Grit, Resilience and Professional Quality of Life

Investigating Wellness in Medical Education

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I do not have an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization.

Je n’ai aucune affiliation (financière ou autre) avec une entreprise pharmaceutique, un fabricant d’appareils médicaux ou un cabinet de communication.
Introduction

Wellness/Well-being

- Being in good health (e.g., physical, emotional, psychological intellectual, spiritual, social)
- Being comfortable, happy and healthy

Higher energy levels, self-efficacy, self-esteem, physical and mental health, low anxiety, low depression

- Given the significance of well-being on both personal and professional aspects of our lives, it is:
  - important to understand how well-being is impacted by professional training.
  - important to explore factors which enhance well-being within medical education.
**Introduction**

**Grit**

*Perseverance and Passion*
- A person’s capacity to sustain both effort and interest in projects over long periods of time, even in the absence of positive feedback

**Resilience**

- The process of effectively negotiating, adapting to, or managing significant sources of stress or trauma

**Predictor of achievement (while controlling for other variables such as talent, IQ, personality traits) such as completion of educational programs.**

**Shown higher preparedness, performance, happiness, pleasure, and well-being**

**Higher resilience associated with less job-related stress, higher states of well-being, lower burnout**
Introduction

- Indicator of well-being:

**Professional Quality of Life (PQOL)**

*Encompasses one’s feelings (both positive and negative) in relation to their work as a ‘helper’*

**Compassion Satisfaction (CS)**

‘Higher levels of well-being’

- Feelings of altruism
- Feeling good to be helping others

**Compassion Fatigue**

“Lower levels of well-being”

- Measures *burnout* and *secondary traumatic stress (STS)*
  - Secondary exposure to people who have experienced stressful events
- *Can have negative effects (e.g., depression, substance abuse, posttraumatic stress, sleep difficulties, intrusive images)*
Purpose

• Assess the overall wellbeing of medical students and residents at various levels of their professional training.
  > To examine the relationship between resilience and grit with overall well-being (PQOL).
    » Explore differences across group demographics (training level, gender, age, self reported health status) on measures of well-being, resilience, Grit
### Methods

#### Group Demographics

428 participants: Residents (349), Undergraduate (79)

#### Gender (n)
- Female (245)
- Male (181)
- Did not disclose (2)

#### Training level (n)
- Pre-clerkship (UGME 1,2; 55)
- Clerkship (UGME 3,4; 24)
- Incoming Residents (78)
- PGY 1 (78)
- PGY 2 (79)
- PGY 3 (48)
- PGY 4+ (48)

#### Self-Reported Health Status (n)
- Excellent (89)
- Very good (169)
- Good (135)
- Poor/fair (32)

#### Age (n)
- <25 (62)
- 25-29 (216)
- 30+ (144)
Methods

Measures

• **Grit**: The Grit scale (Grit-S; Duckworth, Peterson, Matthews and Kelly 2007).
  • 8 items measuring consistency of interests and perseverance of effort. E.g., “I finish what ever I begin”.
  • 1=not at all like me, 5= Very much like me; higher scores indicate more grit.

• **Resilience**: Ego-resiliency scale (ER89; Block and Kremen, 1996).
  • 14-items, measures one’s ability to adapt to one’s level of control to the surrounding circumstances.
  • Higher scores indicate more resiliency.

• **PQOL**: Professional Quality of Life (Stamm, 2010)
  • 30-items, three subscales: CS, Burnout, STS
  • Responses on a 5-point frequency scale “never” to “very often”, higher scores indicate higher levels of the subscales construct
Results

- Linear regression Resilience and PQoL / Grit and PQoL
- Gender, age, program level, self-reported health status

Relationship between **Resilience / Grit** and PQoL

Compassion Satisfaction

![Graph showing the relationship between Resilience and Grit and Compassion Satisfaction](image)

- **Resilience**: $R^2 = 0.291; F(1, 426) = 174.64, p < 0.001; \beta = .099$
- **Grit**: $R^2 = 0.145, F(1, 222) = 37.77, p < 0.001; \beta = .078$

The positive relationship between resiliency/grit and compassion satisfaction held for all subgroupings.
Results

- Linear regression Resilience and PQoL / Grit and PQoL
- Gender, age, program level, self-reported health status

Relationship between Resilience / Grit and PQoL

The negative relationship between resiliency/grit and Burnout held for all subgroupings.
Results

- Linear regression Resilience and PQoL / Grit and PQoL
- Gender, age, program level, self-reported health status

Relationship between Resilience / Grit and PQoL

Resilience

$R^2 = 0.027; F(1, 426) = 11.73, p = .001$

Grit

$R^2 = 0.040; F(1, 222) = 9.23, p = .003; \beta = -.041$

Resilience was inversely related to STS for women, younger participants, residents, and those in excellent health.

**Gender:** The negative relationship between resiliency and secondary traumatic stress exists for women ($p = .001$), but not for men ($p = .149$).

**Age:** The relationship holds true for younger participants ($< 30$) ($p = .009$), but not for older participants ($30+$) ($p = .056$).

**Program Level:** The relationship holds for PGME ($p = .018$), but not for participants in UGME ($p = .402$).

**Health:** The negative relationship exists for those who report being in excellent health ($p = .008$), but not for those in very good ($p = .088$), good ($p = .521$), or poor/fair health ($p = .358$).

The negative relationship between grit and STS held for all subgroupings.
Results
Are there differences between groups on indicators of well-being?

[analyses were conducted using ANOVAs, followed by Tukey post-hoc tests when the ANOVAs yielded a significant result].

> Training Level
  » Jr. Residents (PGY 1,2) had lower CS, higher burnout and higher STS [when compared to UGME, incoming residents, and Sr. Residents].

> Health Status
  » Participants with poorer/fair self reported health status (as opposed to good, very good, or excellent) had significantly lower CS, higher burnout and STS.
  » Participants in excellent health had significantly higher resilience and grit scores

> Other
  » Women showed sig. higher STS than men
  » Younger participants (<30) sig. higher STS than older participants
Conclusions

- Grit and resilience appear to be very important constructs related to one’s ability to handle setbacks, negative feedback, and other obstacles in health professionals’ education and careers.

- There are group differences (health status, gender, age, training level) across well-being indicators (burnout, STS, CS, resilience, grit) in Medical Education.
Understanding the relationship between grit, resilience and well-being is important in fostering physician health and wellness at different stages of medical education (e.g., assists with targeted wellness initiatives).
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