Factors Associated with Social Isolation Among Graduate & Professional Healthcare Students

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Social Isolation

- **Social Isolation**: is the absence of meaningful social networks\(^1,2\)

- Studied most frequently in the elderly and young (children) population

- Often have:
  - Reduced support systems
  - Reduced companionship
  - More vulnerable from both emotional and physical standpoint\(^1\)

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Why Is This Important?

- Social Isolation has been linked to\textsuperscript{1,2,3}:
  - Depression
  - Heart Disease
  - Early Mortality
  - Elevated C-Reactive Protein in adults who were socially isolated as children\textsuperscript{3}
    - Leads to: Lower levels of education, lower socioeconomic status, psychological distress, obesity, and increased risk of becoming a smoker

- Future healthcare providers often under a lot of stress, potential for becoming socially isolated

Goal of the Project

- To measure the relationships between the characteristics of University of Iowa graduate/professional healthcare students and their self-ratings of social isolation/loneliness.
- To explain the factors associated with social isolation among these students.
- Identify or recommend future changes that could be made to graduate and professional healthcare programs.
- To raise awareness about the health effect of social isolation on an individual.
Methods

- Cross-sectional descriptive mix method study including a Qualtrics survey
  - Included both qualitative and quantitative results
- Created a survey based on past questions in the College of Pharmacy end of the year survey and used the Revised UCLA Loneliness Scale¹
- Received Exemption from Full Review by University IRB
- Sent the survey to graduate and professional students of five healthcare colleges
  - College of Medicine, Dentistry, Pharmacy, Nursing, Public Health
- Survey was anonymous

The survey included 17 demographic items & 21 items of the University of California, Los Angeles (UCLA) Loneliness Scale (version 3)\(^1\)

- 38 total questions
- Last question of the survey was, “Would you consider yourself socially isolated?”
- Concluded with an open-ended question
  - “Please list any additional comments you have regarding social isolation as it pertains to your graduate/professional experience:”
- Survey was anonymous and optional
  - Sent out by the Dean of Students of each of the five colleges involved
  - Used small incentive to promote taking the survey

Results

- Received 427 surveys, 398 were completed and considered useable.
- There were a total of 115 comments used for qualitative data.

<table>
<thead>
<tr>
<th>College</th>
<th>Total participants (N)</th>
<th>Total participants (%)</th>
<th>Isolated students (N)</th>
<th>Isolated students* (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentistry</td>
<td>39</td>
<td>9.82</td>
<td>4</td>
<td>10.3</td>
</tr>
<tr>
<td>Medicine</td>
<td>108</td>
<td>27.20</td>
<td>15</td>
<td>13.9</td>
</tr>
<tr>
<td>Nursing</td>
<td>27</td>
<td>6.80</td>
<td>11</td>
<td>40.7</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>167</td>
<td>42.07</td>
<td>29</td>
<td>17.4</td>
</tr>
<tr>
<td>Public health</td>
<td>56</td>
<td>14.11</td>
<td>16</td>
<td>28.6</td>
</tr>
</tbody>
</table>
These results were based on the students who answered “Yes” to the question of whether they considered themselves socially isolated.

- 7 factors with significant association (P < 0.05)
  - 5 with significant positive association
  - 2 with significant negative association

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds Ratio</th>
<th>95% Wald Confidence Limits</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong support system (No vs Yes)</td>
<td>5.45</td>
<td>1.51 - 5.45</td>
<td>0.0098*</td>
</tr>
<tr>
<td>Disability (Yes vs No)</td>
<td>15.50</td>
<td>1.14 - 15.50</td>
<td>0.0396*</td>
</tr>
<tr>
<td>English Second language (Yes vs No)</td>
<td>4.83</td>
<td>1.35 - 4.83</td>
<td>0.0155*</td>
</tr>
<tr>
<td>Social Media hours</td>
<td>0.94</td>
<td>0.87 - 0.94</td>
<td>0.1432</td>
</tr>
<tr>
<td>Socializing hours</td>
<td>0.94</td>
<td>0.85 - 0.94</td>
<td>0.2046</td>
</tr>
<tr>
<td>Study hours</td>
<td>1.02</td>
<td>0.99 - 1.02</td>
<td>0.1883</td>
</tr>
<tr>
<td>Family/dependent-care hours</td>
<td>1.03</td>
<td>1.00 - 1.03</td>
<td>0.0368*</td>
</tr>
<tr>
<td>Sexual orientation (other vs heterosexual)</td>
<td>0.15</td>
<td>0.02 - 0.15</td>
<td>0.0961</td>
</tr>
<tr>
<td>Positive loneliness item *</td>
<td>0.81</td>
<td>0.71 - 0.81</td>
<td>0.0023*</td>
</tr>
<tr>
<td>Negative loneliness item *</td>
<td>1.25</td>
<td>1.13 - 1.25</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>Discuss feeling with friends ©</td>
<td>0.68</td>
<td>0.47 - 0.68</td>
<td>0.0449*</td>
</tr>
<tr>
<td>Financial Concern</td>
<td>0.93</td>
<td>0.62 - 0.93</td>
<td>0.7469</td>
</tr>
</tbody>
</table>
Qualitative Results

- Total of 115 comments were left, 96 students left comments pertaining to the risk factors and the protective factors that we were analyzing.
- The comments were categorized into themes based on content to determine common factors.
- Analyzed regardless of whether the participant indicated they were socially isolated or not.
- The main risk factors themes from this were:
  - No time
  - Older age
  - Married students
  - Feeling different than those around them
  - Competitiveness of the program
  - Online program
  - Students from out of state
  - Being shy/ introverted
  - Lack of opportunity to engage with others
- The Protective Factors:
  - Organization
    - Promotes socialization and involvement
  - Community
    - Supportive group outside the program
Qualitative Results

- “Please list any additional comments you have regarding social isolation as it pertains to your graduate/professional experience.”

  - Example Comments left:
    - “There is no time even for my hobbies. I no longer feel human, I cannot read, I cannot cook, I cannot do things I enjoy. All I do is study which has resulted in my diagnosis of severe depression.”
    - “I have to miss out on many social opportunities, both within my own family with my kids and with my extended family/friends. My friends have stopped asking me to come visit as often and I have had to tell them I was sorry.”
    - “On occasion, it feels like your "friends" are really competitive and don't actually care about your well-being and success.”
Summary of our Findings

Quantitative
- 19.4% confirmed they have feelings of social isolation
- Significant Factors include:
  - Non-available support system
  - Presence of a disability
  - English as a second language
  - Family/dependent care hours
  - The ability of an individual to discuss feelings with friends

Qualitative
- Protective Factors:
  - Community
  - Organization (Program)
- Out-of-state students
- Lack of time
- Program itself increases isolation
- Formation of cliques
- Lack opportunity to engage with others
- Feeling different from peers
- Competition
- Personality- shy or introvert
- Spouse, family, other obligations
- Non-traditional students
Summary of our Findings

- These factors cause individuals to have an increased risk of developing feelings of social isolation
- Which then leads to¹,²,³...
  - Poor health outcomes
  - Increased stress
  - Increased depression, anxiety
  - Poor academic performance
- These are people who are supposed to be future healthcare providers....

Study Limitations

- Conducted at only 1 university in 1 Midwestern state

- Low number of participants
  - May be due to the timing of the survey being sent out in late April, early May
    - Final Exam time
Room for Change

- Increase Awareness
- End of year surveys
  - College of Pharmacy:
    - annual end of year survey
  - Tracks progress
- Implement more accessible supportive programs
  - Student Health
    - Everyone at the University of Iowa
  - University of Iowa College of Dentistry:
    - Psychiatrist within their college strictly for their students
  - University of Iowa College of Medicine
    - Psychiatrist within their college for their students
Presentation Review Survey Link