Medical Student Burnout:
The evidence base meets USMLE Step 1

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Overview

- Psychiatric illness in medical education
- Treatment and barriers to care
- Burnout as a risk factor
- Local resources

Academic Psychiatry
Depression in Resident Physicians: A Systematic Review

Manuscript Number: 1
Full Title: Depression in Resident Physicians: A Systematic Review
Article Type: Systematic Review
Abstract:
Objective: To complete a systematic review of the literature addressing major depressive symptoms in resident physicians.
Method: We conducted a systematic review of articles addressing major depression in physicians in the United States and the United Kingdom. The following keywords were used: anxiety, depression, and mood. Medical residents in internal medicine residencies with a wide range of respondents were included. A meta-analysis was conducted to estimate the prevalence of depression and the following variables were extracted: gender, age, sex, and number of cases.
Results: The prevalence of depression in resident physicians is higher than that of the general population. Many sociodemographic and residency-associated factors have been identified as risk factors for depression in residents. For example, depression is more common among women and those who have experienced depression or anxiety. The prevalence of depression was higher in residents who reported a history of depression or anxiety in their family, or who received treatment for depression or anxiety. Depression was also more common in residents who had poor job satisfaction or who had trouble with their personal issues or family issues. The prevalence of depression was higher in residents who were dissatisfied with their health, or who had a history of depression or anxiety.

Treatment Options

- Free psychotherapy sessions
- Student Affairs offices
- Peer groups
- Family / community support networks
- Institutional programs

Barriers to Treatment

- Dean’s office
- State medical boards
- Finances
- Confidentiality
- Time constraints
- Personal avoidance of pathologizing (stigma)

Burnout is a Syndrome

- Emotional exhaustion
- Personal accomplishment
- Depersonalization
Maslach Burnout Inventory

- 22 item survey
- Validated in physicians

- Presence of burnout increases risk of depression 1.8–2.6% – a risk factor.
- Recovery of burnout associated with decreased suicidal ideation

Impact of Burnout

- Decreased job performance
- Low career satisfaction
- Stress–related health problems
- Decreased empathy
- Increased medical errors
- Attentional failures

Study #3: Pre–Med Burnout

- 2014 Administered MBI to pre–meds:
  - 224 Premeds during summer break
  - 92 follow–up's during fall final exams

Study #4: Systematic Review

- Efficacy of Burnout Interventions in the Medical Education Pipeline

ABSTRACT

Purpose: The prevalence of burnout among medical students and residents is between 40–70%. Little is known about the efficacy of current interventions to mitigate it, despite its association with mood disorders, absenteeism, low job satisfaction, and medical errors. This review summarises the efficacy data of suicide prevention and burnout interventions and how each modality is used.

Method: PUBMED, Google Scholar, and PsychINFO were searched for combinations of medical subject headings (MeSH) terms: medical students, interns, residents, medical postgraduate, clinical clerkship and residents in combination with a keyword group of burnout, professional burnout, suicide, attempted suicide, and prevention. Intervention studies were included. Studies with original data on the efficacy of a suicide prevention or burnout prevention program were included for review. The quality of research was graded using the Strength of Recommendation Taxonomy (SORT) scale.
Results

- Nineteen studies were selected for inclusion in this review. Over one dozen different types of interventions and combinations of interventions were used. There were no studies available on burnout among premedical students, nor were there any data on suicide prevention among medical students or residents. Level A–2 ratings were given to the six studies demonstrating the generally positive impact of the 2003 ACGME duty hour restrictions on burnout. The 13 other studies were rated as B–2, largely because of the paucity of available studies.

<table>
<thead>
<tr>
<th>Type of Intervention</th>
<th>Number of Studies</th>
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<tbody>
<tr>
<td>Duty hour restrictions</td>
<td>6</td>
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<tr>
<td>Mindfulness</td>
<td>3</td>
</tr>
<tr>
<td>Communication and stress management</td>
<td>2</td>
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<tr>
<td>Pass–fail grading</td>
<td>2</td>
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<tr>
<td>Respiratory One Method</td>
<td>1</td>
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<tr>
<td>Balint groups</td>
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<tr>
<td>Journaling</td>
<td>1</td>
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<tr>
<td>Self–development books</td>
<td>1</td>
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<tr>
<td>BATHE technique</td>
<td>1</td>
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<tr>
<td>Comprehensive (counseling, education, and awareness campaign)</td>
<td>1</td>
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</tbody>
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Burnout Treatment & Prevention

- Create online modules teaching each, evidence-based technique
- Provide online peer support groups, self-help style

Mindfulness

Mindfulness refers to nonjudgmental awareness of one’s own moment-to-moment experience, which culminates concentration and insight, as well as physiologic relaxation. Mindfulness-based stress reduction (MBSR) has been shown to be an effective intervention for a range of populations, including medical students. Three studies demonstrated efficacy on burnout in the medical education pipeline.

Respiratory One Method

The Respiratory One Method (ROM) is a relaxation and meditation technique that relies on verbalizing the word “one” during exhalation and is designed to mitigate the impact of emotional arousal. Osgood-Kammerer and Figley administered the Maslach Burnout Inventory to 24 family medicine residents prior to four, weekly ROM treatment sessions. There was a statistically significant decrease in emotional exhaustion scores, but not for depersonalization or personal achievement.
Balint Groups

Balint groups are a group-training method, which help physicians better understand their role in doctor-patient relationships and improve their interpersonal skills. Identified by Michael and Eviad Balint in the late 1950’s, this therapeutic process involves a physician presenting difficult patient encounters to the group, analyzing counter-transference reactions, and sharing experience and suggestions in a supportive atmosphere.19

Self-Development Groups

Holm et. al. mandated that an entire third-year Norwegian medical school class participate in either a clinical-lead small group or a self-development group led by a psychiatrist trained in group analytical therapy.5 Group analysis is group psychotherapy originated in the 1940s by S.H. Foulkes.10 This technique focuses on the relationship between the individual group member and the rest of the group, resulting in a strengthening of both, and a better integration of the individual with his or her community, family and social network. In this study, there was a significant reduction in perceived stress in the psychiatrist-led groups.

The comparison group participated in a clinician-led group that focused on science and career knowledge; therefore there was no true control group. They were two simultaneous interventions and the group analytic therapy was robust enough to show a significant difference anyway.

BATHE Technique

- Background
- Affect
- Troubles
- Handling of the current situation
- Empathetic response

The BATHE technique is a psychological screening tool for anxiety, depression and situational stress.2 The acronym stands guides the clinician’s history taking and stands for background, affect, troubles, handling of the current situation, followed by an empathetic response. Milstein et. al. taught seven pediatric residents how to perform this technique on themselves at the same time the 2005 ACGME duty hour restrictions went into effect. Eight residents were in the control group and the Malach Burnout Inventory (MBI) was used to compare the two groups. No significant changes on the MBI occurred though the Personal Accomplishment domain did decrease in the intervention group. In general, the small sample size and relatively little use of the technique by the residents made generalizations impossible.

Take Home Points

- Complex demands
- Emotional exhaustion is treatable
- A little validation goes a long way

Study Techniques

Your brain on MS-2:

- Pathology – 3,4
- Pharmacology – 1,2,3,4
- Immunology – 1,2,4
- Clinical Med – 3,4,5,6
- Physical Diagnosis – 3,4,5,6
Study Techniques

1. Numbers/data
2. Minutia
3. Logic
4. Processes
5. Narrative
6. Graphic

- Video speed-up
- Audio files
- Personal audio
- Note cards
- Typed notes
- Student summaries
- Drawing posters
- Teaching/discussion

Time Management

- Set and accomplish goals
- Create priorities and establish realistic boundaries
- Recognize and deal with time-wasters
- Break procrastination and indecision habits
- Shift to managing self, not time

A Self Assessment

- Don’t change a thing for one week.
- Log all of your activities.
- Look for patterns.

Time Management

- Create a realistic and productive schedule
- Listen to David Allen’s *Getting Things Done* while you clean/reorganize your study area
- Identify ways to manage email and other attention-grabbers
- Create a personal “no” script

Study #5

Population: MS2’s about to start USMLE 1 Prep

Intervention: Short-course in Study Techniques, Time Management, and Stress Reduction

Control: Randomize to online-only version, vs. wait list, vs. measure participation

Outcome: USMLE scores; burnout, depression or anxiety scale
References


Accreditation Council for Graduate Medical Education. 2006


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