Extremely Severe - 5

**DASS 21 Scores**

- Pre-COVID: Low - 50, Mild - 40, Moderate - 30, Severe - 20, Extremely Severe - 10
- COVID: Low - 60, Mild - 50, Moderate - 40, Severe - 30, Extremely Severe - 20
Anxiety Pre-COVID and COVID - February Data

Self-Reported Stress Scores

DASS 21 Scores

% returned surveys

Pre-COVID COVID
Final Conclusions – Gender/COVID

• Male identifying students may have shown slightly higher levels of depression, anxiety and stress compared to female identifying students

• Levels of depression, anxiety and stress did not appear different in comparable pre-COVID and COVID datasets for the months of August and February.
Thank you

Questions, comments, advice for further exploration?

Please email me – I would love to communicate with you

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