Project on the Good Physician
Using Life Stories to Study
Medical Student Wellness

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Conflicts of interest
None to declare

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A Question for Medical Science Educators

How does one become and remain a good physician?

Sir William Osler, MD  
“The Saint – Johns Hopkins Hospital”  
Original drawing by Max Bridel

Challenges of Medical Education Research

• Mostly conducted within single institutions  
  → Limited Generalizability  
  → Context-specific confounders
• Limited by short-term follow-up  
  → Inability to track educational (clinical) outcomes  
  → Elusive “holy grail” of medical education research
• Suffers from lack of available research funding  
  → Issues of sustainability and institutional commitment  
  → A NIH “Institute of Medical Education Research”

The Push for an Educational Data Warehouse


National Pilot Study of U.S. Medical Students

Methodology

- **Sampling**
  - Stratified, two-stage cluster sample of 24 U.S. allopathic medical schools
  - Randomly selected 40 students from each school:
    - Total sample: 960 students
- **Questionnaire Mailing**
  - Pre-notification letters/emails sent along with requests for address verification
  - First mailing with survey, $5 incentive (follow-up survey $10 incentive)
  - Reminder post-card follow-up
  - Second mailing and email requests with online version of survey
  - Third mailing and email requests with online version of survey

For more details on methodology, see the Project on the Good Physician website:
https://pmr.uchicago.edu/projects/research/good-physician

Comparison of our National Sample with AAMC data

- **Response rates:**
  - Of the 960 cases fielded, 4.3% were declared out-of-scope (students who dropped out, wrong addresses, inaccurately identified as third-years on the AMA masterfile)
  - 1st survey: 564/919 (Adjusted response rate 61%)
  - Follow-up: 474/564 (Adjusted response rate 84%)
- **Qualitative Interviews/Peer-Rating Module**
  - At the end of the follow-up survey, students were offered the opportunity to participate in future studies including completed peer ratings and/or qualitative interviews
  - 21 interviews total, offered $50
  - Peer-ratings, 3-4 ratings per student, offered $50

For more details on methodology, see the Project on the Good Physician website:
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Project on the Good Physician: Study Topics

- **Obstacles to medical virtue**
  - Burnout
  - Entitlement
- **Facilitators of medical virtue**
  - Experiences of moral elevation while working with a clinical exemplar
- **Physician Well-Being**
  - Work motivation, sense of calling and vocational identity
  - Life meaning and life satisfaction
  - Career choices (i.e. work among underserved)
- **Life Stories (Qualitative component)**
  - Basic Demographics
  - Religion/Spirituality
  - Moral Intuitions (Haidt)
  - Religious affiliation
  - Importance of religion
  - Spirituality
  - Personality Characteristics
  - Big 5 Personality
  - Virtues
  - Empathy
  - Mindfulness
  - Interpersonal Generosity

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Stressing the Journey: Using Life Stories to Study Medical Student Wellbeing

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Background: Burnout among medical students

- Medical students suffer from high rates of psychological distress
  - Growing levels of cognitive and emotional burnout after starting medical school
  - High levels of stress, burnout, alcohol dependence, depression, and suicidal ideation

- (1) Quality of life matters for medical professionals and
  (2) burnout can negatively affect job performance and patient care

Life stories

Beckman, 2015; Beresin et al., 2016; Bore et al., 2016; Dunn et al., 2008; Dyrbye, Power et al., 2010; Eliz and Stoklsrnan, 2014; Goldhagen et al., 2013; Greenhill et al., 2015; Howe et al., 2012; Saein et al., 2014; Temple et al., 2015; Thompson et al., 2016

Life stories

Recent years have witnessed an upsurge of interest among theorists and researchers in autobiographical recollections, life stories, and narrative approaches to understanding human behavior and experience. An important development in this context is D. P. McAdam's life story model of identity (1985, 1991, 1996), which asserts that people living in modern societies provide their lives with unity and meaning by constructing narrative and evolving narratives of the self. The idea that identity is a life story narrative with a number of important themes in developmental, cognitive, personality, and clinical psychology. This detailed review and critique recovers theory and research on life stories as means of investigating of self-concept, autobiographical memory, personality structure and change, and the complex relations between individual lives and cultural history.
Methods

- In-depth phone interviews with 21 fourth-year medical students (2012)
  - Asked whether they felt burned out at any point during medical training
  - ~1 hour in duration
  - Interviews transcribed and de-identified (2012)

- Secondary analysis (2016-2017)
  - De-identified data helped reduce threats to confidentiality
  - Fresh perspective

Findings

Table 1: Summary statistics of 21 medical students interviewed (n, %)

<table>
<thead>
<tr>
<th></th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experienced significant negative personal life events before or during medical school (e.g. Death of a parent)</td>
<td>6 (29)</td>
</tr>
<tr>
<td>Reported burnout during medical school</td>
<td>17 (81)</td>
</tr>
<tr>
<td>Registered as having “high” burnout on the survey</td>
<td>6 (29)</td>
</tr>
<tr>
<td>Spirituality and religion</td>
<td>5 (24)</td>
</tr>
<tr>
<td>Spirituality but not religion</td>
<td>6 (29)</td>
</tr>
<tr>
<td>Medical specialty</td>
<td>19 (90)</td>
</tr>
<tr>
<td>Specialty intentions</td>
<td>11 (52)</td>
</tr>
<tr>
<td>Debt</td>
<td></td>
</tr>
<tr>
<td>&lt;$100,000</td>
<td>6 (29)</td>
</tr>
<tr>
<td>$100,000-$200,000</td>
<td>5 (24)</td>
</tr>
<tr>
<td>&gt;$200,000</td>
<td>10 (48)</td>
</tr>
</tbody>
</table>

Findings

- Reported stressors
  - Negative role models
    - "[For those of us] who were dead set on surgery [...] he wasn’t enough to change our minds [...] but the other people who didn’t want to do surgery [...] it solidified the stereotype in their mind [...] [Surgeons can be real jerks and very self-centered and hypocritical] (Respondent 11)."
  - "You think that most people [who] get into medicine are nice people who want to help patients, but you sort of realize that a lot of individuals do it for their ego or for their feeling of power [...] Sort of jaded me—the way things were" (Respondent 19).
  - "I learned what not to do. And you need people like that just as much as you need people to show you what to do" (Respondent 5).

- Reported stressors
  - Difficult rotations
    - "I was working too much and not gaining anything out of it [...]. Then, on top of that, having to work 90 hours a week just [...] really burned me out. And it stopped immediately when I got off that rotation" (Respondent 2).
    - "[The] attitude and demeanor of many of the surgeons had a really negative impact on me [...]. I got the impression that none of them really enjoyed their jobs, so they took out their stress and the consequences of their lifestyle on others [...] [Often it was very degrading] (to work with those surgeons)" (Respondent 17).

- Reported stressors
  - USMLE Step One
    - "[Just going through the motions], (Respondent 7)
    - "How much longer can I do this, and what am I sacrificing to be doing this?" (Respondent 11).
    - "I think taking Step 1 was actually a really high point even though it’s so arduous—I think once things sort of come together you realize [...] you actually know a lot of things at the same time" (Respondent 3).
Findings

- **Double-edged swords**
  - **Financial concerns**
    - "[I]t’s impossible to do anything else at this point […]. I’m $300,000 in debt. […I] can’t just stop and work at Starbucks" (Respondent 16).
    - "There were a lot of times when I actually considered dropping out […]. [There were] even times the only reason I stayed in was because of the debt that I was already in" (Respondent 21).

- **Personal life events**
  - "Once you’ve gone through something like that […] it does definitely make you a more compassionate doctor. I know that my ability to give tough news to families has probably deepened so much because of [my] own personal experiences" (Respondent 12, who lost her father during third year).
  - "I had trouble thinking of any other specialty as even a possibility […]. I decided that this was no way to go through life. […] [I] did my best to come to know [every] specialty inside and out before I had to actually decide if it would be for me. […] I was actually lucky enough to get my dysrhythmia under control […], but I wouldn’t change having to have gone through that. […] I learned that you can deal with anything" (Respondent 5, diagnosed with dysrhythmia).

- **Stress-attenuating factors**
  - **Positive role models**
    - "[This role model] didn’t treat me as just another medical student. He had me first assist on a couple of cases, which is a little bit unheard of at the hospital where I was. And he just [...] showed faith in my abilities […]. Sort of made me feel like I could conquer the world" (Respondent 5).
  - **Support networks**
    - "I realized that she really did get it. She was looking at the big picture" (Respondent 11).

Findings

- **Stress-attenuating factors**
  - **Faith and spirituality**
    - "I feel like choosing medical school and becoming a physician is part of my destiny […]. I know this time period is temporary because there’s nothing that I can’t overcome" (Respondent 8).
    - "It’s my religion that first got me to treat people with respect […] it has affected the way I approach people, […] I was a lot less nervous than a lot of my classmates about talking to patients and about delving into their private life" (Respondent 10).
  - **Passion**
    - "I would be worried about [burnout] if I was going into a different specialty that wasn’t surgery […]. With another specialty, I would definitely predict that I would burn out at some point because I didn’t go into it for the right reasons. Now that I’m going into something I know I’m giddy about, I don’t worry about that" (Respondent 3).

Conclusions

- **Using life stories, we sought to understand how medical students make sense of their trajectories to identify key stressors as well as factors that protect against stress**
  - Stressors included negative role models, stressful rotations, and the USMLE Step One
  - "Double-edged swords" produced stress but also helped students persevere (for better or worse); debt, personal life events
  - Stress-attenuating factors, including positive role models, support networks, faith and spirituality, and passion, helped students reframe stressors as temporary
Conclusions

• We found very high rates of reported burnout (81%)
  • This may be because of the longitudinal focus of our question; we asked whether respondents had felt burned out at any point during the course of medical school
  • It is conceivable for medical students to feel burnout without registering as being burned out on a standardized assessment
  • Future research is needed on self-perceived burnout and its effects on medical student well-being

Limitations

• Generalizability
• Selection / Limitations of secondary data analysis
• Recall bias

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Thank you
Questions?

Additional slides

2017 Burnout Study


Yoon et al. Project on the Good Physician: Redemption Life Narratives Predict Growth in Generosity and Protects from Burnout. (unpublished manuscript)
Final Word by Viktor Frankl

“Everything can be taken from a man but one thing: the last of the human freedoms—to choose one’s attitude in any given set of circumstances, to choose one’s own way.”

Viktor E. Frankl