

BRIEF COMMUNICATION

Distinct correlates of empathy and compassion with burnout and affective symptoms in health professionals and students

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Objective: The causes of high rates of psychological distress among health professionals and students are largely unknown. Health professionals respond to those who are in distress with empathy (feeling what others feel) or compassion (caring about what others feel). This study aims to investigate whether empathy and compassion are distinct traits and how both traits are associated with negative affect (burnout, depression, anxiety and anger symptoms) in undergraduate students and professionals in medicine, psychology and nursing.

Methods: A sample of 464 students and professionals filled out an online protocol with a socio-demographic data questionnaire and self-report questionnaires covering the variables of interest.

Results: The findings indicate that empathy is associated with higher negative affect, while compassion is associated with lower negative affect, which suggests that they are different traits.

Conclusion: Our findings provide new evidence that the well-being of health professionals might be affected differently depending on socioemotional traits relevant to emotional connection.

Keywords: Empathy; compassion; burnout; physicians

Introduction

As concern for the well-being of medical professionals has increased, the high rates of depression and suicidal ideation observed among medical students¹ and residents² have garnered increasing attention. However, the causes of such psychological distress among health professionals are still largely unknown.

One possibility is that such negative outcomes arise from individual differences in how clinicians respond to the emotional states of their patients. Prior work has shown that people differ in how they respond to those who are in distress: while some tend to respond with empathy (feeling what others feel), others tend to respond with compassion (caring about what others feel).³ Here we investigate the hypothesis that empathy is related to higher levels of burnout and affective symptoms, while compassion is related to lower levels of these outcomes.

Methods

Participants

A total of 884 undergraduate students currently registered in a university and active professionals in medicine,

psychology and nursing were approached. Of these, 464 individuals completed the protocol (79.7% female, with a median age of 23.3 years, 34.3% from medicine, 47% from psychology, and 18.8% from nursing).

Measures

Two subscales of the Interpersonal Reactivity Index (IRI),⁴ concern and perspective taking, were used to assess compassion. Two subscales of the Empathy Index,³ empathy and behavioral contagion, were used to assess empathy. Symptoms of negative affectivity were assessed with the depression, anxiety and anger scales of the Patient-Reported Outcomes Measurement Information System,⁵ while burnout was assessed with the Medical Student Well-Being Index.⁶

Procedures

Participants were invited to the study through their academic e-mail addresses and media advertisements. Any currently enrolled undergraduate medicine, psychology or nursing majors, as well as active medicine, psychology and nursing professionals were eligible to

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participate. The protocol was available at the FormR survey software webpage, including the consent form and the questionnaires. At the end of the protocol, the participants received instant feedback with a personalized result based on the cutoff points or average scores.

Ethics statement

The authors affirm that all procedures contributing to this study complied with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975 (2008 revision). Written informed consent was obtained from all participants. All procedures involving human subjects/patients were approved by the ethics committee of the Universidade Federal do Rio Grande do Sul (approval 76845717.1.0000.5327).

Statistical analysis

Confirmatory factor analysis of the IRI and Empathy Index subscales were conducted to test whether empathy and compassion are different constructs. To test whether empathy and compassion predict symptoms of burnout, depression, anxiety and anger, structural equation modeling was performed. All analyses were performed with the “lavaan” package in R software.

Results

Empathy and compassion traits

Unidimensional confirmatory factor analysis models using IRI and Empathy Index items as indicators of a single unifying construct revealed an unacceptable fit to the data (RMSEA = 0.105, CFI = 0.780, TLI = 0.762). A second-order model using the concern and perspective taking subscales to indicate compassion and the empathy and behavioral contagion subscales to indicate empathy provided an acceptable fit to the data (RMSEA = 0.066, CFI = 0.917, TLI = 0.910) and supported discriminability between the two traits.

Empathy and compassion predict mood symptoms

Structural equation models using the second-order model of empathy and compassion showed that higher levels of empathy were associated with higher symptoms of burnout ($\beta = 0.691$, $p < 0.001$), depression ($\beta = 0.456$, $p < 0.001$), anxiety ($\beta = 0.669$, $p < 0.001$) and anger ($\beta = 0.59$, $p < 0.001$), while higher levels of compassion were associated with lower burnout ($\beta = -0.457$, $p = 0.002$), depression ($\beta = -0.47$, $p < 0.001$), anxiety ($\beta = -0.487$, $p = 0.002$) and anger ($\beta = -0.642$, $p < 0.001$).

Post-hoc analysis revealed that the negative association between compassion and burnout, depression,

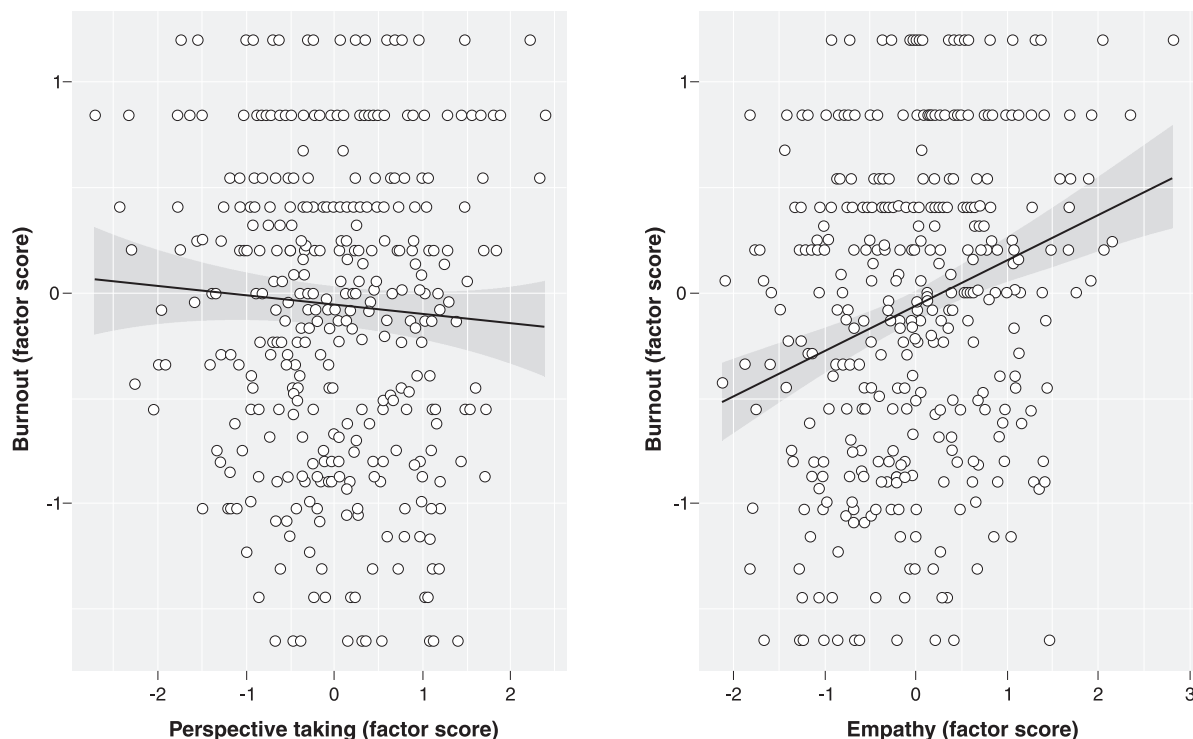


Figure 1 Associations between perspective taking and empathy with burnout. Post-hoc analysis showed association of perspective taking with lower depression ($\beta = -0.298$, $p < 0.001$), anxiety ($\beta = -0.313$, $p < 0.001$), anger ($\beta = -0.415$, $p < 0.001$) and burnout ($\beta = -0.267$, $p = 0.005$). Empathy was associated with higher levels of depression ($\beta = 0.33$, $p = 0.016$), anxiety ($\beta = 0.514$, $p = 0.001$), anger ($\beta = 0.373$, $p = 0.008$) and burnout ($\beta = 0.578$, $p = 0.006$).

anxiety, and anger was driven by the perspective taking subscale of the IRI, while the positive association of empathy with all measured symptoms was driven by the empathy subscale of the Empathy Index (Figure 1). There were no significant results in regressions with the variables concern and behavioral contagion.

Discussion

This study shows that empathy and compassion are distinct traits that have opposite associations with burnout and domains of negative affect (depression, anxiety and anger); empathy was associated with higher levels of burnout and negative affect symptoms, while compassion was associated with lower levels of burnout and negative affect symptoms.

For the most part, previous studies have shown that empathy is associated with lower burnout and psychological distress.⁷ However, the most common measures of empathy, such as the Jefferson Scale of Physician Empathy,⁸ consist of subscales that evaluate perspective taking and compassionate care – the two core components of compassion. Therefore, studies finding that empathy is a protective factor for burnout and negative affect might have failed to differentiate empathy from compassion, two interrelated constructs that have distinct associations with psychological distress. While our study has the strength of separating those two constructs, it is also important to consider the limitations of the study, which are its convenience sampling and exclusive use of self-report questionnaires.

To conclude, this study raises two important issues. First, that a conceptual distinction should be made in the medical literature to assess empathy and compassion as

two distinct traits, given that current instruments mix these two higher-order concepts. Second, health professional training that focuses on increasing empathy might have unwanted consequences, whereas a focus on compassion (specifically, perspective taking) might have desirable consequences for their well-being.

Disclosure

The authors report no conflicts of interest.

References

- 1 Rotenstein LS, Ramos MA, Torre M, Bradley Segal J, Peluso MJ, Guille C, et al. Prevalence of depression, depressive symptoms, and suicidal ideation among medical students: a systematic review and meta-analysis. *JAMA*. 2016;316:2214-36.
- 2 Mata DA, Ramos MA, Bansal N, Khan R, Guille C, Di Angelantonio E, et al. Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. *JAMA*. 2015;314:2373-83.
- 3 Jordan MR, Amir D, Bloom P. Are empathy and concern psychologically distinct? *Emotion*. 2016;16:1107-16.
- 4 Davis MH. A multidimensional approach to individual differences in empathy [Internet]. 1980 [cited 2020 Jun 4]. www.uv.es/~friasnav/Davis_1980.pdf
- 5 PROMIS [Internet]. [cited 2019 Apr 7]. www.healthmeasures.net/explore-measurement-systems/promis
- 6 Dyrbye LN, Szydlo DW, Downing SM, Sloan JA, Shanafelt TD. Development and preliminary psychometric properties of a well-being index for medical students. *BMC Med Educ*. 2010;10:8.
- 7 Dyrbye LN, Burke SE, Hardeman RR, Herrin J, Wittlin NW, Yeazel M, et al. Association of clinical specialty with symptoms of Burnout and career choice regret among US resident physicians. *JAMA*. 2018;320:1114-30.
- 8 Hojat M, Mangione S, Nasca TJ, Cohen MJM, Gonnella JS, Erdmann JB, et al. The Jefferson scale of physician empathy: development and preliminary psychometric data. *Educ Psychol Meas*. 2001;61:349-65.