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## Empathy and Burnout in medicine – acknowledging risks and opportunities

### Journal Item

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## Title Page

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**Title: Empathy and Burnout in medicine – acknowledging risks and opportunities**

Running title: Empathy and burnout in medicine

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18 Patient-centeredness has been identified by the Institute of Medicine as one of the six main  
19 aims for a 21st Century health system, and encompasses qualities of compassion, empathy,  
20 as well as being responsive to the patients' values, needs and preferences<sup>1</sup>. These tenets of  
21 modern medical professionalism require greater expectations over physicians' emotional  
22 availability than in the past, but this trend is risky in a context in which physicians show  
23 increasing rates of emotional vulnerability<sup>2-3</sup>. A systematic review of 54 studies found  
24 between 20.9 to 43.2 per cent of resident physicians report depression or depressive  
25 symptoms<sup>3</sup>. Longitudinal studies indicate that the prevalence of depressive symptoms  
26 increases with increasing years in training<sup>3</sup>, rather than diminishing with greater expertise  
27 and experience. A national survey found that 46 per cent of practicing physicians show  
28 some signs of burnout<sup>4</sup>, a phenomenon involving difficulties in dealing with stressful work  
29 and demands. Burnout can lead to feelings of depersonalisation and hopelessness<sup>2</sup>, and is  
30 associated with increased physician errors and reduced empathy for patients<sup>4</sup>. It is  
31 therefore a concern that the demands and expectations on physicians' emotional resources  
32 are carefully balanced with the psychological costs and risks to their mental wellbeing in the  
33 provision of patient-centered empathic care.

34

35 Demonstrating empathy in clinical practice requires physicians to be able to listen to and  
36 understand the patient's perspective, communicate that understanding, and act in a way  
37 that is helpful<sup>1</sup> such as expressing sympathy, respect and support. The benefits to patients  
38 when physicians demonstrate clinical empathy are well reported, including greater patient  
39 satisfaction, openness about symptoms, reduced patient distress and improved outcomes<sup>1</sup>.  
40 In contrast, low physician empathy is associated with burnout and emotional exhaustion,

41 but the direction of the relationship is unclear<sup>2</sup>. Demonstrating clinical empathy may  
42 contribute to a compassion fatigue and emotional exhaustion which, in turn, leads to  
43 physician burnout<sup>2</sup>. The decline of empathy may be a coping mechanism for extreme  
44 emotional arousal; neuroscientific studies indicate that the brains of physicians show a  
45 downregulated empathic arousal response (e.g. negative affect or feelings) to witnessing  
46 distress compared to controls<sup>2</sup>. Declining student empathy during medical school has been  
47 argued to represent the downregulation of empathy as a means of survival in the face of  
48 burnout or extreme distress<sup>1</sup>. Competing time and resource demands and stressors in the  
49 environment have been identified as hindering emotional regulation<sup>2</sup>, which may explain  
50 why offering empathic care can be emotionally exhausting for physicians – their ability to  
51 engage in emotional self-regulation is hindered or disrupted by the challenges of the  
52 modern medical workplace. Medical training should seek to better educate about, and  
53 mitigate against, the risks which may lead to reductions in empathy, or greater emotional  
54 vulnerability, to ensure that this does not become an enduring and worsening problem as  
55 the demands on medical students and physicians steadily increase.

56

57 There has been a general lack of acknowledgement in medicine of the social and biological  
58 variables that link empathy with gender role expectations and sex differences despite  
59 research evidence. Females are more likely to demonstrate empathy and it may be more  
60 socially acceptable for them to do so<sup>5</sup>. Sex differences relating to empathy are consistent  
61 with neuroimaging studies which demonstrate greater neural activation in females during  
62 empathy tasks, findings from adolescent studies, and arguments for the possible  
63 evolutionary roots for greater empathic concern in females<sup>2</sup>. A 2013 study of 7,584 board-

64 certified practicing physicians found significant differences between males and females on a  
65 measure of emotional empathy<sup>2</sup>. After controlling for age and experience, they found a  
66 highly specific effect of gender on 'empathic concern' (the tendency to experience feelings  
67 such as compassion and concern for others), but not on the component measuring cognitive  
68 empathy ('perspective taking': the capacity to understand another's experience or  
69 perspective). Female physicians reported higher levels of empathic concern, reported  
70 feeling less valued by patients and colleagues, and were more likely to report that their  
71 professional work had negatively affected their personal lives than males. The authors<sup>2</sup>  
72 report that the higher rates of empathic concern in females corroborates research that  
73 suggests that women – in and outside of medicine - are more likely to report emotional  
74 exhaustion (depletion of emotional resources)<sup>5</sup> than men. Emotional exhaustion is one of  
75 the three burnout dimensions along with reduced personal accomplishment (feelings of  
76 insufficiency and reduced professional self-esteem) and depersonalization (developing a  
77 callous cynical attitude)<sup>5</sup>.

78

79 Burnout is a gradual process that develops over time; the order of presentation of the  
80 dimensions in the onset of burnout differs for men and women and, thus, the early warning  
81 signals are likely to differ<sup>5</sup>. Houkes et al.<sup>5</sup> collated findings from 18 studies from across the  
82 world incorporating samples from different occupational groups (including medicine) that  
83 reported significant gender differences in the prevalence and experience of burnout  
84 between males and females. They then conducted a three-wave longitudinal study of  
85 physicians using statistical modelling to explore the aetiology of burnout<sup>5</sup>. They found  
86 evidence that the causal order of burnout dimensions differs between male and female

87 physicians. The onset of male physicians' burnout presented with depersonalization,  
88 whereas female physicians' burnout was triggered by emotional exhaustion<sup>5</sup>. Additionally,  
89 for males only, their sense of personal accomplishment showed independence from the  
90 other two dimensions; male reported increasing personal accomplishment even as their  
91 emotional exhaustion and depersonalisation increased. This was not the case for females,  
92 whose burnout shows signs of reduction in their sense of personal accomplishment.  
93 Therefore, it is possible that reduced personal accomplishment is not a symptom of burnout  
94 for male physicians, but is for females<sup>5</sup>. The authors<sup>5</sup> recommend consideration of the  
95 differences in the dimensions and early presentation of burnout between male and female  
96 physicians should be incorporated in workplace training and policy development given the  
97 rapid feminization of the workforce.

98

99 Despite the evidence for differences in the experiences of empathy, as well as the burnout  
100 trajectory for male and female physicians, there appears to be limited consideration of  
101 these findings in the interventions to reduce burnout. Conceptually, two approaches of  
102 addressing the problem of declining empathy and increasing burnout in medicine have been  
103 identified: within the individual, and within the environment. In terms of the individual,  
104 Gleichgerrcht and Decety<sup>2</sup> recommend the optimal approach for fostering healthy clinical  
105 empathy in medical training is to focus on the cognitive components which concern  
106 understanding of another's experience and perspective, rather than the emotional  
107 component which concerns sharing in the emotions or feelings of another and may lead to  
108 emotional exhaustion. Issues related to differential experiences of empathy and different  
109 burnout trajectories, for males and females, are largely missing from the general

110 recommendations for developing cognitive empathy or focusing on the cognitive  
111 components to empathy. Therefore, practical questions of when, where and how to  
112 intervene in medical education and training to address gender (societal expectations) and  
113 sex (biological) differences remain.

114 The American Medical Association (AMA) additionally recommends a systems-based  
115 approach to preventing physician burnout<sup>4</sup> which marks a major leap forward in addressing  
116 the organisation and environmental factors that contribute to distress and burnout. The  
117 AMA Steps Forward: Preventing Physician Burnout is an online training module<sup>4</sup> which  
118 encourages the development of a team-based model of care, with a focus on team-based  
119 communication, scheduling, and infrastructure, such that patient visits may be team-based  
120 but physician-led. Typically, these systems-based approaches<sup>4</sup> also fail to consider sex  
121 differences in experiencing empathy, gender differences relating to differential expectations  
122 towards physicians demonstrating empathic care, and ignores that the experience and  
123 trajectory of burnout differs may often differ for male and female physicians.

124

125 Addressing physician burnout is likely to require interventions that address how individual,  
126 dispositional factors (including sex differences) interact with physician's environment to  
127 produce conditions for burnout which may develop differently between male and female  
128 physicians. There is an opportunity to begin training in emotional regulation (empathy and  
129 avoiding burnout) during medical school and continue through residency training, on how  
130 situational/environmental stressors (workplace demands, time demands) deplete our  
131 psychological resources for emotional regulation<sup>2</sup>. Medical education and training should  
132 prepare students and future physicians for possible differential experiences with regard to

133 the emotional availability that might be expected of them, as women and men, from  
134 patients based on societal expectations. There is an opportunity to empower medical  
135 students and physicians in strategies for dealing with these possibly difficult patient  
136 encounters in order to mitigate against them should they occur. There exists a duty to  
137 further explore gender differences in how physicians might experience empathy and  
138 burnout, so that strategies for coping with the demands of emotional availability and  
139 vulnerability in the medical workplace may be more nuanced. Finally, there is an  
140 opportunity to train team members in the new team-based models of care that the  
141 *experience* of burnout, the burnout *trajectory* and the *identification* of burnout may have  
142 different characteristics and early warning signs for male and female physicians.

143

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150 The authors declare that they do not have a conflict of interest

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